ALLIED
Catalog
700

ALLIED Industrial Electronics Catalog-1970

ALLIED

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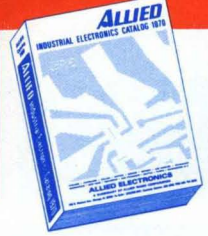

Buyer's Guide

Make this 1970 Catalog your buying guide for electronics throughout the year. You'll find complete lines of just about everything you need. You pay OEM prices and get fastest service.

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• CURRENT OEM PRICES • STOCKED IN DEPTH

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Semiconductor and Integrated Circuit Directory and Price List

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Most types listed in the Directory are accompanied by a page number. This reference gives the location of the specific device in this Catalog, where you'll find useful descriptions and engineering parameters. It's another Allied convenience to assist you in ordering "exactly" what you want.

INTEGRATED CIRCUIT DIRECTORY (See Page 7)

Features complete lines of integrated circuits from these leading manufacturers: RCA, Texas Instruments, Motorola and Sylvania. Specifications, pp. 39-59.

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IMPORTANT ORDERING INFORMATION

When ordering, specify Dept. No. followed by Manufacturer's Type No. and Name. (Note: Integrated Circuit Dept. Nos. differ from Semiconductor Dept Nos.). For Example: 49 D 26 1N3010-MOT Designates Motorola Type 1N3010

SEMICONDUCTORS

Dept. No.	Key	Manufacturer	Dept. No.	Key	Manufacturer
49 D 22	CO	Conant	49 D 31	ST	Sarkes-Tarzian
49 D 24	IR	International Rectifier	49 D 12	SYL	Sylvania
49 D 26	MOT	Motorola	49 D 32	TI	Texas Instruments
49 D 1	RCA	Radio Corp. of America			
49 D 30	SPR	Sprague	49 D 34	VA	Varo

INTEGRATED CIRCUITS

50 D 26	MOT	Motorola	50 D 12	SYL	Sylvania
50 D 1	RCA	Radio Corp. of America	50 D 32	TI	Texas Instruments
50 D 30	SPR	Sprague			

PAGE GUIDE TO ENGINEERING SPECS

We have included the most-often-asked-for specifications on most of the units listed in the Semiconductor and Integrated Circuit Directory.

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INTEGRATED CIRCUIT ACCESSORIES

We have complete stocks of integrated circuit accessories: Augat sockets, breadboards, and test sockets; Cinch-Jones and Elco sockets; Triad, Vector and Vero boards. Augat listings on pages 328-330; Cinch-Jones, page 332; Elco, page 327; Elgin, page 346; Triad, page 347; Vector, page 349; Vero, page 346.

Beckman

INTEGRATED CIRCUIT TEST INSTRUMENTATION

Model 998. Precision linear I/C tester provides accurate measurements of all important DC parameters including input offset voltage; input offset current; input voltage range; open loop voltage gain: supply current levels; and power dissipation. Also measures device output voltage limits; output current capabilities; equivalent input noise voltage and output resistance. Features easy, fast test setup, with no external plug-ins needed. 7x16½x12¼". 115/230 V, 50-400 Hz AC. Requires I/C package adapter, order below. Shpg. wt., 10 lbs.
51 D 5761 UF.....945.00

Model 999. Low-cost tester for entire digital I/C family. Measures all DC parameters of RTL, RCTL, DTL, TTL, LPDTL, and ECL devices. Ideal for quality control procedures, manufacturing, labs and schools. Eliminates expensive and complicated programming. Tests input threshold levels; output current; short-circuit output currents; input forward current; fan-out; power dissipation and current drain; noise immunity and truth tables. For 115/230 V, 50-1000 Hz AC. Overall size, 7x16½x12¼".
Requires I/C package adapter, order below.
51 D 5762 U. Shpg. wt., 10 lbs.....595.00

Model 997. Automatic tester for incoming inspections, production testing of digital I/C's. All internal programming supplied. Compatible with most automatic I/C handlers. Total test time, less than 100 msec. Checks digital devices with up to 10 inputs and 6 outputs. Short-circuit proof. 115/230 VAC. 50-400 Hz. 19½x13½x14". Requires two I/C pkg. adapters, below.
51 D 5760 UF. Shpg. wt., 20 lbs..2995.00

Integrated Circuit Socket Adapters for above.

Stock No.	Type	Description	EACH	Stock No.	Type	Description	EACH
51 D 5781	C-1	14-Pin Dual In-Line	14.50	51 D 5785	C-5	12-Pin TO-5	14.50
51 D 5782	C-2	16-Pin Dual In-Line	14.50	51 D 5786	C-6	14-Pin TO-5	14.50
51 D 5783	C-3	8-Pin TO-5	14.50	51 D 5787	C-7	14-Pin ¼x¼" Flat Pack	14.50
51 D 5784	C-4	10-Pin TO-5	14.50	51 D 5788	C-8	14-Pin ⅛x¼" Flat Pack	14.50

See Pages 7-13 in Directory for Integrated Circuits

integrated circuit directory

SEE PAGE 13 FOR SEMICONDUCTORS

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CA3001	RCA	49	5.55	4.00	3.35
CA3002	RCA	50	3.71	2.70	2.25
CA3004	RCA	49	3.71	2.70	2.25
CA3005	RCA	49	2.48	1.80	1.50
CA3006	RCA	49	5.80	4.20	3.50
CA3007	RCA	50	5.35	3.90	3.25
CA3008	RCA	49	6.44	4.68	3.90
CA3008A	RCA	49	9.74	7.08	5.90
CA3010	RCA	49	2.61	1.90	1.58
CA3010A	RCA	49	4.79	3.48	2.90
CA3011	RCA	50	1.47	1.07	.89
CA3012	RCA	50	1.82	1.32	1.10
CA3013	RCA	50	2.15	1.56	1.30
CA3014	RCA	50	2.48	1.80	1.50
CA3015	RCA	49	3.96	2.88	2.40
CA3015A	RCA	49	6.44	4.68	3.90
CA3016	RCA	49	8.91	6.48	5.40
CA3016A	RCA	49	11.39	8.28	6.90
CA3018	RCA	51	1.62	1.18	.98
CA3018A	RCA	51	2.22	1.62	1.35
CA3019	RCA	51	1.62	1.18	.98
CA3020	RCA	50	2.56	1.86	1.55
CA3020A	RCA	50	3.26	2.37	1.98
CA3021	RCA	49	3.14	2.28	1.90
CA3022	RCA	49	2.64	1.92	1.60
CA3023	RCA	49	2.56	1.86	1.55
CA3026	RCA	51	2.06	1.50	1.25
CA3028A	RCA	50	1.47	1.07	.89
CA3028B	RCA	50	2.06	1.50	1.25
CA3029	RCA	49	1.62	1.18	.98
CA3029A	RCA	49	3.14	2.28	1.90
CA3030	RCA	49	2.61	1.90	1.58
CA3030A	RCA	49	4.79	3.48	2.90
CA3031/702A	RCA	49	4.95	3.60	3.00
CA3032/702C	RCA	49	3.30	2.40	2.00
CA3033	RCA	49	4.79	3.48	2.90
CA3033A	RCA	49	8.09	5.88	4.90
CA3034VI	RCA	49	2.89	2.10	1.75
CA3035	RCA	51	2.48	1.80	1.50
CA3035VI	RCA	51	2.48	1.80	1.50
CA3036	RCA	51	1.47	1.07	.89
CA3037	RCA	49	3.14	2.28	1.90
CA3037A	RCA	49	4.79	3.48	2.90
CA3038	RCA	49	4.79	3.48	2.90
CA3038A	RCA	49	6.44	4.68	3.90
CA3039	RCA	51	1.61	1.17	.98
CA3040	RCA	49	4.87	3.54	2.95
CA3041	RCA	50	2.06	1.50	1.25
CA3042	RCA	50	2.06	1.50	1.25
CA3043	RCA	50	2.81	2.04	1.70
CA3044	RCA	50	2.31	1.68	1.40
CA3044VI	RCA	50	2.31	1.68	1.40
CA3045	RCA	51	2.47	1.80	1.50
CA3046	RCA	51	1.61	1.17	.98
CA3047	RCA	49	2.61	1.90	1.58
CA3047A	RCA	49	4.79	3.48	2.90
CA3048	RCA	51	4.04	2.94	2.45
CA3049	RCA	51	3.22	2.34	1.95
CA3050	RCA	50	3.71	2.70	2.25
CA3051	RCA	50	2.72	1.98	1.65
CA3053	RCA	50	.81	.59	.49
CD2100	RCA	52	6.20	4.50	3.75
CD2101	RCA	52	6.50	4.75	3.95
CD2150	RCA	52	3.96	2.88	2.40
CD2151	RCA	52	3.96	2.88	2.40
CD2152	RCA	52	3.96	2.88	2.40
CD2153	RCA	52	5.20	3.80	3.15
CD2200	RCA	52	5.20	3.80	3.15
CD2200D	RCA	52	5.20	3.80	3.15
CD2201	RCA	52	5.45	3.95	3.30
CD2201D	RCA	52	5.45	3.95	3.30
CD2202	RCA	52	5.45	3.95	3.30
CD2202D	RCA	52	5.45	3.95	3.30
CD2203	RCA	52	6.95	5.05	4.20
CD2203D	RCA	52	6.95	5.05	4.20
CD2204	RCA	52	3.71	2.70	2.25
CD2204D	RCA	52	3.71	2.70	2.25
CD2205	RCA	52	5.20	3.80	3.15
CD2205D	RCA	52	5.20	3.80	3.15
CD2300/930	RCA	53	4.13	3.00	2.50
CD2300D/930	RCA	53	4.13	3.00	2.50
CD2300E/830	RCA	53	1.73	1.26	1.05
CD2301/961	RCA	53	4.13	3.00	2.50
CD2301D/961	RCA	53	4.13	3.00	2.50
CD2301E/861	RCA	53	1.73	1.26	1.05
CD2302/946	RCA	53	4.54	3.30	2.75
CD2302D/946	RCA	53	4.54	3.30	2.75
CD2302E/846	RCA	53	1.90	1.38	1.15
CD2303/949	RCA	53	4.54	3.30	2.75
CD2303D/949	RCA	53	4.54	3.30	2.75
CD2303E/849	RCA	53	1.90	1.38	1.15
CD2304/945	RCA	53	4.95	3.60	3.00
CD2304D/945	RCA	53	4.95	3.60	3.00
CD2304E/845	RCA	53	2.48	1.80	1.50
CD2305/948	RCA	53	4.95	3.60	3.00
CD2305D/948	RCA	53	4.95	3.60	3.00
CD2305E/848	RCA	53	2.48	1.80	1.50
CD2306/932	RCA	53	4.54	3.30	2.75
CD2306D/932	RCA	53	4.54	3.30	2.75
CD2306E/832	RCA	53	1.90	1.38	1.15
CD2307/944	RCA	53	4.54	3.30	2.75
CD2307D/944	RCA	53	4.54	3.30	2.75
CD2307E/844	RCA	53	1.90	1.38	1.15
CD2308/962	RCA	53	4.54	3.30	2.75
CD2308D/962	RCA	53	4.54	3.30	2.75
CD2308E/862	RCA	53	1.90	1.38	1.15
CD2309/963	RCA	53	4.54	3.30	2.75
CD2309D/963	RCA	53	4.54	3.30	2.75
CD2309E/863	RCA	53	1.90	1.38	1.15
CD2310/936	RCA	53	4.79	3.48	2.90
CD2310D/936	RCA	53	4.79	3.48	2.90
CD2310E/836	RCA	53	1.90	1.38	1.15
CD2311/937	RCA	53	4.79	3.48	2.90
CD2311D/937	RCA	53	4.79	3.48	2.90
CD2311E/837	RCA	53	1.90	1.38	1.15
CD2312	RCA	53	4.79	3.48	2.90
CD2312D	RCA	53	4.79	3.48	2.90
CD2312E	RCA	53	1.90	1.38	1.15
CD2313	RCA	53	4.79	3.48	2.90
CD2313D	RCA	53	4.79	3.48	2.90
CD2313E	RCA	53	1.90	1.38	1.15
CD2314/933	RCA	53	3.71	2.70	2.25
CD2314D/933	RCA	53	3.71	2.70	2.25
CD2314E/833	RCA	53	1.49	1.08	.90
CD2315	RCA	53	6.45	4.70	3.90
CD2315D	RCA	53	6.45	4.70	3.90
CD2315E	RCA	53	4.46	3.24	2.70
CD2316	RCA	53	6.45	4.70	3.90
CD2316D	RCA	53	6.45	4.70	3.90
CD2316E	RCA	53	4.46	3.24	2.70
CD2317	RCA	53	6.45	4.70	3.90
CD2317D	RCA	53	6.45	4.70	3.90
CD2317E	RCA	53	4.46	3.24	2.70
CD2318	RCA	53	6.45	4.70	3.90
CD2318D	RCA	53	6.45	4.70	3.90
CD2318E	RCA	53	4.46	3.24	2.70
CD4000	RCA	51	8.25	6.20	5.00
CD4000D	RCA	51	6.60	4.80	4.00
CD4001	RCA	51	9.50	6.90	5.75
CD4001D	RCA	51	7.85	5.70	4.75
CD4002	RCA	51	9.10	6.60	5.50
CD4002D	RCA	51	7.45	5.40	4.50
CD4003	RCA	51	13.05	10.80	9.00
CD4003D	RCA	51	11.60	9.60	8.00
CD4004	RCA	51	15.95	13.20	11.00
CD4004T	RCA	51	14.50	12.00	10.00
CD4005	RCA	51	15.95	13.20	11.00
CD4005D	RCA	51	14.50	12.00	10.00
CD4007	RCA	51	6.60	4.80	4.00
CD4007D	RCA	51	4.95	3.60	3.00
CD4006	RCA	51	26.50	21.90	18.25
CD4006D	RCA	51	25.00	20.70	17.25

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC301F	MOT	39	12.65	10.15	8.45
MC301G	MOT	39	11.55	9.25	7.70
MC302F	MOT	39	14.85	11.90	9.90
MC302G	MOT	39	13.70	11.00	9.15
MC303F	MOT	39	16.70	13.40	11.15
MC303G	MOT	39	15.60	12.50	10.40
MC304F	MOT	39	8.40	6.70	5.60
MC304G	MOT	39	7.25	5.80	4.85
MC305F	MOT	39	8.40	6.70	5.60
MC305G	MOT	39	7.25	5.80	4.85
MC306F	MOT	39	11.30	9.05	7.55
MC306G	MOT	39	10.20	8.15	6.80
MC307F	MOT	39	11.30	9.05	7.55
MC307G	MOT	39	10.20	8.15	6.80
MC308F	MOT	39	18.80	15.05	12.55
MC308G	MOT	39	17.70	14.15	11.80
MC309F	MOT	39	13.70	11.00	9.15
MC309G	MOT	39	12.60	10.10	8.40
MC310F	MOT	39	13.70	11.00	9.15
MC310G	MOT	39	12.60	10.10	8.40
MC311F	MOT	39	13.70	11.00	9.15
MC311G	MOT	39	12.60	10.10	8.40
MC312AF	MOT	39	16.70	13.40	11.15
MC312AG	MOT	39	15.60	12.50	10.40
MC312F	MOT	39	16.70	13.40	11.15
MC312G	MOT	39	15.60	12.50	10.40
MC313F	MOT	39	18.35	14.70	12.25
MC314F	MOT	39	21.95	17.60	14.65
MC314G	MOT	39	20.85	16.70	13.90
MC315F	MOT	43	24.35	19.50	16.25
MC315G	MOT	39	23.25	18.60	15.50
MC316F	MOT	39	11.30	9.05	7.55
MC316G	MOT	39	10.20	8.15	6.80
MC317F	MOT	39	11.30	9.05	7.55
MC317G	MOT	39	10.20	8.15	6.80
MC318F	MOT	39	11.30	9.05	7.55
MC318G	MOT	39	10.20	8.15	6.80
MC351F	MOT	39	6.45	5.65	5.15
MC351G	MOT	39	4.55	4.00	3.65
MC352AF	MOT	39	6.45	5.65	5.15
MC352AG	MOT	39	4.55	4.00	3.65
MC352F	MOT	39	6.45	5.65	5.15
MC352G	MOT	39	4.55	4.00	3.65
MC353F	MOT	39	7.95	7.20	6.25
MC353G	MOT	39	5.95	5.20	4.75
MC354F	MOT	39	4.45	4.15	3.45
MC354G	MOT	39	2.45	2.15	1.95
MC355F	MOT	39	4.80	4.45	3.75

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 1 CA3000 RCA designates RCA CA3000

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC355G	MOT	39	2.80	2.45	2.25
MC356F	MOT	39	5.55	5.15	4.35
MC356G	MOT	39	3.55	3.15	2.85
MC357F	MOT	39	5.55	5.15	4.35
MC357G	MOT	39	3.55	3.15	2.85
MC358AF	MOT	39	11.50	10.35	9.10
MC358AG	MOT	39	9.50	8.35	7.60
MC358F	MOT	39	11.50	10.35	9.10
MC358G	MOT	39	9.50	8.35	7.60
MC359F	MOT	39	5.70	5.25	4.45
MC359G	MOT	39	3.70	3.25	2.95
MC360F	MOT	39	5.70	5.25	4.45
MC360G	MOT	39	3.70	3.25	2.95
MC361F	MOT	39	5.70	5.25	4.45
MC361G	MOT	39	3.70	3.25	2.95
MC362AF	MOT	39	6.85	6.05	5.50
MC362AG	MOT	39	5.00	4.40	4.00
MC362F	MOT	39	6.85	6.05	5.50
MC362G	MOT	39	5.00	4.40	4.00
MC363F	MOT	39	7.35	6.50	5.90
MC364F	MOT	39	12.20	10.70	9.75
MC364G	MOT	39	10.75	9.45	8.60
MC365F	MOT	39	11.05	9.75	8.85
MC365G	MOT	39	9.20	8.10	7.35
MC366F	MOT	39	8.10	7.15	6.50
MC366G	MOT	39	6.25	5.50	5.00
MC367F	MOT	39	7.50	6.60	6.00
MC367G	MOT	39	5.60	4.95	4.50
MC368F	MOT	39	7.50	6.60	6.00
MC368G	MOT	39	5.60	4.95	4.50
MC369F	MOT	39	7.25	6.40	5.80
MC369G	MOT	39	5.45	4.80	4.35
MC400F	MOT	...	4.25	3.40	2.85
MC400L	MOT	42	4.05	3.25	2.70
MC401F	MOT	...	4.25	3.40	2.85
MC401L	MOT	42	4.40	3.55	2.95
MC402F	MOT	...	4.25	3.40	2.85
MC402L	MOT	42	4.05	3.25	2.70
MC403F	MOT	...	4.25	3.40	2.85
MC403L	MOT	42	4.05	3.25	2.70
MC404F	MOT	...	4.25	3.40	2.85
MC404L	MOT	42	4.40	3.55	2.95
MC405F	MOT	...	4.25	3.40	2.85
MC405L	MOT	42	4.40	3.55	2.95
MC406F	MOT	...	4.25	3.40	2.85
MC406L	MOT	42	4.40	3.55	2.95
MC407F	MOT	...	4.85	3.90	3.25
MC407L	MOT	42	4.40	3.55	2.95
MC408F	MOT	...	4.25	3.40	2.85
MC408L	MOT	42	4.05	3.25	2.70
MC409F	MOT	...	3.05	2.45	2.05
MC409L	MOT	42	2.75	2.20	1.85
MC410F	MOT	...	3.05	2.45	2.05
MC410L	MOT	42	2.75	2.20	1.85
MC411F	MOT	...	3.05	2.45	2.05
MC411L	MOT	42	2.75	2.20	1.85
MC412F	MOT	...	4.25	3.40	2.85
MC412L	MOT	42	4.05	3.25	2.70
MC413F	MOT	...	4.85	3.90	3.25
MC413L	MOT	42	4.40	3.55	2.95
MC414F	MOT	...	4.85	3.90	3.25
MC414L	MOT	42	4.40	3.55	2.95
MC415F	MOT	...	5.70	4.55	3.80
MC415L	MOT	42	6.45	5.15	4.30
MC416F	MOT	..	5.70	4.55	3.80
MC416L	MOT	42	6.45	5.15	4.30
MC417F	MOT	...	5.70	4.55	3.80
MC417L	MOT	42	6.45	5.15	4.30
MC418F	MOT	...	5.70	4.55	3.80
MC418L	MOT	42	6.45	5.15	4.30
MC420F	MOT	...	4.25	3.40	2.85
MC420L	MOT	42	4.95	3.95	3.30
MC421F	MOT	...	5.90	4.75	3.95
MC421L	MOT	42	5.30	4.25	3.55
MC422F	MOT	...	8.75	7.00	5.85
MC425F	MOT	...	4.85	3.90	3.25
MC425L	MOT	42	4.40	3.55	2.95
MC450F	MOT	..	3.50	2.80	2.35
MC450L	MOT	42	3.20	2.60	2.15
MC451F	MOT	...	3.50	2.80	2.35
MC451L	MOT	42	3.60	2.90	2.40
MC452F	MOT	...	3.50	2.80	2.35
MC452L	MOT	42	3.20	2.60	2.15

SEE PAGE 13 FOR SEMICONDUCTORS

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufactuer's type and name.

Example: 50 D 26 MC453F MOT designates Motorola MC453F

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC453F	MOT	...	3.50	2.80	2.35
MC453L	MOT	42	3.20	2.60	2.15
MC454F	MOT	...	3.50	2.80	2.35
MC454L	MOT	42	3.60	2.90	2.40
MC455F	MOT	...	3.50	2.80	2.35
MC455L	MOT	42	3.60	2.90	2.40
MC456F	MOT	...	3.50	2.80	2.35
MC456L	MOT	42	3.60	2.90	2.40
MC457F	MOT	...	4.10	3.30	2.75
MC457L	MOT	42	3.60	2.90	2.40
MC458F	MOT	...	3.50	2.80	2.35
MC458L	MOT	42	3.20	2.60	2.15
MC459F	MOT	...	3.05	2.45	2.05
MC459L	MOT	42	2.75	2.20	1.85
MC460F	MOT	...	3.05	2.45	2.05
MC460L	MOT	42	2.75	2.20	1.85
MC461F	MOT	...	3.05	2.45	2.05
MC461L	MOT	42	2.75	2.20	1.85
MC462F	MOT	...	3.50	2.80	2.35
MC462L	MOT	42	3.20	2.60	2.15
MC463F	MOT	...	4.10	3.30	2.75
MC463L	MOT	42	3.60	2.90	2.40
MC464F	MOT	...	4.10	3.30	2.75
MC464L	MOT	42	3.60	2.90	2.40
MC465F	MOT	...	4.80	3.85	3.20
MC465L	MOT	42	5.15	4.15	3.45
MC466F	MOT	...	4.80	3.85	3.20
MC466L	MOT	42	5.15	4.15	3.45
MC467F	MOT	...	4.80	3.85	3.20
MC467L	MOT	42	5.15	4.15	3.45
MC468F	MOT	...	4.80	3.85	3.20
MC468L	MOT	42	5.15	4.15	3.45
MC470F	MOT	...	3.50	2.80	2.35
MC470L	MOT	42	3.90	3.10	2.60
MC471F	MOT	...	4.85	3.90	3.25
MC471L	MOT	42	4.25	3.40	2.85
MC472F	MOT	...	7.35	5.90	4.90
MC472L	MOT	42	7.35	5.90	4.90
MC475F	MOT	...	4.10	3.30	2.75
MC475L	MOT	42	3.60	2.90	2.40
MC500F	MOT	...	6.45	5.15	4.30
MC500L	MOT	42	6.45	5.15	4.30
MC501F	MOT	...	6.45	5.15	4.30
MC501L	MOT	42	6.45	5.15	4.30
MC502F	MOT	...	6.45	5.15	4.30
MC502L	MOT	42	6.45	5.15	4.30
MC503F	MOT	...	6.45	5.15	4.30
MC503L	MOT	42	6.45	5.15	4.30
MC504F	MOT	...	6.45	5.15	4.30
MC504L	MOT	42	6.45	5.15	4.30
MC505F	MOT	...	6.45	5.15	4.30
MC505L	MOT	42	6.45	5.15	4.30
MC506F	MOT	...	6.45	5.15	4.30
MC506L	MOT	42	6.45	5.15	4.30
MC507F	MOT	...	7.40	5.95	4.95
MC507L	MOT	42	7.40	5.95	4.95
MC508F	MOT	...	6.45	5.15	4.30
MC508L	MOT	42	6.45	5.15	4.30
MC509F	MOT	...	4.55	3.65	3.05
MC509L	MOT	42	4.55	3.65	3.05
MC510F	MOT	...	4.55	3.65	3.05
MC510L	MOT	42	4.55	3.65	3.05
MC511F	MOT	...	4.55	3.65	3.05
MC511L	MOT	42	4.55	3.65	3.05
MC512F	MOT	...	6.45	5.15	4.30
MC512L	MOT	42	6.45	5.15	4.30
MC513F	MOT	...	7.40	5.95	4.95
MC513L	MOT	42	7.40	5.95	4.95
MC514F	MOT	...	7.40	5.95	4.95
MC514L	MOT	42	7.40	5.95	4.95
MC515F	MOT	...	8.75	7.00	5.85
MC515L	MOT	42	8.75	7.00	5.85
MC516F	MOT	...	8.75	7.00	5.85
MC516L	MOT	42	8.75	7.00	5.85
MC517F	MOT	...	8.75	7.00	5.85
MC517L	MOT	42	8.75	7.00	5.85
MC518F	MOT	...	8.75	7.00	5.85
MC518L	MOT	42	8.75	7.00	5.85
MC520F	MOT	...	6.45	5.15	4.30
MC520L	MOT	42	6.45	5.15	4.30
MC521F	MOT	...	7.70	6.20	5.15
MC521L	MOT	42	7.70	6.20	5.15
MC522F	MOT	...	13.40	10.75	8.95
MC522L	MOT	42	13.40	10.75	8.95
MC525F	MOT	...	.74	.59	.49
MC525L	MOT	42	7.40	5.95	4.95
MC550F	MOT	...	5.40	4.30	3.60
MC550L	MOT	42	5.40	4.30	3.60
MC551F	MOT	...	5.40	4.30	3.60
MC551L	MOT	42	5.40	4.30	3.60
MC552F	MOT	...	5.40	4.30	3.60
MC552L	MOT	42	5.40	4.30	3.60
MC553F	MOT	...	5.40	4.30	3.60
MC553L	MOT	42	5.40	4.30	3.60
MC554F	MOT	...	5.40	4.30	3.60
MC554L	MOT	42	5.40	4.30	3.60
MC555F	MOT	...	5.40	4.30	3.60
MC555L	MOT	42	5.40	4.30	3.60
MC556F	MOT	...	5.40	4.30	3.60
MC556L	MOT	42	5.40	4.30	3.60
MC557F	MOT	...	6.20	5.00	4.15
MC557L	MOT	42	6.20	5.00	4.15
MC558F	MOT	...	5.40	4.30	3.60
MC558L	MOT	42	5.40	4.30	3.60
MC559F	MOT	...	4.55	3.65	3.05
MC559L	MOT	42	4.55	3.65	3.05
MC560F	MOT	...	4.55	3.65	3.05
MC560L	MOT	42	4.55	3.65	3.05
MC561F	MOT	...	4.55	3.65	3.05
MC561L	MOT	42	4.55	3.65	3.05
MC562F	MOT	...	5.40	4.30	3.60
MC562L	MOT	42	5.40	4.30	3.60
MC563F	MOT	...	6.20	5.00	4.15
MC563L	MOT	42	6.20	5.00	4.15
MC564F	MOT	...	6.20	5.00	4.15
MC564L	MOT	42	6.20	5.00	4.15
MC565F	MOT	...	7.35	5.90	4.90
MC565L	MOT	42	7.35	5.90	4.90
MC566F	MOT	...	7.35	5.90	4.90
MC566L	MOT	42	7.35	5.90	4.90
MC567F	MOT	...	7.35	5.90	4.90
MC567L	MOT	42	7.35	5.90	4.90
MC568F	MOT	...	7.35	5.90	4.90
MC568L	MOT	42	7.35	5.90	4.90
MC570F	MOT	...	5.40	4.30	3.60
MC570L	MOT	42	5.40	4.30	3.60
MC571F	MOT	...	6.50	5.20	4.35
MC571L	MOT	42	6.50	5.20	4.35
MC572F	MOT	...	11.15	8.95	7.45
MC572L	MOT	42	7.35	5.90	4.90
MC575F	MOT	...	6.20	5.00	4.15
MC575L	MOT	42	6.20	5.00	4.15

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MC660L	MOT	40	3.35	2.50
MC660P	MOT	40	2.10	1.70
MC661L	MOT	40	3.35	2.50
MC661P	MOT	40	2.05	1.65
MC662L	MOT	40	3.90	2.90
MC662P	MOT	40	2.35	1.90
MC663L	MOT	40	7.20	6.10
MC663P	MOT	40	5.20	4.20
MC664L	MOT	40	4.80	4.05
MC664P	MOT	40	3.30	2.65
MC665L	MOT	40	4.90	3.95
MC665P	MOT	40	2.85	2.30
MC666L	MOT	40	4.90	3.95
MC666P	MOT	40	3.15	2.55
MC667L	MOT	40	6.50	5.50
MC667P	MOT	40	4.85	3.90
MC668L	MOT	40	3.70	2.75
MC668P	MOT	40	2.05	1.65
MC669L	MOT	40	3.15	2.35
MC669P	MOT	40	1.80	1.45
MC670L	MOT	40	3.50	2.60
MC670P	MOT	40	2.05	1.65
MC671L	MOT	40	3.50	2.60
MC671P	MOT	40	2.10	1.70
MC672L	MOT	40	3.70	2.75
MC672P	MOT	40	2.10	1.70
MC673L	MOT	40	3.50	2.60
MC673P	MOT	40	2.35	1.90
MC674L	MOT	40	3.50	2.60
MC674P	MOT	40	2.30	1.85
MC700G	MOT	44	1.24	.92
MC701G	MOT	44	1.50	1.11
MC702G	MOT	44	1.24	.92
MC703G	MOT	44	1.24	.92
MC704G	MOT	44	1.38	1.02
MC705G	MOT	44	1.50	1.11
MC706G	MOT	44	1.50	1.11
MC707G	MOT	44	1.24	.92
MC708G	MOT	45	1.50	1.11
MC709G	MOT	45	1.24	.92
MC710G	MOT	45	1.24	.92
MC711G	MOT	45	1.24	.92
MC712G	MOT	45	1.50	1.11
MC713G	MOT	45	1.89	1.40
MC714G	MOT	44	1.24	.92
MC715G	MOT	44	1.38	1.02
MC715P	MOT	45	1.00	.75
MC717P	MOT	45	1.08	.81
MC718G	MOT	45	1.38	1.02
MC718P	MOT	45	1.00	.75
MC719P	MOT	45	1.08	.81
MC720G	MOT	45	1.89	1.40
MC721G	MOT	45	1.24	.92
MC722G	MOT	45	2.21	1.64

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MC722P	MOT	45	1.35	1.00
MC723G	MOT	44	1.89	1.40
MC723P	MOT	45	1.30	.95
MC724P	MOT	45	1.08	.81
MC725P	MOT	45	1.08	.81
MC726G	MOT	44	2.21	1.64
MC726P	MOT	45	1.35	1.00
MC727G	MOT	44	1.24	.92
MC728G	MOT	45	1.24	.92
MC729G	MOT	44	1.24	.92
MC764P	MOT	45	2.55	1.90
MC767P	MOT	45	4.05	3.00
MC770P	MOT	45	3.55	2.65
MC771P	MOT	45	1.80	1.35
MC774G	MOT	44	2.21	1.64
MC775P	MOT	45	1.35	1.00
MC776P	MOT	45	2.00	1.50
MC777P	MOT	...	4.05	3.00
MC778P	MOT	45	2.35	1.75
MC779P	MOT	45	1.90	1.40
MC780P	MOT	45	4.05	3.00
MC781G	MOT	45	1.54	1.14
MC782G	MOT	45	2.21	1.64
MC783P	MOT	45	1.55	1.14
MC784P	MOT	45	1.46	1.08
MC785P	MOT	45	1.09	.81
MC786P	MOT	45	1.09	.81
MC787P	MOT	45	1.90	1.40
MC788P	MOT	45	1.35	1.00
MC789P	MOT	45	1.08	.81
MC790P	MOT	45	2.00	1.50
MC791P	MOT	45	2.35	1.75
MC792P	MOT	45	1.09	.81
MC793P	MOT	45	1.09	.81
MC794P	MOT	...	4.05	3.00
MC796P	MOT	45	5.05	3.75
MC797P	MOT	45	5.05	3.75
MC798P	MOT	45	1.21	.90
MC799G	MOT	44	1.54	1.14
MC799P	MOT	45	1.08	.81

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MC800G	MOT	44	1.42	1.42	1.42	1.05
MC801G	MOT	44	1.67	1.67	1.67	1.24
MC802G	MOT	44	1.42	1.42	1.42	1.05
MC803G	MOT	44	1.42	1.42	1.42	1.05
MC804G	MOT	44	1.53	1.53	1.53	1.13
MC805G	MOT	44	1.67	1.67	1.67	1.24
MC806G	MOT	44	1.67	1.67	1.67	1.24
MC807G	MOT	44	1.42	1.42	1.42	1.05
MC808G	MOT	45	1.67	1.67	1.67	1.24
MC809G	MOT	45	1.42	1.42	1.42	1.05
MC810G	MOT	45	1.42	1.42	1.42	1.05
MC811G	MOT	45	1.42	1.42	1.42	1.05
MC812G	MOT	45	1.67	1.67	1.67	1.24
MC813G	MOT	45	2.12	2.12	2.12	1.57
MC814G	MOT	44	1.42	1.42	1.42	1.05
MC815G	MOT	44	1.53	1.53	1.53	1.13
MC815P	MOT	45	1.15	1.15	1.15	.86
MC816G	MOT	44	2.12	2.12	2.12	1.57
MC816P	MOT	45	1.40	1.40	1.40	1.05
MC817P	MOT	45	1.25	1.25	1.25	.93
MC818G	MOT	45	1.53	1.53	1.53	1.13
MC818P	MOT	45	1.15	1.15	1.15	.86
MC819P	MOT	45	1.25	1.25	1.25	.93
MC820G	MOT	45	2.12	2.12	2.12	1.57
MC821G	MOT	45	1.42	1.42	1.42	1.05
MC822G	MOT	45	2.48	2.48	2.48	1.84
MC822P	MOT	45	1.55	1.55	1.55	1.15
MC824P	MOT	45	1.25	1.25	1.25	.93
MC825P	MOT	45	1.25	1.25	1.25	.93
MC826G	MOT	44	2.48	2.48	2.48	1.84
MC826P	MOT	45	1.55	1.55	1.55	1.15
MC827G	MOT	44	1.42	1.42	1.42	1.05
MC828G	MOT	45	1.42	1.42	1.42	1.05

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MC829G	MOT	44	1.42	1.42	1.42
			1000-4999 Ea.		1.05
MC830F	MOT	46	3.60	2.90	2.40
MC830G	MOT	46	3.60	2.90	2.40
MC830P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC831F	MOT	46	5.25	4.20	3.50
MC831G	MOT	46	5.25	4.20	3.50
MC831P	MOT	46	3.00	3.00	3.00
			1000-4999 Ea.		2.25
MC832F	MOT	46	4.05	3.25	2.70
MC832G	MOT	46	4.05	3.25	2.70
MC832P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC833F	MOT	46	4.70	3.80	3.15
MC833G	MOT	46	4.50	3.60	3.00
MC833P	MOT	46	1.35	1.35	1.35
			1000-4999 Ea.		1.00
MC834F	MOT	46	4.35	3.50	2.90
MC834P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC835F	MOT	46	4.35	3.50	2.90
MC835P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC836F	MOT	46	4.35	3.50	2.90

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MC836P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC837F	MOT	46	4.35	3.50	2.90
MC837P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC838F	MOT	46	15.00	12.00	10.00
MC838P	MOT	46	7.55	7.55	7.55
			1000-4999 Ea.		6.70
MC839F	MOT	46	15.00	12.00	10.00
MC839P	MOT	46	7.55	7.55	7.55
			1000-4999 Ea.		6.70
MC840F	MOT	46	4.35	3.50	2.90
MC840P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC841F	MOT	46	4.35	3.50	2.90
MC841P	MOT	46	2.00	2.00	2.00
			1000-4999 Ea.		1.50
MC842F	MOT	46	5.85	4.70	3.90
MC842P	MOT	46	3.60	3.60	3.60
			1000-4999 Ea.		2.70
MC843G	MOT	46	13.35	10.70	8.90
MC844F	MOT	46	4.05	3.25	2.70
MC844G	MOT	46	4.05	3.25	2.70
MC844P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC845F	MOT	46	5.25	4.20	3.50
MC845G	MOT	46	5.25	4.20	3.50
MC845P	MOT	46	3.00	3.00	3.00
			1000-4999 Ea.		2.25
MC846F	MOT	46	3.60	2.90	2.40
MC846G	MOT	46	3.60	2.90	2.40
MC846P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC847F	MOT	46	4.70	3.80	3.15
MC847P	MOT	46	1.35	1.35	1.35
			1000-4999 Ea.		1.00
MC848F	MOT	46	5.25	4.20	3.50
MC848G	MOT	46	5.25	4.20	3.50
MC848P	MOT	46	3.00	3.00	3.00
			1000-4999 Ea.		2.25
MC849F	MOT	46	3.60	2.90	2.40
MC849G	MOT	46	3.60	2.90	2.40
MC849P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC850F	MOT	46	9.90	7.90	6.60
MC850G	MOT	46	9.90	7.90	6.60
MC850P	MOT	46	4.50	4.50	4.50
			1000-4999 Ea.		3.35
MC851F	MOT	46	11.60	9.30	7.75
MC851G	MOT	46	11.40	9.10	7.60
MC851P	MOT	46	4.50	4.50	4.60
			1000-4999 Ea.		3.35
MC852F	MOT	...	8.40	6.70	5.60
MC852P	MOT	...	4.75	4.75	4.75
			1000-4999 Ea.		3.60
MC853F	MOT	...	8.40	6.70	5.60
MC853P	MOT	...	4.75	4.75	4.75
			1000-4999 Ea.		3.60
MC855F	MOT	46	8.40	6.70	5.60
MC855P	MOT	46	4.75	4.75	4.75
			1000-4999 Ea.		3.60
MC856F	MOT	46	8.40	6.70	5.60
MC856P	MOT	...	4.75	4.75	4.75
			1000-4999 Ea.		3.60
MC857F	MOT	46	6.45	5.15	4.30
MC857P	MOT	46	2.70	2.70	2.70
			1000-4999 Ea.		2.00
MC858F	MOT	46	6.45	5.15	4.30
MC858P	MOT	46	2.70	2.70	2.70
			1000-4999 Ea.		2.00
MC861F	MOT	46	3.60	2.90	2.40
MC861G	MOT	46	3.60	2.90	2.40
MC861P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC862F	MOT	46	3.60	2.90	2.40
MC862G	MOT	46	3.60	2.90	2.40
MC862P	MOT	46	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC863F	MOT	46	3.60	2.90	2.40
MC863G	MOT	46	3.60	2.90	2.40
MC863P	MOT	...	1.65	1.65	1.65
			1000-4999 Ea.		1.25
MC864P	MOT	45	3.00	3.00	3.00
			1000-4999 Ea.		2.20
MC867P	MOT	45	4.60	4.60	4.60
			1000-4999 Ea.		3.40
MC870P	MOT	45	4.05	4.05	4.05
			1000-4999 Ea.		3.00
MC871P	MOT	45	2.10	2.10	2.10
			1000-4999 Ea.		1.55
MC874G	MOT	44	2.48	2.48	2.48
			1000-4999 Ea.		1.84
MC875P	MOT	45	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC876P	MOT	45	2.30	2.30	2.30
			1000-4999 Ea.		1.72
MC877P	MOT		4.60	4.60	4.60
			1000-4999 Ea.		3.40
MC878P	MOT	45	2.70	2.70	2.70
			1000-4999 Ea.		2.00
MC879P	MOT	45	2.15	2.15	2.15
			1000-4999 Ea.		1.60
MC880P	MOT	45	4.60	4.60	4.60
			1000-4999 Ea.		3.40
MC881G	MOT	45	1.73	1.73	1.73
			1000-4999 Ea.		1.28
MC882G	MOT	45	2.48	2.48	2.48
			1000-4999 Ea.		1.84
MC883P	MOT	45	1.80	1.80	1.80
			1000-4999 Ea.		1.34
MC884P	MOT	45	1.70	1.70	1.70
			1000-4999 Ea.		1.27
MC885P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93

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MC886P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93
MC887P	MOT	45	2.15	2.15	2.15
			1000-4999 Ea.		1.60
MC888P	MOT	45	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC889P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93
MC890P	MOT	45	2.30	2.30	2.30
			1000-4999 Ea.		1.72
MC891P	MOT	45	2.70	2.70	2.70
			1000-4999 Ea.		2.00
MC892P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93
MC893P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93
MC894P	MOT	..	4.60	4.60	4.60
			1000-4999 Ea.		3.40
MC896P	MOT	45	5.65	5.65	5.65
			1000-4999 Ea.		4.20
MC897P	MOT	45	5.65	5.65	5.65
			1000-4999 Ea.		4.20
MC898P	MOT	45	1.40	1.40	1.40
			1000-4999 Ea.		1.05
MC899G	MOT	44	1.73	1.73	1.73
			1000-4999 Ea.		1.28
MC899P	MOT	45	1.25	1.25	1.25
			1000-4999 Ea.		.93
MC900G	MOT	44	5.00	4.00	3.35
MC901G	MOT	44	4.55	3.65	3.05
MC902G	MOT	44	4.95	3.95	3.30
MC903G	MOT	44	4.55	3.65	3.05
MC904G	MOT	44	5.60	4.50	3.75
MC905G	MOT	44	5.70	4.55	3.80
MC906G	MOT	44	5.70	4.55	3.80
MC907G	MOT	44	4.55	3.65	3.05
MC908G	MOT	44	5.60	4.50	3.75
MC909G	MOT	44	5.00	4.00	3.35
MC910G	MOT	45	4.70	3.80	3.15
MC911G	MOT	45	4.55	3.65	3.05
MC912G	MOT	45	5.60	4.50	3.75
MC913G	MOT	45	6.00	4.80	4.00
MC914G	MOT	44	4.70	3.80	3.15
MC915G	MOT	44	4.70	3.80	3.15
MC916G	MOT	44	6.30	5.05	4.20
MC918G	MOT	45	4.70	3.80	3.15
MC920G	MOT	45	6.30	5.05	4.20
MC921G	MOT	45	4.25	3.40	2.85
MC922G	MOT	45	6.30	5.05	4.20
MC926G	MOT	44	6.30	5.05	4.20
MC927G	MOT	44	4.70	3.80	3.15
MC928G	MOT	45	4.55	3.65	3.05
MC929G	MOT	44	4.55	3.65	3.05
MC930F	MOT	46	6.50	5.20	4.35
MC930G	MOT	46	6.50	5.20	4.35
MC931F	MOT	46	9.00	7.20	6.00
MC931G	MOT	46	9.00	7.20	6.00
MC932F	MOT	46	7.10	5.70	4.75
MC932G	MOT	46	7.10	5.70	4.75
MC933F	MOT	46	5.45	4.40	3.65
MC933G	MOT	46	5.45	4.40	3.65
MC934F	MOT	46	7.80	6.25	5.20
MC935F	MOT	46	7.80	6.25	5.20
MC936F	MOT	46	7.80	6.25	5.20
MC937F	MOT	46	7.80	6.25	5.20
MC938F	MOT	46	27.00	21.60	18.00
MC939F	MOT	46	27.00	21.60	18.00
MC940F	MOT	46	7.80	6.25	5.20
MC941F	MOT	46	7.80	6.25	5.20
MC942F	MOT	46	9.90	7.90	6.60
MC943G	MOT	46	22.50	18.00	15.00
MC944F	MOT	46	7.10	5.70	4.75
MC944G	MOT	46	7.10	5.70	4.75
MC945F	MOT	46	9.00	7.20	6.00
MC945G	MOT	46	9.00	7.20	6.00
MC946F	MOT	46	6.50	5.20	4.35
MC946G	MOT	46	6.50	5.20	4.35
MC947F	MOT	46	5.45	4.40	3.65
MC948F	MOT	46	9.00	7.20	6.00
MC948G	MOT	46	9.00	7.20	6.00
MC949F	MOT	46	6.50	5.20	4.35
MC949G	MOT	46	6.50	5.20	4.35
MC950F	MOT	46	12.40	10.00	8.30
MC950G	MOT	46	12.40	10.00	8.30
MC951F	MOT	46	20.25	16.20	13.50
MC951G	MOT	46	18.50	14.80	12.35
MC952F	MOT	46	14.40	11.50	9.60
MC953F	MOT	46	14.40	11.50	9.60
MC955F	MOT	46	14.40	11.50	9.60
MC956F	MOT	46	14.40	11.50	9.60
MC957F	MOT	46	11.40	9.10	7.60
MC958F	MOT	46	11.40	9.10	7.60
MC961F	MOT	46	6.50	5.20	4.35
MC961G	MOT	46	6.50	5.20	4.35
MC962F	MOT	46	6.50	5.20	4.35
MC962G	MOT	46	6.50	5.20	4.35
MC963F	MOT	46	6.50	5.20	4.35
MC963G	MOT	46	6.50	5.20	4.35
MC974G	MOT	44	6.30	5.05	4.20
MC981G	MOT	45	8.70	6.95	5.80
MC982G	MOT	45	6.30	5.05	4.20
MC999G	MOT	44	8.70	6.95	5.80

Type No.	Mfr.	Page No.	EACH 1-999	1000-4999
MC1001P	MOT	40	1.50	1.10
MC1002P	MOT	40	1.50	1.10
MC1003P	MOT	40	1.50	1.10
MC1004P	MOT	40	1.55	1.15

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 26 MC836P MOT designates Motorola MC836P

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-999	1000-4999
MC1005P	MOT	40	1.55	1.15
MC1006P	MOT	40	1.55	1.15
MC1007P	MOT	40	1.60	1.20
MC1008P	MOT	40	1.60	1.20
MC1009P	MOT	40	1.60	1.20
MC1010P	MOT	40	1.70	1.25
MC1011P	MOT	40	1.70	1.25
MC1012P	MOT	40	1.70	1.25
MC1013P	MOT	40	2.90	2.15
MC1014P	MOT	40	3.15	2.35
MC1015P	MOT	40	3.15	2.35
MC1016P	MOT	40	3.15	2.35
MC1017P	MOT	40	3.30	2.45
MC1018P	MOT	40	3.30	2.45
MC1019P	MOT	40	4.25	3.15
MC1020P	MOT	40	1.50	1.10
MC1021P	MOT	40	4.25	3.15
MC1022P	MOT	40	4.50	3.35
MC1023P	MOT	40	6.50	4.80
MC1024P	MOT	40	1.60	1.20
MC1025P	MOT	40	1.55	1.15
MC1026P	MOT	40	6.50	4.80
MC1027P	MOT	40	6.50	4.80
MC1028P	MOT	40	11.25	8.35
MC1029P	MOT	40	3.15	2.35
MC1030P	MOT	40	4.80	3.55
MC1031P	MOT	40	4.80	3.55
MC1033P	MOT	40	3.15	2.55
MC1034P	MOT	40	10.35	7.65
MC1035P	MOT	40	1.80	1.35
MC1036P	MOT	40	13.50	10.00
MC1037P	MOT	40	13.50	10.00
MC1038P	MOT	40	11.20	8.30
MC1039P	MOT	40	5.15	3.80

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC1050F	MOT	...	5.30	4.25	3.55
MC1051F	MOT	...	5.30	4.25	3.55
MC1052F	MOT	...	5.30	4.25	3.55
MC1110G	MOT	47	37.50	31.25	25.00
MC1124L	MOT	48	6.30	6.30	5.40
			1000-4999 Ea.		4.50
MC1150L	MOT	...	29.25	23.40	19.50
MC1151L	MOT	..	25.50	20.40	17.00
MC1201F	MOT	40	4.10	3.30	2.75
MC1202F	MOT	40	4.10	3.30	2.75
MC1203F	MOT	40	4.10	3.30	2.75
MC1204F	MOT	40	4.25	3.40	2.85
MC1205F	MOT	40	4.25	3.40	2.85
MC1206F	MOT	40	4.25	3.40	2.85
MC1207F	MOT	40	4.40	3.55	2.95
MC1208F	MOT	40	4.40	3.55	2.95
MC1209F	MOT	40	4.40	3.55	2.95
MC1210F	MOT	40	4.55	3.65	3.05
MC1211F	MOT	40	4.55	3.65	3.05
MC1212F	MOT	40	4.55	3.65	3.05
MC1213F	MOT	40	7.50	6.00	5.00
MC1214F	MOT	40	8.60	6.90	5.75
MC1215F	MOT	40	8.60	6.90	5.75
MC1216F	MOT	40	8.60	6.90	5.75
MC1217F	MOT	40	8.90	7.15	5.95
MC1218F	MOT	40	8.90	7.15	5.95
MC1219F	MOT	40	11.40	9.10	7.60
MC1220F	MOT	40	4.10	3.30	2.75
MC1221F	MOT	40	11.40	9.10	7.60
MC1222F	MOT	40	9.35	7.50	6.25
MC1224F	MOT	40	4.40	3.55	2.95
MC1225F	MOT	40	4.25	3.40	2.85
MC1226F	MOT	40	14.25	11.40	9.50
MC1229F	MOT	40	8.25	6.60	5.50
MC1230F	MOT	40	11.60	9.30	7.75
MC1231F	MOT	40	11.60	9.30	7.75
MC1233F	MOT	40	8.60	6.90	5.75
MC1235F	MOT	40	4.50	3.60	3.00
MC1238F	MOT	40	22.50	18.00	15.00
MC1302P	MOT	48	5.25	4.35	3.50
MC1303L	MOT	48	5.25	4.35	3.50
MC1304P	MOT	48	7.20	6.00	4.80
MC1314G	MOT	.	3.20	2.70	2.15
MC1325P	MOT	48	3.75	3.10	2.50

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 26 MC1414L MOT designates Motorola MC1414L

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC1414L	MOT	48	9.75	8.10	6.50
MC1429G	MOT	47	3.90	2.65	1.95
MC1430F	MOT	47	6.75	5.60	4.50
MC1430G	MOT	47	5.25	4.35	3.50
MC1431F	MOT	47	6.75	5.60	4.50
MC1431G	MOT	47	5.25	4.35	3.50
MC1433F	MOT	47	8.85	7.35	5.90
MC1433G	MOT	47	3.90	2.65	1.95
MC1433L	MOT	47	8.25	6.85	5.50
MC1435F	MOT	47	8.25	6.85	5.50
MC1435G	MOT	47	6.75	5.60	4.50
MC1435L	MOT	47	6.75	5.60	4.50
MC1437L	MOT	47	6.50	4.40	3.25
MC1439G	MOT	47	3.60	2.45	1.80
MC1440F	MOT	48	13.50	11.25	9.00
MC1440G	MOT	48	3.00	2.00	1.50
MC1440L	MOT	48	12.00	10.00	8.00
MC1441F	MOT	48	19.50	16.25	13.00
MC1441L	MOT	48	19.50	16.25	13.00
MC1460G	MOT	48	5.25	4.35	3.50
MC1460R	MOT	48	6.75	5.60	4.50
MC1461G	MOT	48	6.75	5.60	4.50
MC1461R	MOT	48	8.25	6.85	5.50
MC1466L	MOT	48	12.75	10.60	8.50
MC1495L	MOT	48	22.50	18.75	15.00
MC1500F	MOT	47	13.95	11.60	9.30
MC1510F	MOT	47	13.95	11.60	9.30
MC1510G	MOT	47	12.00	10.00	8.00
MC1511F	MOT	...	15.95	14.00	12.75
MC1511G	MOT	...	13.45	11.80	10.75
MC1512G	MOT	...	15.30	13.50	12.25
MC1514L	MOT	48	19.50	16.25	13.00
MC1519G	MOT	47	50.00	40.00	30.00
MC1520F	MOT	47	12.00	10.00	8.00
MC1520G	MOT	47	9.75	8.10	6.50
MC1524G	MOT	47	70.00	55.00	40.00
MC1525G	MOT	47	12.00	10.00	8.00
MC1526G	MOT	47	60.00	48.00	36.00
MC1529G	MOT	47	11.25	9.35	7.50
MC1530F	MOT	47	15.00	12.50	10.00
MC1530G	MOT	47	12.75	10.60	8.50
MC1531F	MOT	47	15.00	12.50	10.00
MC1531G	MOT	47	12.75	10.60	8.50
MC1533F	MOT	47	15.00	12.50	10.00
MC1533G	MOT	47	12.75	10.60	8.50
MC1533L	MOT	47	12.75	10.65	8.50
MC1535F	MOT	47	15.00	12.50	10.00
MC1535G	MOT	47	12.75	10.60	8.50
MC1537L	MOT	47	18.00	15.00	12.00
MC1539G	MOT	47	11.25	9.35	7.50
MC1540F	MOT	48	24.00	20.00	16.00
MC1540G	MOT	48	22.50	18.75	15.00
MC1540L	MOT	48	22.50	18.75	15.00
MC1541F	MOT	48	27.00	22.50	18.00
MC1541L	MOT	48	27.00	22.50	18.00
MC1543L	MOT	48	27.00	22.50	18.00
MC1545F	MOT	47	9.75	8.10	6.50
MC1545G	MOT	47	8.25	6.85	5.50
MC1545L	MOT	47	8.25	6.85	5.50
MC1550F	MOT	47	7.25	6.05	4.85
MC1550G	MOT	47	1.50	1.00	.75
MC1552G	MOT	47	9.00	7.50	6.00
MC1553G	MOT	47	9.00	7.50	6.00
MC1554G	MOT	47	14.25	11.85	9.50
MC1560G	MOT	48	22.50	18.75	15.00
MC1560R	MOT	48	30.00	25.00	20.00
MC1561G	MOT	48	30.00	25.00	20.00
MC1561R	MOT	48	37.50	31.25	25.00
MC1566L	MOT	48	36.75	30.60	24.50
MC1595L	MOT	48	27.00	22.50	18.00
MC1660S	MOT	40	15.00	12.00	10.00
MC1661S	MOT	40	15.00	12.00	10.00
MC1662S	MOT	40	16.50	13.20	11.00
MC1663S	MOT	40	16.50	13.20	11.00
MC1664S	MOT	40	16.50	13.20	11.00
MC1665S	MOT	40	16.50	13.20	11.00
MC1666S	MOT	40	30.00	24.00	20.00
MC1667S	MOT	40	30.00	24.00	20.00
MC1668S	MOT	40	37.50	30.00	25.00
MC1669S	MOT	40	37.50	30.00	25.00
MC1670S	MOT	40	27.00	21.60	18.00
MC1671S	MOT	40	27.00	21.60	18.00
MC1709CF	MOT	47	8.85	7.35	5.90
MC1709CG	MOT	47	3.90	2.65	1.95
MC1709CL	MOT	47	5.90	4.00	2.95
MC1709F	MOT	47	15.00	12.50	10.00
MC1709G	MOT	47	12.75	10.60	8.50
MC1709L	MOT	47	12.75	10.65	8.50
MC1710CF	MOT	48	6.60	5.50	4.40
MC1710CG	MOT	48	3.90	2.65	1.95
MC1710CL	MOT	48	6.00	5.00	4.00
MC1710F	MOT	48	13.50	11.25	9.00
MC1710G	MOT	48	11.25	9.35	7.50
MC1710L	MOT	48	11.25	9.35	7.50
MC1711CF	MOT	48	10.35	8.60	6.90
MC1711CG	MOT	48	3.90	2.65	1.95
MC1711CL	MOT	48	9.75	8.10	6.50
MC1711F	MOT	48	20.25	16.85	13.50
MC1711G	MOT	48	18.00	15.00	12.00
MC1711L	MOT	48	18.00	15.00	12.00
MC1712CF	MOT	47	4.80	4.00	3.20
MC1712CG	MOT	47	3.90	2.65	1.95
MC1712CL	MOT	47	4.40	3.70	2.95
MC1712F	MOT	47	13.50	11.25	9.00
MC1712G	MOT	47	11.25	9.35	7.35
MC1712L	MOT	47	11.25	9.35	7.50
MC1800F	MOT	46	3.60	2.90	2.40
MC1800P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1801F	MOT	46	3.60	2.90	2.40
MC1801P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1802F	MOT	46	3.60	2.90	2.40
MC1802P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1803F	MOT	46	3.60	2.90	2.40
MC1803P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1804F	MOT	46	3.60	2.90	2.40
MC1804P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1805F	MOT	46	3.60	2.90	2.40
MC1805P	MOT	46	1.55	1.55	1.55
			1000-4999 Ea.		1.15
MC1806F	MOT	46	4.20	3.35	2.80
MC1806P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1807F	MOT	46	4.20	3.35	2.80
MC1807P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1808F	MOT	46	4.20	3.35	2.80
MC1808P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1809F	MOT	46	4.20	3.35	2.80
MC1809P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1810F	MOT	46	4.20	3.35	2.80
MC1810P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1811F	MOT	46	4.20	3.35	2.80
MC1811P	MOT	46	1.90	1.90	1.90
			1000-4999 Ea.		1.44
MC1812F	MOT	46	6.45	5.15	4.30
MC1812P	MOT	46	2.70	2.70	2.70
			1000-4999 Ea.		2.00
MC1813P	MOT	46	7.95	7.95	7.95
			1000-4999 Ea.		7.05
MC1814F	MOT	46	15.00	12.00	10.00
MC1814P	MOT	46	7.55	7.55	7.55
			1000-4999 Ea.		6.70
MC1900F	MOT	46	6.50	5.20	4.35
MC1901F	MOT	46	6.50	5.20	4.35
MC1902F	MOT	46	6.50	5.20	4.35
MC1903F	MOT	46	6.50	5.20	4.35
MC1904F	MOT	46	6.50	5.20	4.35
MC1905F	MOT	46	6.50	5.20	4.35
MC1906F	MOT	46	7.55	6.05	5.05
MC1907F	MOT	46	7.55	6.05	5.05
MC1908F	MOT	46	7.55	6.05	5.05
MC1909F	MOT	46	7.55	6.05	5.05
MC1910F	MOT	46	7.55	6.05	5.05
MC1911F	MOT	46	7.55	6.05	5.05
MC1912F	MOT	46	11.40	9.10	7.60
MC1914F	MOT	46	27.00	21.60	18.00
MC2000F	MOT	43	4.70	3.80	3.15
MC2000L	MOT	43	5.40	4.30	3.60
MC2001F	MOT	43	4.70	3.80	3.15
MC2001L	MOT	43	4.85	3.90	3.25
MC2002F	MOT	43	3.05	2.45	2.05
MC2002L	MOT	43	2.75	2.20	1.85
MC2003F	MOT	43	4.70	3.80	3.15
MC2003L	MOT	43	4.85	3.90	3.25
MC2004F	MOT	43	4.70	3.80	3.15
MC2004L	MOT	43	5.40	4.30	3.60
MC2005F	MOT	43	4.70	3.80	3.15
MC2005L	MOT	43	4.85	3.90	3.25
MC2006F	MOT	43	3.05	2.45	2.05
MC2006L	MOT	43	2.75	2.20	1.85
MC2007F	MOT	43	4.70	3.80	3.15
MC2007L	MOT	43	4.85	3.90	3.25
MC2009F	MOT	43	7.10	5.70	4.75
MC2009L	MOT	43	7.80	6.25	5.20
MC2010F	MOT	43	7.10	5.70	4.75
MC2010L	MOT	43	7.80	6.25	5.20
MC2013F	MOT	43	4.70	3.80	3.15
MC2013L	MOT	43	5.85	4.70	3.90
MC2025F	MOT	43	8.15	6.55	5.45
MC2025L	MOT	43	7.80	6.25	5.20
MC2026F	MOT	43	8.15	6.55	5.45
MC2026L	MOT	43	7.80	6.25	5.20
MC2028F	MOT	43	8.15	6.55	5.45
MC2028L	MOT	43	7.80	6.25	5.20
MC2050F	MOT	43	3.95	3.20	2.65
MC2050L	MOT	43	4.20	3.35	2.80
MC2051F	MOT	43	3.95	3.20	2.65
MC2051L	MOT	43	3.90	3.10	2.60
MC2052F	MOT	43	3.05	2.45	2.05
MC2052L	MOT	43	2.75	2.20	1.85
MC2053F	MOT	43	3.95	3.20	2.65
MC2053L	MOT	43	3.90	3.10	2.60
MC2054F	MOT	43	3.95	3.20	2.65
MC2054L	MOT	43	4.20	3.35	2.80
MC2055F	MOT	43	3.95	3.20	2.65
MC2055L	MOT	43	3.90	3.10	2.60
MC2056F	MOT	43	3.95	3.20	2.65
MC2056L	MOT	43	2.75	2.20	1.85
MC2057F	MOT	43	3.95	3.20	2.65
MC2057L	MOT	43	3.90	3.10	2.60
MC2059F	MOT	43	5.90	4.75	3.95
MC2059L	MOT	43	6.30	5.05	4.20
MC2060F	MOT	43	5.90	4.75	3.95
MC2060L	MOT	43	6.30	5.05	4.20
MC2063F	MOT	43	3.95	3.20	2.65
MC2063L	MOT	43	4.80	3.85	3.20
MC2075F	MOT	43	6.80	5.45	4.55
MC2075L	MOT	43	6.30	5.05	4.20
MC2076F	MOT	43	6.80	5.45	4.55
MC2076L	MOT	43	6.30	5.05	4.20
MC2078F	MOT	43	6.80	5.45	4.55
MC2078L	MOT	43	6.30	5.05	4.20
MC2100F	MOT	43	7.20	5.75	4.80
MC2100L	MOT	43	7.20	5.75	4.80
MC2101F	MOT	43	7.20	5.75	4.80
MC2101L	MOT	43	7.20	5.75	4.80
MC2102F	MOT	43	4.55	3.65	3.05
MC2102L	MOT	43	4.55	3.65	3.05
MC2103F	MOT	43	7.20	5.75	4.80
MC2103L	MOT	43	7.20	5.75	4.80
MC2104F	MOT	43	7.20	5.75	4.80
MC2104L	MOT	43	7.20	5.75	4.80
MC2105F	MOT	43	7.20	5.75	4.80
MC2105L	MOT	43	7.20	5.75	4.80
MC2106F	MOT	43	4.55	3.65	3.05
MC2106L	MOT	43	4.55	3.65	3.05
MC2107F	MOT	43	7.20	5.75	4.80
MC2107L	MOT	43	7.20	5.75	4.80
MC2109F	MOT	43	10.70	8.60	7.15
MC2109L	MOT	43	10.70	8.60	7.15
MC2110F	MOT	43	10.70	8.60	7.15
MC2110L	MOT	43	7.20	5.75	4.80
MC2113F	MOT	43	7.20	5.75	4.80
MC2113L	MOT	43	7.20	5.75	4.80
MC2125F	MOT	43	12.30	9.85	8.20
MC2125L	MOT	43	12.30	9.85	8.20
MC2126F	MOT	43	12.30	9.85	8.20
MC2126L	MOT	43	12.30	9.85	8.20
MC2128F	MOT	43	12.30	9.85	8.20
MC2128L	MOT	43	12.30	9.85	8.20
MC2150F	MOT	43	5.90	4.75	3.95
MC2150L	MOT	43	5.90	4.75	3.95
MC2151F	MOT	43	5.90	4.75	3.95
MC2151L	MOT	43	5.90	4.75	3.95
MC2152F	MOT	43	4.55	3.65	3.05
MC2152L	MOT	43	4.55	3.65	3.05
MC2153F	MOT	43	5.90	4.75	3.95
MC2153L	MOT	43	5.90	4.75	3.95
MC2154F	MOT	43	5.90	4.75	3.95
MC2154L	MOT	43	5.90	4.75	3.95
MC2155F	MOT	43	5.90	4.75	3.95
MC2155L	MOT	43	5.90	4.75	3.95
MC2156F	MOT	43	4.55	3.65	3.05
MC2156L	MOT	43	5.90	4.75	3.95
MC2157F	MOT	43	5.90	4.75	3.95
MC2157L	MOT	43	5.90	4.75	3.95
MC2159F	MOT	43	9.00	7.20	6.00
MC2159L	MOT	43	9.00	7.20	6.00
MC2160F	MOT	43	9.00	7.20	6.00
MC2160L	MOT	43	9.00	7.20	6.00
MC2163F	MOT	43	5.90	4.75	3.95
MC2163L	MOT	43	5.90	4.75	3.95
MC2175F	MOT	43	10.25	8.20	6.85
MC2175L	MOT	43	10.25	8.20	6.85
MC2176F	MOT	43	10.25	8.20	6.85
MC2176L	MOT	43	10.25	8.20	6.85
MC2178F	MOT	43	10.25	8.20	6.85
MC2178L	MOT	43	10.25	8.20	6.85
MC3000F	MOT	44	5.40	4.30	3.60
MC3000L	MOT	44	4.35	3.50	2.90
MC3000P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3001F	MOT	44	5.40	4.30	3.60
MC3001L	MOT	44	4.35	3.50	2.90
MC3001P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3002F	MOT	44	5.90	4.75	3.95
MC3002L	MOT	44	4.80	3.85	3.20
MC3002P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3003F	MOT	44	5.90	4.75	3.95
MC3003L	MOT	44	4.80	3.85	3.20
MC3003P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3005F	MOT	44	5.40	4.30	3.60
MC3005L	MOT	44	4.35	3.50	2.90
MC3005P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3006F	MOT	44	5.40	4.30	3.60
MC3006L	MOT	44	4.35	3.50	2.90

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC3006P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3010F	MOT	44	5.40	4.30	3.60
MC3010L	MOT	44	4.35	3.50	2.90
MC3010P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3015F	MOT	44	5.40	4.30	3.60
MC3015L	MOT	44	4.35	3.50	2.90
MC3015P	MOT	44	3.05	2.40	2.05
			1000-4999 Ea.		1.85
MC3020F	MOT	44	5.90	4.75	3.95
MC3020L	MOT	44	4.80	3.85	3.20
MC3020P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3025F	MOT	44	5.90	4.75	3.95
MC3025L	MOT	44	4.80	3.85	3.20
MC3025P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3026F	MOT	44	5.90	4.75	3.95
MC3026L	MOT	44	4.80	3.85	3.20
MC3026P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3028F	MOT	44	5.90	4.75	3.95
MC3028L	MOT	44	4.80	3.85	3.20
MC3028P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3029F	MOT	44	5.90	4.75	3.95
MC3029L	MOT	44	4.80	3.85	3.20
MC3029P	MOT	44	3.40	2.65	2.25
			1000-4999 Ea.		2.05
MC3030F	MOT	44	4.20	3.40	2.80
MC3030L	MOT	44	3.50	2.80	2.35
MC3030P	MOT	44	2.45	1.95	1.65
			1000-4999 Ea.		1.50
MC3050F	MOT	44	7.45	5.95	4.95
MC3050L	MOT	44	6.95	5.60	4.65
MC3050P	MOT	44	4.85	3.85	3.25
			1000-4999 Ea.		2.95
MC3052F	MOT	44	7.45	5.95	4.95
MC3052L	MOT	44	6.95	5.60	4.65
MC3052P	MOT	44	4.85	3.85	3.25
			1000-4999 Ea.		2.95
MC3060F	MOT	44	10.40	8.35	6.95
MC3060L	MOT	44	10.40	8.35	6.95
MC3060P	MOT	44	7.75	6.10	5.15
			1000-4999 Ea.		4.70
MC3061F	MOT	44	10.40	8.35	6.95
MC3061L	MOT	44	10.40	8.35	6.95
MC3061P	MOT	44	7.75	6.10	5.15
			1000-4999 Ea.		4.70
MC3062F	MOT	44	10.40	8.35	6.95
MC3062L	MOT	44	10.40	8.35	6.95
MC3062P	MOT	44	7.75	6.10	5.15
			1000-4999 Ea.		4.70
MC4004F	MOT	41	26.55	21.25	17.20
MC4004L	MOT	41	17.70	14.15	11.80
MC4005F	MOT	41	18.95	15.20	12.65
MC4005L	MOT	41	13.55	10.85	9.05
MC4006F	MOT	41	19.20	15.35	12.80
MC4006L	MOT	41	11.25	9.00	7.50
MC4008L	MOT	41	11.65	9.15	7.75
MC5400F	MOT	41	6.50	5.20	4.35
MC5400L	MOT	41	6.50	5.20	4.35
MC5401F	MOT	41	6.50	5.20	4.35
MC5401L	MOT	41	6.50	5.20	4.35
MC5402F	MOT	41	7.20	5.75	4.80
MC5402L	MOT	41	7.20	5.75	4.80
MC5404L	MOT	41	7.20	5.75	4.80
MC5410F	MOT	41	6.50	5.20	4.35
MC5410L	MOT	41	6.50	5.20	4.35
MC5420F	MOT	41	6.50	5.20	4.35
MC5420L	MOT	41	6.50	5.20	4.35
MC5430F	MOT	41	6.50	5.20	4.35
MC5430L	MOT	41	6.50	5.20	4.35
MC5440F	MOT	41	7.20	5.75	4.80
MC5440L	MOT	41	7.20	5.75	4.80
MC5450F	MOT	41	7.20	5.75	4.80
MC5450L	MOT	41	7.20	5.75	4.80
MC5451F	MOT	41	6.50	5.20	4.35
MC5451L	MOT	41	6.50	5.20	4.35
MC5453F	MOT	41	7.20	5.75	4.80
MC5453L	MOT	41	7.20	5.75	4.80
MC5454F	MOT	41	6.50	5.20	4.35
MC5454L	MOT	41	6.50	5.20	4.35
MC5460F	MOT	41	5.85	4.70	3.90
MC5460L	MOT	41	5.85	4.70	3.90
MC5472F	MOT	41	9.15	7.30	6.10
MC5472L	MOT	41	9.15	7.30	6.10
MC5473F	MOT	41	13.35	10.70	8.90
MC5473L	MOT	41	13.35	10.70	8.90
MC5479F	MOT	41	13.05	10.45	8.70
MC5479L	MOT	41	13.05	10.45	8.70
MC7400F	MOT	41	3.75	3.00	2.50
MC7400L	MOT	41	3.15	2.50	2.10
MC7400P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7401F	MOT	...	3.75	3.00	2.50
MC7401L	MOT	41	3.15	2.50	2.10
MC7401P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7402F	MOT	41	4.05	3.25	2.70
MC7402L	MOT	41	3.50	2.80	2.35
MC7402P	MOT	41	1.70	1.70	1.45
			1000-4999 Ea.		1.30
MC7404L	MOT	41	4.05	3.25	2.70
MC7404P	MOT	41	1.80	1.80	1.55
			1000-4999 Ea.		1.40
MC7410F	MOT	...	3.75	3.00	2.50
MC7410L	MOT	41	3.15	2.50	2.10
MC7410P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7420F	MOT	...	3.75	3.00	2.50
MC7420L	MOT	41	3.15	2.50	2.10

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MC7420P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7430F	MOT	...	3.75	3.00	2.50
MC7430L	MOT	41	3.15	2.50	2.10
MC7430P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7440F	MOT	55	4.05	3.25	2.70
MC7440L	MOT	41	3.50	2.80	2.35
MC7440P	MOT	41	1.70	1.70	1.45
			1000-4999 Ea.		1.30
MC7450F	MOT	55	4.50	3.25	2.70
MC7450L	MOT	41	3.50	2.80	2.35
MC7450P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7451F	MOT	55	3.75	3.00	2.50
MC7451L	MOT	41	3.15	2.50	2.10
MC7451P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7453F	MOT	55	4.05	3.25	2.70
MC7453L	MOT	41	3.50	2.80	2.35
MC7453P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7454F	MOT	55	3.75	3.00	2.50
MC7454L	MOT	41	3.15	2.50	2.10
MC7454P	MOT	41	1.45	1.45	1.25
			1000-4999 Ea.		1.12
MC7460F	MOT	55	3.00	2.40	2.00
MC7460L	MOT	41	2.45	2.00	1.65
MC7460P	MOT	41	1.10	1.10	.94
			1000-4999 Ea.		.85
MC7472F	MOT	55	5.25	4.20	3.50
MC7472L	MOT	41	5.10	4.10	3.40
MC7472P	MOT	41	2.00	2.00	1.70
			1000-4999 Ea.		1.55
MC7473F	MOT	55	7.50	6.00	5.00
MC7473L	MOT	41	7.50	6.00	5.00
MC7473P	MOT	41	3.40	3.40	2.85
			1000-4999 Ea.		2.60
MC7475P	MOT	41	5.15	5.15	4.35
			1000-4999 Ea.		3.95
MC7476P	MOT	41	3.50	3.50	2.95
			1000-4999 Ea.		2.70
MC7479F	MOT	...	7.35	5.90	4.90
MC7479L	MOT	41	7.20	5.75	4.80
MC7479P	MOT	41	2.90	2.90	2.45
			1000-4999 Ea.		2.25

Type No.	Mfr.	Page No.	EACH 1-999	1000-4999
MC9701P	MOT	45	2.45	1.80
MC9704P	MOT	45	5.05	3.75
MC9718P	MOT	45	1.09	.81
MC9719P	MOT	45	1.09	.81
MC9720P	MOT	45	1.09	.81
MC9721P	MOT	45	1.09	.81
MC9722P	MOT	45	2.35	1.75
MC9801P	MOT	45	2.75	2.05
MC9804P	MOT	45	5.75	4.25
MC9818P	MOT	45	1.25	.93
MC9819P	MOT	45	1.25	.93
MC9820P	MOT	45	1.25	.93
MC9821P	MOT	45	1.25	.93
MC9822P	MOT	45	2.70	2.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MCH1439G	MOT	...	18.00	15.00	14.00
MCH1539G	MOT	...	22.50	18.75	15.00
QK2201	RCA	...		Each	75.00
QK2202	RCA	...		Each	37.95

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-249
SF12-02	SYL	...	5.40	4.30	3.65
SF12-03	SYL	...	5.40	4.30	3.65
SF13-02	SYL	...	4.50	3.60	3.05
SF13-03	SYL	...	4.50	3.60	3.05
SF22-02	SYL	...	6.70	5.35	4.55
SF22-03	SYL	56	6.70	5.35	4.55
SF23-02	SYL	56	5.55	4.45	3.75
SF23-03	SYL	56	5.55	4.45	3.75
SF32-02	SYL	56	7.35	5.85	4.95
SF32-03	SYL	56	7.35	5.85	4.95
SF33-02	SYL	56	6.15	4.90	4.15
SF33-03	SYL	56	6.15	4.90	4.15
SF52-02	SYL	56	5.70	4.55	3.85
SF52-03	SYL	56	5.70	4.55	3.85
SF52P-03	SYL	56		1-999 Ea.	3.70
				1000-4999 Ea.	2.80
SF53-02	SYL	56	4.80	3.85	3.25
SF53-03	SYL	56	4.80	3.85	3.25
SF53P-03	SYL	56		1-999 Ea.	2.95
				1000-4999 Ea.	2.25
SF62-02	SYL	56	5.70	4.55	3.85
SF62-03	SYL	56	5.70	4.55	3.85
SF62P-03	SYL	56		1-999 Ea.	3.70
				1000-4999 Ea.	2.80
SF63-02	SYL	56	4.80	3.85	3.25
SF63-03	SYL	56	4.80	3.85	3.25
SF63P-03	SYL	56		1-999 Ea.	2.95
				1000-4999 Ea.	2.25

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 26 MC3006P MOT designates Motorola MC3006P

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
SF81-02	SYL	58	12.90	10.30	8.80
SF81-03	SYL	58	12.90	10.30	8.80
SF83-02	SYL	58	7.30	5.80	4.95
SF83-03	SYL	58	7.30	5.80	4.95
SF102-02	SYL	57	8.80	7.05	5.95
SF102-03	SYL	57	8.80	7.05	5.95
SF102P-03	SYL	56		1-999 Ea.	4.95
				1000-4999 Ea.	3.70
SF103-02	SYL	57	7.35	5.85	4.95
SF103-03	SYL	57	7.35	5.85	4.95
SF103P-03	SYL	56		1-999 Ea.	3.95
				1000-4999 Ea.	2.95
SF112-02	SYL	57	8.80	7.05	5.95
SF112-03	SYL	57	8.80	7.05	5.95
SF112P-03	SYL	56		1-999 Ea.	4.95
				1000-4999 Ea.	3.70
SF113-02	SYL	57	7.35	5.85	4.95
SF113-03	SYL	57	7.35	5.85	4.95
SF113P-03	SYL	56		1-999 Ea.	3.95
				1000-4999 Ea.	2.95
SF122-02	SYL	57	9.80	7.80	6.60
SF122-03	SYL	57	9.80	7.80	6.60
SF122P-03	SYL	56		1-999 Ea.	6.00
				1000-4999 Ea.	4.50
SF123-02	SYL	57	8.15	6.50	5.50
SF123-03	SYL	57	8.15	6.50	5.50
SF123P-03	SYL	56		1-999 Ea.	4.80
				1000-4999 Ea.	3.60
SF132-02	SYL	57	9.80	7.80	6.60
SF132-03	SYL	57	9.80	7.80	6.60
SF132P-03	SYL	56		1-999 Ea.	6.00
				1000-4999 Ea.	4.50
SF133-02	SYL	57	8.15	6.50	5.50
SF133-03	SYL	57	8.15	6.50	5.50
SF133P-03	SYL	56		1-999 Ea.	4.80
				1000-4999 Ea.	3.60
SF202-02	SYL	58	8.15	6.50	5.50
SF202-03	SYL	58	8.15	6.50	5.50
SF202P-03	SYL	56		1-999 Ea.	5.02
				1000-4999 Ea.	3.75
SF203-02	SYL	58	6.80	5.40	4.60
SF203-03	SYL	58	6.80	5.40	4.60
SF203P-03	SYL	56		1-999 Ea.	4.15
				1000-4999 Ea.	3.10
SF212-02	SYL	58	8.15	6.50	5.50
SF212-03	SYL	58	8.15	6.50	5.50
SF212P-03	SYL	56		1-999 Ea.	5.02
				1000-4999 Ea.	3.75
SF213-02	SYL	58	6.80	5.40	4.60
SF213-03	SYL	58	6.80	5.40	4.60
SF213P-03	SYL	56		1-999 Ea.	4.15
				1000-4999 Ea.	3.10
SF252-02	SYL	58	7.10	5.65	4.80
SF252-03	SYL	58	7.10	5.65	4.80
SF253-02	SYL	58	5.90	4.70	4.00
SF253-03	SYL	58	5.90	4.70	4.00
SF262-02	SYL	58	7.10	5.65	4.80
SF262-03	SYL	58	7.10	5.65	4.80
SF263-02	SYL	58	5.90	4.70	4.00
SF263-03	SYL	58	5.90	4.70	4.00
SG42-02	SYL	57	4.25	3.40	2.90
SG42-03	SYL	57	4.25	3.40	2.90
SG42P-03	SYL	56		1-999 Ea.	2.30
				1000-4999 Ea.	1.75
SG43-02	SYL	57	3.50	2.80	2.40
SG43-03	SYL	57	3.50	2.80	2.40
SG43P-03	SYL	56		1-999 Ea.	1.85
				1000-4999 Ea.	1.40
SG52-02	SYL	57	4.25	3.40	2.90
SG52-03	SYL	57	4.25	3.40	2.90
SG52P-03	SYL	56		1-999 Ea.	2.55
				1000-4999 Ea.	1.95
SG53-02	SYL	57	3.50	2.80	2.40
SG53-03	SYL	57	3.50	2.80	2.40
SG53P-03	SYL	56		1-999 Ea.	2.05
				1000-4999 Ea.	1.55
SG62-02	SYL	57	4.25	3.40	2.90
SG62-03	SYL	57	4.25	3.40	2.90
SG62P-03	SYL	56		1-999 Ea.	2.30
				1000-4999 Ea.	1.75
SG63-02	SYL	57	3.50	2.80	2.40
SG63-03	SYL	57	3.50	2.80	2.40
SG63P-03	SYL	56		1-999 Ea.	1.85
				1000-4999 Ea.	1.40
SG72-02	SYL	57	4.25	3.40	2.90
SG72-03	SYL	57	4.25	3.40	2.90
SG72P-03	SYL	56		1-999 Ea.	2.55
				1000-4999 Ea.	1.95
SG73-02	SYL	57	3.50	2.80	2.40

integrated circuit directory

SEE PAGE 13 FOR SEMICONDUCTORS

INTEGRATED CIRCUIT IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 12 SG73-03 SYL designates Sylvania SG73-03

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
SG73-03	SYL	57	3.50	2.80	2.40
SG73P-03	SYL	56		1-999 Ea.	2.10
				1000-4999 Ea.	1.55
SG82-02	SYL	57	4.90	3.90	3.30
SG82-03	SYL	57	4.90	3.90	3.30
SG83-02	SYL	57	4.10	3.25	2.75
SG83-03	SYL	57	4.10	3.25	2.75
SG92-02	SYL	57	4.25	3.40	2.90
SG92-03	SYL	57	4.25	3.40	2.90
SG93-02	SYL	57	3.50	2.80	2.40
SG93-03	SYL	57	3.50	2.80	2.40
SG102-02	SYL	57	4.25	3.40	2.90
SG102-03	SYL	57	4.25	3.40	2.90
SG102P-03	SYL	56		1-999 Ea.	2.55
				1000-4999 Ea.	1.95
SG103-02	SYL	57	3.50	2.80	2.40
SG103-03	SYL	57	3.50	2.80	2.40
SG103P-03	SYL	56		1-999 Ea.	2.10
				1000-4999 Ea.	1.55
SG112-02	SYL	57	4.25	3.40	2.90
SG112-03	SYL	57	4.25	3.40	2.90
SG112P-03	SYL	56		1-999 Ea.	2.55
				1000-4999 Ea.	1.95
SG113-02	SYL	57	3.50	2.80	2.40
SG113-03	SYL	57	3.50	2.80	2.40
SG113P-03	SYL	56		1-999 Ea.	2.05
				1000-4999 Ea.	1.55
SG122-02	SYL	57	4.25	3.40	2.90
SG122-03	SYL	57	4.25	3.40	2.90
SG123-02	SYL	57	3.50	2.80	2.40
SG123-03	SYL	57	3.50	2.80	2.40
SG132-02	SYL	57	4.90	3.90	3.30
SG132-03	SYL	57	4.90	3.90	3.30
SG132P-03	SYL	56		1-999 Ea.	2.55
				1000-4999 Ea.	1.95
SG133-02	SYL	57	4.10	3.25	2.75
SG133-03	SYL	57	4.10	3.25	2.75
SG133P-03	SYL	56		1-999 Ea.	2.00
				1000-4999 Ea.	1.50
SG142-02	SYL	57	4.25	3.40	2.90
SG142-03	SYL	57	4.25	3.40	2.90
SG142P-03	SYL	56		1-999 Ea.	2.30
				1000-4999 Ea.	1.75
SG143-02	SYL	57	3.50	2.80	2.40
SG143-03	SYL	57	3.50	2.80	2.40
SG143P-03	SYL	56		1-999 Ea.	1.85
				1000-4999 Ea.	1.40
SG152-02	SYL	57	3.05	2.40	2.05
SG152-03	SYL	57	3.05	2.40	2.05
SG152P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG153-02	SYL	56	3.05	2.40	2.05
SG153-03	SYL	57	3.05	2.40	2.05
SG153P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG162-02	SYL	57	4.90	3.90	3.30
SG162-03	SYL	57	4.90	3.90	3.30
SG163-02	SYL	57	4.10	3.25	2.75
SG163-03	SYL	56	4.10	3.25	2.75
SG172-02	SYL	57	3.05	2.40	2.05
SG172-03	SYL	57	3.05	2.40	2.05
SG172P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG173-02	SYL	57	3.05	2.40	2.05
SG173-03	SYL	57	3.05	2.40	2.05
SG173P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG182-02	SYL	57	3.05	2.40	2.05
SG182-03	SYL	57	3.05	2.40	2.05
SG183-02	SYL	57	3.05	2.40	2.05
SG183-03	SYL	57	3.05	2.40	2.05
SG192-02	SYL	56	4.25	3.40	2.90
SG192-03	SYL	56	4.25	3.40	2.90
SG192P-03	SYL	56		1-999 Ea.	2.30
				1000-4999 Ea.	1.75
SG193-02	SYL	57	3.50	2.80	2.40
SG193-03	SYL	57	3.50	2.80	2.40
SG193P-03	SYL	56		1-999 Ea.	1.85
				1000-4999 Ea.	1.40
SG202-02	SYL	57	4.75	3.80	3.20
SG202-03	SYL	57	4.75	3.80	3.20
SG203-02	SYL	57	3.95	3.15	2.65
SG203-03	SYL	57	3.95	3.15	2.65
SG212-02	SYL	57	4.75	3.80	3.20
SG212-03	SYL	57	4.75	3.80	3.20
SG212P-03	SYL	56		1-999 Ea.	3.10
				1000-4999 Ea.	2.35
SG213-02	SYL	57	3.95	3.15	2.65
SG213-03	SYL	57	3.95	3.15	2.65
SG213P-03	SYL	56		1-999 Ea.	2.40
				1000-4999 Ea.	1.85
SG222-02	SYL	57	4.75	3.80	3.20
SG222-03	SYL	57	4.75	3.80	3.20
SG222P-03	SYL	56		1-999 Ea.	2.80
				1000-4999 Ea.	2.10
SG223-02	SYL	57	3.95	3.15	2.65
SG223-03	SYL	57	3.95	3.15	2.65
SG223P-03	SYL	56		1-999 Ea.	2.25
				1000-4999 Ea.	1.70
SG232-02	SYL	57	3.05	2.40	2.05
SG232-03	SYL	57	3.05	2.40	2.05
SG232P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG233-02	SYL	57	3.05	2.40	2.05
SG233-03	SYL	57	3.05	2.40	2.05
SG233P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG242-02	SYL	57	4.75	3.80	3.20
SG242-03	SYL	57	4.75	3.80	3.20
SG242P-03	SYL	56		1-999 Ea.	2.80
				1000-4999 Ea.	2.10
SG243-02	SYL	57	3.95	3.15	2.65
SG243-03	SYL	57	3.95	3.15	2.65
SG243P-03	SYL	56		1-999 Ea.	2.25
				1000-4999 Ea.	1.70
SG252-02	SYL	58	4.75	3.80	3.20
SG252-03	SYL	58	4.75	3.80	3.20
SG252P-03	SYL	56		1-999 Ea.	3.10
				1000-4999 Ea.	2.35
SG253-02	SYL	58	3.95	3.15	2.65
SG253-03	SYL	58	3.95	3.15	2.65
SG253P-03	SYL	56		1-999 Ea.	2.40
				1000-4999 Ea.	1.85
SG262-02	SYL	58	4.75	3.80	3.20
SG262-03	SYL	58	4.75	3.80	3.20
SG262P-03	SYL	56		1-999 Ea.	2.80
				1000-4999 Ea.	2.10
SG263-02	SYL	58	3.95	3.15	2.65
SG263-03	SYL	58	3.95	3.15	2.65
SG263P-03	SYL	56		1-999 Ea.	2.25
				1000-4999 Ea.	1.70
SG272-02	SYL	58	3.05	2.40	2.05
SG272-03	SYL	58	3.05	2.40	2.05
SG272P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG273-02	SYL	58	3.05	2.40	2.05
SG273-03	SYL	58	3.05	2.40	2.05
SG273P-03	SYL	56		1-999 Ea.	1.60
				1000-4999 Ea.	1.20
SG282-02	SYL	57	4.90	3.90	3.30
SG282-03	SYL	58	4.90	3.90	3.30
SG283-02	SYL	58	4.10	3.25	2.75
SG283-03	SYL	58	4.10	3.25	2.75
SG292-02	SYL	58	4.75	3.80	3.20
SG292-03	SYL	58	4.75	3.80	3.20
SG293-02	SYL	58	3.95	3.15	2.65
SG293-03	SYL	58	3.95	3.15	2.65
SG302-02	SYL	58	4.75	3.80	3.20
SG302-03	SYL	58	4.75	3.80	3.20
SG302P-03	SYL	56		1-999 Ea.	3.34
				1000-4999 Ea.	2.74
SG303-02	SYL	58	3.95	3.15	2.65
SG303-03	SYL	58	3.95	3.15	2.65
SG303P-03	SYL	56		1-999 Ea.	2.74
				1000-4999 Ea.	2.05
SG312-02	SYL	58	4.75	3.80	3.20
SG312-03	SYL	58	4.75	3.80	3.20
SG312P-03	SYL	56		1-999 Ea.	3.34
				1000-4999 Ea.	2.50
SG313-02	SYL	58	3.95	3.15	2.65
SG313-03	SYL	66	3.95	3.15	2.65
SG313P-03	SYL	56		1-999 Ea.	2.74
				1000-4999 Ea.	2.05
SG320-02	SYL	58	7.20	5.75	4.85
SG320-03	SYL	58	8.10	6.45	5.45
SG321-02	SYL	58	5.95	4.75	4.05
SG321-03	SYL	58	6.70	5.35	4.55
SG322-02	SYL	58	4.75	3.80	3.20
SG322-03	SYL	58	4.75	3.80	3.20
SG323-02	SYL	58	3.95	3.15	2.65
SG323-03	SYL	58	3.95	3.15	2.65
SG351-02	SYL	58	7.45	5.95	5.00
SG351-03	SYL	58	8.35	6.65	5.65
SG353-02	SYL	58	4.10	3.25	2.75
SG353-03	SYL	58	4.10	3.25	2.75
SM10-02	SYL	58	9.95	7.95	6.75
SM10-03	SYL	58	9.95	7.95	6.75
SM11-02	SYL	58	7.60	6.05	5.15
SM11-03	SYL	58	7.60	6.05	5.15
SM12-02	SYL	58	6.05	4.85	4.10
SM12-03	SYL	58	6.05	4.85	4.10
SM13-02	SYL	58	5.00	4.00	3.40
SM13-03	SYL	58	5.00	4.00	3.40
SM20-02	SYL	58	11.40	9.10	7.70
SM20-03	SYL	58	11.40	9.10	7.70
SM21-02	SYL	58	8.75	6.95	5.90
SM21-03	SYL	58	8.75	6.95	5.90
SM22-02	SYL	58	6.85	5.50	4.65
SM22-03	SYL	58	6.85	5.50	4.65
SM23-02	SYL	58	5.70	4.55	3.85
SM23-03	SYL	58	5.70	4.55	3.85
SM30-02	SYL	58	11.40	9.10	7.70
SM30-03	SYL	58	11.40	9.10	7.70
SM31-02	SYL	58	8.75	6.95	5.90
SM31-03	SYL	58	8.75	6.95	5.90
SM32-02	SYL	58	6.85	5.50	4.65
SM32-03	SYL	58	6.85	5.50	4.65
SM33-02	SYL	58	5.70	4.55	3.85
SM33-03	SYL	58	5.70	4.55	3.85
SM41-02	SYL	58	7.35	5.85	4.95
SM41-03	SYL	58	7.35	5.85	4.95
SM43-02	SYL	58	4.80	3.85	3.25
SM43-03	SYL	58	4.80	3.85	3.25
SM61-02	SYL	58	13.20	10.55	8.95
SM61-03	SYL	58	13.20	10.55	8.95
SM63-02	SYL	58	6.60	5.30	4.45
SM63-03	SYL	58	6.60	5.30	4.45
SM71-02	SYL	58	13.20	10.55	8.95
SM71-03	SYL	58	13.20	10.55	8.95
SM73-02	SYL	58	6.60	5.30	4.45
SM73-03	SYL	58	6.60	5.30	4.45
SM81-02	SYL	58	25.85	20.60	17.45
SM81-03	SYL	58	25.85	20.60	17.45
SM82-02	SYL	58	23.50	18.75	15.85
SM82-03	SYL	58	23.50	18.75	15.85
SM83-02	SYL	58	19.60	15.60	13.20
SM83-03	SYL	58	19.60	15.60	13.20
SM90-02	SYL	58	25.30	20.15	17.10
SM90-03	SYL	58	25.30	20.15	17.10
SM91-02	SYL	58	25.30	20.15	17.10
SM91-03	SYL	58	25.30	20.15	17.10
SM92-02	SYL	58	12.65	10.10	8.55
SM92-03	SYL	58	12.65	10.10	8.55
SM93-02	SYL	58	12.65	10.10	8.55
SM93-03	SYL	58	12.65	10.10	8.55
SM113-02	SYL	58	13.05	10.40	8.80
SM113-03	SYL	58	13.05	10.40	8.80
SM121-02	SYL	58	19.60	15.60	13.20
SM121-03	SYL	58	19.60	15.60	13.20
SM123-02	SYL	58	9.80	7.80	6.60
SM123-03	SYL	58	9.80	7.80	6.60
SM131-02	SYL	58	19.60	15.60	13.20
SM131-03	SYL	58	19.60	15.60	13.20
SM133-02	SYL	58	9.80	7.80	6.60
SM133-03	SYL	58	9.80	7.80	6.60
SM143-02	SYL	58	13.05	10.40	8.80
SM143-03	SYL	58	13.05	10.40	8.80
SM153-02	SYL	58	13.05	10.40	8.80
SM153-03	SYL	58	13.05	10.40	8.80
SM163-02	SYL	58	9.80	7.80	6.60
SM163-03	SYL	58	9.80	7.80	6.60
SM173-02	SYL	58	9.80	7.80	6.60
SM173-03	SYL	58	9.80	7.80	6.60
SM183-02	SYL	58	26.90	21.45	18.15
SM183-03	SYL	58	26.90	21.45	18.15
SM193-02	SYL	58	26.90	21.45	18.15
SM193-03	SYL	58	26.90	21.45	18.15
SM211-02	SYL	58	22.85	18.20	15.40
SM211-03	SYL	58	22.85	18.20	15.40
SM213-02	SYL	58	11.45	9.10	7.70
SM213-03	SYL	58	11.45	9.10	7.70
SM221-02	SYL	58	22.85	18.20	15.40
SM221-03	SYL	58	22.85	18.20	15.40
SM223-02	SYL	58	11.45	9.10	7.70
SM223-03	SYL	58	11.45	9.10	7.70
SN54H10F	TI	55	7.28	5.80	4.94
SN54H20F	TI	55	5.63	4.48	3.82
SN54H30F	TI	55	5.63	4.48	3.82
SN54H40F	TI	55	7.28	5.80	4.94
SN54H50F	TI	55	6.64	5.28	4.50
SN54H55F	TI	55	6.64	5.28	4.50
SN54H60F	TI	55	4.97	3.96	3.37
SN54H61F	TI	55	4.97	3.96	3.37
SN54H62F	TI	55	4.97	3.96	3.37
SN54H71F	TI	55	10.61	8.44	7.20
SN54H72F	TI	55	10.61	8.44	7.20
SN54L00R	TI	...	8.99	7.15	6.10
SN54L20R	TI	...	8.99	7.15	6.10
SN54L71R	TI	...	14.74	11.73	10.00
SN54L72R	TI	...	14.74	11.73	10.00
SN74H00N	TI	55	2.33	1.85	1.58
SN74H10F	TI	55	4.86	3.87	3.30
SN74H10N	TI	56	2.33	1.85	1.58
SN74H11F	TI	55	4.86	3.87	3.30
SN74H11N	TI	56	2.55	2.03	1.73
SN74H20F	TI	55	3.75	2.99	2.55
SN74H20N	TI	56	1.97	1.57	1.34
SN74H21F	TI	55	4.86	3.87	3.30
SN74H21N	TI	56	2.55	2.03	1.73
SN74H30F	TI	55	3.75	2.99	2.55
SN74H30N	TI	56	1.97	1.57	1.34
SN74H40F	TI	55	4.86	3.87	3.30
SN74H50F	TI	55	4.42	3.52	3.00
SN74H50N	TI	56	2.33	1.85	1.58
SN74H53F	TI	...	4.42	3.52	3.00
SN74H53N	TI	56	2.33	1.85	1.58
SN74H55F	TI	...	4.42	3.52	3.00
SN74H55N	TI	56	2.33	1.85	1.58
SN74H60F	TI	...	3.32	2.64	2.25
SN74H60N	TI	56	1.74	1.39	1.18
SN74H61F	TI	...	3.32	2.64	2.25
SN74H62F	TI	...	3.32	2.64	2.25
SN74H71F	TI	55	7.07	5.63	4.80
SN74H72F	TI	55	7.07	5.63	4.80
SN74H72N	TI	56	3.72	2.96	2.52
SN74L00R	TI	...	4.77	3.80	3.24
SN74L20R	TI	...	4.77	3.80	3.24
SN74L71R	TI	...	7.85	6.25	5.33
SN74L72R	TI	...	7.85	6.25	5.33

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SN510B	TI	54	28.25	22.50	19.20
SN511B	TI	54	31.10	24.75	21.10
SN512B	TI	54	22.30	17.75	15.15
SN513B	TI	54	24.55	19.55	16.65
SN514B	TI	54	22.30	17.75	15.15
SN515B	TI	54	22.30	17.75	15.15
SN516B	TI	54	22.30	17.75	15.15
SN517B	TI	54	29.50	23.50	20.00
SN518B	TI	54	29.50	23.50	20.00
SN524A	TI	56	17.00	13.60	11.60
SN525F	TI	56	35.70	28.40	24.20
SN724L	TI	56	12.15	9.70	8.25
SN725F	TI	56	25.20	20.00	17.10
SN5101B	TI	54	28.25	22.50	19.20
SN5161B	TI	54	22.30	17.75	15.15
SN5162B	TI	54	24.55	19.55	16.65
SN5191B	TI	54	29.50	23.50	20.00
SN5231AL	TI	56	26.00	20.60	17.60
SN5300F	TI	54	17.75	14.25	12.10
SN5301F	TI	54	18.75	14.85	12.75
SN5302F	TI	54	22.75	18.00	15.50
SN5304F	TI	54	22.75	18.00	15.50
SN5310F	TI	54	11.35	9.00	7.70
SN5311F	TI	54	13.00	10.25	8.80
SN5315F	TI	54	13.00	10.25	8.80
SN5331F	TI	54	13.00	10.25	8.80
SN5340F	TI	54	11.35	9.00	7.70
SN5350F	TI	54	11.35	9.00	7.70
SN5370F	TI	54	16.20	12.90	11.00
SN5440F	TI	55	6.10	4.86	4.14
SN5450F	TI	55	5.31	4.23	3.60
SN5451F	TI	55	5.31	4.23	3.60
SN5453F	TI	55	5.31	4.23	3.60
SN5454F	TI	55	5.31	4.23	3.60
SN5460F	TI	55	3.98	3.17	2.70
SN5470F	TI	55	7.97	6.34	5.41
SN5474F	TI	55	10.61	8.44	7.20
SN5480F	TI	55	14.28	11.37	9.70
SN5482F	TI	55	17.98	14.31	12.20
SN7300F	TI	54	8.10	6.45	5.50
SN7300N	TI	54	8.10	6.45	5.50
SN7301F	TI	54	8.50	6.75	5.75
SN7301N	TI	...	8.50	6.75	5.75
SN7302F	TI	54	10.50	8.35	7.15
SN7302N	TI	...	10.50	8.35	7.15
SN7310F	TI	54	5.65	4.50	3.85
SN7310N	TI	...	5.65	4.50	3.85
SN7311F	TI	54	6.50	5.15	4.40
SN7311N	TI	...	6.50	5.15	4.40
SN7315F	TI	54	6.50	5.15	4.40
SN7315N	TI	...	6.50	5.15	4.40
SN7320F	TI	54	5.65	4.50	3.85
SN7320N	TI	...	5.65	4.50	3.85
SN7330F	TI	54	5.65	4.50	3.85
SN7330N	TI	...	5.65	4.50	3.85
SN7331F	TI	54	6.50	5.15	4.40
SN7331N	TI	...	6.50	5.15	4.40
SN7350F	TI	54	5.65	4.50	3.85
SN7350N	TI	...	5.65	4.50	3.85
SN7360F	TI	54	6.50	5.15	4.40
SN7360N	TI	...	6.50	5.15	4.40
SN7370F	TI	54	7.70	6.15	5.25
SN7370N	TI	...	7.70	6.15	5.25
SN7380F	TI	54	9.75	7.75	6.60
SN7380N	TI	...	9.75	7.75	6.60
SN7400F	TI	55	3.54	2.82	2.40
SN7400N	TI	55	1.86	1.48	1.26
SN7401N	TI	...	1.86	1.48	1.26
SN7402N	TI	...	2.13	1.70	1.45
SN7410F	TI	55	3.54	2.82	2.40
SN7410N	TI	55	1.86	1.48	1.26
SN7420F	TI	55	2.99	2.38	2.03
SN7420N	TI	55	1.58	1.26	1.07
SN7430F	TI	55	2.99	2.38	2.03
SN7430N	TI	55	1.58	1.26	1.07
SN7440F	TI	55	4.06	3.23	2.76
SN7440N	TI	55	2.13	1.70	1.45
SN7441AN	TI	55	15.40	12.25	10.50
SN7450F	TI	55	3.54	2.82	2.40
SN7450N	TI	55	1.86	1.48	1.26
SN7451F	TI	55	3.54	2.82	2.40
SN7453F	TI	55	3.54	2.82	2.40
SN7453N	TI	55	1.86	1.48	1.26
SN7454N	TI	55	1.86	1.48	1.26
SN7460F	TI	55	2.65	2.11	1.80
SN7470F	TI	55	5.31	4.23	3.60
SN7470N	TI	55	2.80	2.23	1.90
SN7472F	TI	55	4.95	3.94	3.36
SN7472N	TI	55	2.60	2.07	1.77
SN7473F	TI	55	7.45	5.95	5.05
SN7473N	TI	55	4.29	3.41	2.91
SN7474F	TI	55	7.07	5.63	4.80
SN7474N	TI	55	3.72	2.96	2.52

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SN7475N	TI	...	6.56	5.22	4.45
SN7476N	TI	55	4.51	3.59	3.06
SN7482N	TI	55	7.45	5.93	5.05
SN7483N	TI	55	11.82	9.41	8.02
SN7490F	TI	55	14.53	11.57	9.86
SN7490N	TI	55	7.66	6.10	5.20
SN7491AN	TI	55	10.38	8.26	7.05
SN7492N	TI	55	7.66	6.10	5.20
SN7493N	TI	55	7.66	6.10	5.20
SN7496N	TI	...	9.84	7.84	6.68
SN7510F	TI	...	6.50	5.15	4.40
SN15831F	TI	54	4.50	3.44	3.00
SN15831N	TI	54	2.66	2.03	1.77
SN15832F	TI	54	3.22	2.46	2.15
SN15832N	TI	54	1.90	1.45	1.26
SN15833F	TI	54	3.00	2.29	2.00
SN15833N	TI	54	1.08	1.08	.95
SN15844F	TI	54	3.22	2.46	2.15
SN15845F	TI	54	4.50	3.44	3.00
SN15845N	TI	54		Each	1.96
SN15846F	TI	54	3.22	2.46	2.15
SN15846N	TI	54	1.20	1.20	1.08
SN15848F	TI	54	4.50	3.44	3.00
SN15848N	TI	54	1.68	1.68	1.47
SN15850F	TI	54	9.65	7.37	6.44
SN15851F	TI	54	9.65	7.37	6.44
SN15862F	TI	54	3.22	2.46	2.15
SN15862N	TI	54	1.90	1.45	1.26
SN15930F	TI	54	4.12	3.15	2.75
SN15931F	TI	54	5.77	4.41	3.85
SN15932F	TI	54	4.12	3.15	2.75
SN15933F	TI	54	3.79	2.90	2.53
SN15944F	TI	54	4.12	3.15	2.75
SN15946F	TI	54	4.12	3.15	2.75
SN15950F	TI	54	12.37	9.45	8.25
SN15962F	TI	54	4.12	3.15	2.75
SN52702F	TI	56	8.02	8.02	6.01
SN52702L	TI	56	3.15	3.15	2.35
SN52710F	TI	56	5.95	5.95	4.46
SN52710L	TI	56	3.15	3.15	2.35
SN52711L	TI	56	3.45	3.45	2.60
SN54930F	TI	55	6.50	5.15	4.40
SN54932F	TI	55	7.15	5.70	4.85
SN54946F	TI	55	6.50	5.15	4.40
SN54948F	TI	55	9.05	7.25	6.15
SN54962F	TI	55	6.50	5.15	4.40
SN54965F	TI	55	6.50	5.15	4.40
SN54996F	TI	55	6.50	5.15	4.40
SN72702L	TI	56	2.75	2.75	2.00
SN72709L	TI	56	2.50	2.50	1.85
SN72710F	TI	56	4.77	4.77	3.58
SN72710L	TI	56	2.75	2.75	2.00
SN72711F	TI	55	7.33	7.33	5.50
SN74930F	TI	55	3.65	2.90	2.50
SN74932F	TI	55	4.05	3.20	2.75
SN74946F	TI	55	3.65	2.90	2.50
SN74948F	TI	55	5.10	4.05	3.50
SN74962F	TI	55	3.65	2.90	2.50
SN74965F	TI	55	3.65	2.90	2.50
SN74966F	TI	55	3.65	2.90	2.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
UD4001	SPR	59	55.28	55.28	46.07
UD4024	SPR	59	47.80	47.80	39.90
UD4036	SPR	59	74.66	74.66	62.22
UD4037	SPR	59	64.32	64.32	53.60
UD4074	SPR	59	85.80	68.65	57.20
UD4080	SPR	59	85.80	68.65	57.20

Type No.	Mfr.	Page No.	EACH 1-99	100-999
UD4131	SPR	59	21.84	18.20
UD4146	SPR	59	27.01	22.51
UD4156	SPR	59	33.23	27.69
UD4174	SPR	59	22.75	15.20
UD4175	SPR	59	30.20	20.10
UD4181	SPR	59	15.00	12.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
USN74H00A	SPR	59	2.33	1.85	1.58
USN74H01A	SPR	59	2.33	1.85	1.58
USN74H10A	SPR	59	2.33	1.85	1.58
USN74H11A	SPR	59	2.55	2.03	1.73
USN74H20A	SPR	59	1.97	1.57	1.34
USN74H30A	SPR	59	1.97	1.57	1.34
USN74H40A	SPR	59	2.55	2.03	1.73
USN74H50A	SPR	59	2.33	1.85	1.58
USN74H51A	SPR	59	2.33	1.85	1.58

INTEGRATED CIRCUIT -- IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 50 D 32 SN510B TI designates Texas Instruments SN510B

Dept. No.	Mfr.	Name
50 D 1	RCA	Radio Corp. of America
50 D 12	SYL	Sylvania
50 D 26	MOT	Motorola
50 D 30	SPR	Sprague
50 D 32	TI	Texas Instruments

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
USN74H52A	SPR	59	2.33	1.85	1.58
USN74H53A	SPR	59	2.33	1.85	1.58
USN74H54A	SPR	59	2.33	1.85	1.58
USN74H55A	SPR	59	2.33	1.85	1.58
USN74H60A	SPR	59	1.74	1.39	1.18
USN75H61A	SPR	59	1.74	1.39	1.18
USN74H62A	SPR	59	1.74	1.39	1.18
USN74H71A	SPR	59	3.72	2.96	2.52
USN74H72A	SPR	59	3.72	2.96	2.96
USN7400A	SPR	59	1.86	1.48	1.26
USN7401A	SPR	59	1.86	1.48	1.26
USN7402A	SPR	59	2.13	1.70	1.45
USN7404A	SPR	59	2.33	1.85	1.58
USN7405A	SPR	59	2.33	1.85	1.58
USN7408A	SPR	59	2.33	1.85	1.58
USN7410A	SPR	59	1.86	1.48	1.26
USN7411A	SPR	59	2.33	1.85	1.58
USN7420A	SPR	59	1.58	1.26	1.07
USN7430A	SPR	59	1.58	1.26	1.07
USN7440A	SPR	59	2.13	1.70	1.45
USN7441B	SPR	59	10.36	8.25	7.03
USN7450A	SPR	59	1.86	1.48	1.26
USN7451A	SPR	59	1.86	1.48	1.26
USN7453A	SPR	59	1.86	1.48	1.26
USN7454A	SPR	59	1.86	1.48	1.26
USN7460A	SPR	59	1.39	1.10	.94
USN7470A	SPR	59	2.80	2.23	1.99
USN7472A	SPR	59	2.60	2.07	1.77
USN7473A	SPR	59	4.29	3.41	2.91
USN7474A	SPR	59	3.72	2.96	2.52
USN7475B	SPR	59	6.56	5.22	4.45
USN7476B	SPR	59	4.51	3.59	3.06
USN7480A	SPR	59	5.02	3.99	3.40
USN7482A	SPR	59	7.45	5.93	5.05
USN7483B	SPR	59	11.82	9.41	8.02
USN7490A	SPR	59	7.66	6.10	5.20
USN7491A	SPR	59	10.38	8.26	7.05
USN7492A	SPR	59	7.66	6.10	5.20
USN7493A	SPR	59	7.66	6.10	5.20
USN74107	SPR	59	4.29	3.41	2.91

Type No.	Mfr.	Page No.	EACH 1-99	100-999
UT1000	SPR	59	37.62	31.35
UT1001	SPR	57	47.70	39.75
UT1001A	SPR	59	52.30	43.65
UT1002	SPR	59	127.39	106.16

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
UT1041	SPR	59	25.10	20.10	16.75

Type No.	Mfr.	Page No.	EACH 1-99	100-999
UT1051	SPR	59	16.20	13.50
UT1057	SPR	59	64.30	53.60
UT1062	SPR	59	57.89	48.24

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
UT1070	SPR	59	45.60	36.45	30.40
UT1071	SPR	59	50.30	40.25	33.55
UT1072	SPR	59	55.80	44.60	37.20
UT1078	SPR	59	18.40	18.40	12.25
UT1079	SPR	59	42.20	42.20	28.10
UT1080	SPR	59	34.75	34.75	23.15

semiconductor directory

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N21B	SYL	101	.81	.70	.64
1N21C	SYL	101	.84	.72	.66
1N21D	SYL	101	2.10	1.80	1.65
1N21E	SYL	101	3.16	2.70	2.48
1N21F	SYL	101	6.30	5.40	4.95
1N21WE	SYL	101	3.16	2.70	2.48
1N23B	SYL	101	.81	.70	.64
1N23C	SYL	101	.84	.72	.66

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N23D	SYL	101	2.10	1.80	1.65
1N23E	SYL	101	3.16	2.70	2.48
1N23F	SYL	101	6.30	5.40	4.95
1N23G	SYL	101	10.50	9.00	8.25
1N23WE	SYL	101	3.16	2.70	2.48
1N23WE/JAN	SYL	101	3.16	2.70	2.48
1N25	SYL	101	3.53	3.03	2.74

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N26	SYL	101	6.50	5.60	5.10
1N26C	SYL	101	31.15	27.80	25.50
1N34A	RCA	101		Each	.55
1N34A	SYL	101	.30	.30	.23
				1000-5000 Ea.	.14

Ordering Information on Next Page

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 12 1N35 SYL designates Sylvania 1N35

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N35	SYL	101	1.58	1.58	1.21
1N38A	SYL	101	.49	.49	.38
1N38B	SYL	101	.49	.49	.38
1N48	SYL	101	.30	.30	.20
1N53	SYL	101	23.20	19.80	18.25
1N54A	SYL	101	.42	.42	.32
1N55A	SYL	101	.40	.40	.31
1N58A	SYL	101	.55	.55	.41
1N60	RCA	...		Each	.55
1N60	SYL	101	.30	.30	.23
			1000-5000 Ea.		.18
1N63	SYL	101	.36	.36	.28
1N64	SYL	101	.30	.30	.23
			1000-5000 Ea.		.18
1N65	SYL	101	.48	.48	.35
1N67A	SYL	101	.28	.28	.21
1N68A	SYL	101	.28	.28	.21
1N69A	SYL	101	.30	.30	.23
1N78A	SYL	101	4.50	3.85	3.54
1N78B	SYL	101	5.00	4.30	3.93
1N81A	SYL	101	.48	.48	.36
1N82A	RCA	...		Each	1.60
1N82AG	SYL	101	.59	.41	.34
1N87	SYL	101	.20	.16	.12
1N90	SYL	101	.33	.33	.22
1N91	MOT	...	.90	.90	.60
1N92	MOT	...	1.95	1.95	1.30
1N93	MOT	...	2.70	2.70	1.80
1N98	SYL	101	.31	.31	.24

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N99	SYL	101	.50	.39
1N100	SYL	101	.32	.27
1N116	SYL	101	.49	.36
1N118A	SYL	101	.23	.20
1N126	SYL	101	.30	.24
1N128	SYL	101	.32	.25
1N191	SYL	101	.35	.28
1N192	SYL	101	.34	.26
1N198	SYL	101	.35	.28
1N198B	SYL	101	1.03	.78
1N248B	MOT	101	1.50	1.00
1N249B	MOT	65	1.65	1.10
1N249C	MOT	65	1.95	1.30
1N250B	MOT	65	2.40	1.60
1N250C	MOT	65	2.70	1.80
1N251	SYL	101	.65	.43
1N252	SYL	101	.65	.43
1N256	TI	...	2.16	1.44
1N270	RCA	...	Each	.48
1N270	SYL	101	.32	.25
			1000-5000 Ea.	.11
1N276	SYL	101	.31	.24
1N277	SYL	101	.34	.26
			1000-5000 Ea.	.14
1N279	SYL	101	.29	.22
1N281	SYL	101	.31	.24
			1000-5000 Ea.	.14
1N283	SYL	101	.51	.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-5000
1N294	SYL	101	.34	.26	.15
1N295	RCA	...		Each	.55
1N295	SYL	101	.35	.27	.15

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N358A	SYL	101	15.00	12.85	11.80
1N415G	SYL	101	10.50	9.00	8.25
1N416G	SYL	101	10.50	9.00	8.25

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N429	IR	...	5.00	4.10
1N429	MOT	64	5.45	4.10
1N430A	IR	91	23.20	19.95
1N440B	IR	91	.66	.44
1N440B	RCA	85	.53	.38
			1000-Up Ea.	.32
1N441B	IR	91	.69	.46
1N441B	RCA	85	.60	.43
			1000-Up Ea.	.36
1N442B	IR	91	.79	.53
1N442B	RCA	85	.66	.51
			1000-Up Ea.	.43
1N442B	TI	...	.79	.53
1N443B	IR	91	.97	.65
1N443B	RCA	85	.79	.58
			1000-Up Ea.	.48
1N444B	IR	91	1.05	.70
1N444B	RCA	85	.92	.67
			1000-Up Ea.	.56
1N444B	TI	...	1.05	.70
1N445B	IR	91	1.42	.95
1N445B	RCA	85	1.12	.82
			1000-Up Ea.	.68

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-5000
1N456	SYL	101	.42	.28	.18
1N456A	SYL	101	.42	.28	.18
1N457	SYL	101	.45	.30	.19
1N457A	SYL	101	.45	.30	.19
1N458	SYL	101	.48	.32	.21
1N458A	SYL	101	.48	.32	.21
1N459	SYL	101	.51	.34	.21
1N459A	SYL	101	.51	.34	.21
1N461	SYL	101	.42	.28	.18
1N461A	SYL	101	.42	.28	.18
1N462	SYL	101	.44	.29	.19
1N462A	SYL	101	.44	.29	.19
1N463	SYL	101	.54	.36	.22
1N463A	SYL	101	.54	.36	.22
1N464	SYL	101	.53	.35	.21
1N464A	SYL	101	.53	.35	.21
1N482	SYL	101	.66	.40	.19
1N482A	SYL	101	.69	.46	.19
1N482B	SYL	101	.69	.46	.19
1N483	SYL	101	.70	.47	.19
1N483A	SYL	101	.70	.47	.19
1N483B	SYL	101	.70	.47	.19
1N484	SYL	101	.70	.47	.22
1N484A	SYL	101	.70	.47	.22
1N484B	SYL	101	.70	.47	.22
1N485	SYL	101	.90	.60	.24
1N485A	SYL	101	.90	.60	.24
1N485B	SYL	101	.90	.60	.24
1N486A	SYL	101	.90	.60	.26
1N486B	SYL	101	.90	.60	.26
1N487A	SYL	101	1.41	.94	.38
1N488	SYL	101	1.17	.78	.45
1N488A	SYL	101	1.78	1.19	.49

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N497	SYL	101	.39	.30
1N498	SYL	101	.44	.35
1N500	SYL	101	.53	.41
1N536	IR	91	.42	.29
1N536	RCA	85	.36	.27
			1000-Up Ea.	.22
1N537	RCA	85	.40	.29
			1000-Up Ea.	.24
1N538	IR	91	.52	.34
1N538	RCA	85	.45	.32
			1000-Up Ea.	.27
1N539	IR	91	.59	.39
1N539	RCA	85	.50	.36
			1000-Up Ea.	.30
1N540	IR	91	.67	.43
1N540	RCA	85	.56	.41
			1000-Up Ea.	.34
1N547	IR	91	.95	.60
1N547	RCA	85	.79	.57
			1000-Up Ea.	.48
1N560	IR	91	1.57	1.05
1N625	SYL	101	.43	.29
1N626	SYL	101	.45	.30
1N627	SYL	101	.60	.39
1N628	SYL	101	.72	.47
1N629	SYL	101	.81	.54
1N634	SYL	101	.52	.41
1N643A	SYL	101	1.50	1.00
1N645	SYL	...	1.40	.80
1N645A	TI	...	1.65	1.10
1N646	TI	99	1.60	1.05
1N647	SYL	...	1.70	1.10
1N647	TI	99	1.70	1.10
1N648	TI	99	1.80	1.20
1N649	SYL	...	2.25	1.40
1N659	SYL	101	.58	.39
1N659	TI	95	.56	.36
1N660	TI	95	.65	.34
1N661	TI	95	.98	.68
1N662	SYL	101	.92	.44
1N663	SYL	101	1.20	.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
1N695	SYL	101	.30	.24	.14

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N702	IR	94	1.00	....	.80
1N702A	IR	94	1.00	....	.85
1N703	IR	94	1.00	....	.80
1N703A	IR	94	1.00	....	.85
1N704	IR	94	1.00	....	.80
1N704A	IR	94	1.00	....	.85
1N705	IR	94	1.00	....	.80
1N705A	IR	94	1.00	....	.85
1N706	IR	94	1.00	....	.80
1N706A	IR	94	1.00	....	.85
1N707	IR	94	1.00	....	.80
1N707A	IR	94	1.00	....	.85
1N708	IR	94	1.00	....	.80
1N708A	IR	94	1.00	....	.85
1N709	IR	94	1.00	....	.80
1N709A	IR	94	1.00	....	.85
1N710	IR	94	1.00	....	.80
1N710A	IR	94	1.00	....	.85
1N711	IR	94	1.00	....	.80
1N711A	IR	94	1.00	....	.85
1N712	IR	94	1.00	....	.80
1N712A	IR	94	1.00	....	.85
1N713	IR	94	1.00	....	.80
1N713A	IR	94	1.00	....	.85
1N714	IR	94	1.00	....	.80
1N714A	IR	94	1.00	....	.85
1N715	IR	94	1.00	....	.80
1N715A	IR	94	1.00	....	.85
1N718	IR	94	1.00	....	.80
1N718A	IR	94	1.00	....	.85
1N721	IR	94	1.00	....	.80
1N721A	IR	94	1.00	....	.85
1N722	IR	94	1.00	....	.80
1N722A	IR	94	1.00	....	.85
1N723	IR	94	1.00	....	.80
1N723A	IR	94	1.00	....	.85
1N746	IR	94	1.00	....	.80
1N746	MOT	61	2.00	1.70	1.50
1N746A	IR	94	1.00	....	.85
1N746A	MOT	61	2.75	2.35	2.05
1N747	IR	94	1.00	....	.80
1N747	MOT	61	2.00	1.70	1.50
1N747A	IR	94	1.00	....	.85
1N747A	MOT	61	2.75	2.35	2.05
1N748	IR	94	1.00	....	.80
1N748	MOT	61	2.00	1.70	1.50
1N748A	IR	94	1.00	....	.85
1N748A	MOT	61	2.75	2.35	2.05
1N749	IR	94	1.00	....	.80
1N749	MOT	61	2.00	1.70	1.50
1N749A	IR	94	1.00	....	.85
1N749A	MOT	61	2.75	2.35	2.05
1N750	IR	94	1.00	....	.80
1N750	MOT	61	2.00	1.70	1.50
1N750A	IR	94	1.00	....	.85
1N750A	MOT	61	2.75	2.35	2.05
1N751	IR	94	1.00	....	.80
1N751	MOT	61	2.00	1.70	1.50
1N751A	IR	94	1.00	....	.85
1N751A	MOT	61	2.75	2.35	2.05
1N752	IR	94	1.00	....	.80
1N752	MOT	61	2.00	1.70	1.50
1N752A	IR	94	1.00	....	.85
1N752A	MOT	61	2.75	2.35	2.05
1N753	IR	94	1.00	....	.80
1N753	MOT	61	2.00	1.70	1.50
1N753A	IR	94	1.00	....	.85
1N753A	MOT	61	2.75	2.35	2.05
1N754	IR	94	1.00	....	.80
1N754	MOT	61	2.00	1.70	1.50
1N754A	IR	94	1.00	....	.85
1N754A	MOT	61	2.75	2.35	2.05
1N755	IR	94	1.00	....	.80
1N755	MOT	61	2.00	1.70	1.50
1N755A	IR	94	1.00	....	.85
1N755A	MOT	61	2.75	2.35	2.05
1N756	IR	94	1.00	....	.80
1N756	MOT	61	2.00	1.70	1.50
1N756A	IR	94	1.00	....	.85
1N756A	MOT	61	2.75	2.35	2.05
1N757	IR	94	1.00	....	.80
1N757	MOT	61	2.00	1.70	1.50
1N757A	IR	94	1.00	....	.85
1N757A	MOT	61	2.75	2.35	2.05
1N758	IR	94	1.00	....	.80
1N758	MOT	61	2.00	1.70	1.50
1N758A	IR	94	1.00	....	.85
1N758A	MOT	61	2.75	2.35	2.05
1N759	IR	94	1.00	....	.80
1N759	MOT	61	2.00	1.70	1.50
1N759A	IR	94	1.00	....	.85
1N759A	MOT	61	2.75	2.35	2.05

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N763	MOT	...	2.15	1.60
1N764	MOT	...	2.15	1.60
1N764	TI	...	1.05	.85
1N765	TI	...	1.05	.85

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N766	TI	...	1.05	.85
1N770	SYL	101	.48	.38
			1000-5000 Ea.	.16
1N816	SYL	101	.52	.35
			1000-5000 Ea.	.18

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N821	IR	94	2.30	2.30	1.85
1N821	MOT	63	2.75	2.35	1.90
			100 Ass't Ea.		2.10
1N821A	MOT	63	3.05	2.60	2.10
			100 Ass't Ea.		2.30
1N823	IR	94	3.05	3.05	2.45
1N823	MOT	63	3.60	3.10	2.50
			100 Ass't Ea.		2.75
1N823A	MOT	63	3.90	3.35	2.70
			100 Ass't Ea.		2.95
1N825	IR	94	4.60	4.60	3.70
1N825	MOT	63	5.80	5.00	4.00
			100 Ass't Ea.		4.40
1N825A	MOT	63	6.50	5.60	4.50
			100 Ass't Ea.		4.95
1N826	IR	94	6.60	6.60	5.25
1N827	IR	94	8.75	8.75	7.50
1N827	MOT	63	10.85	9.35	7.50
			100 Ass't Ea.		8.25
1N827A	MOT	63	13.05	11.25	9.50
			100 Ass't Ea.		9.90
1N828	IR	94	11.04	11.04	9.00
1N829	IR	94	11.25	11.25	10.10
1N829	MOT	63	16.30	14.05	11.25
			100 Ass't Ea.		12.35
1N829A	MOT	63	19.55	16.85	13.50
			100 Ass't Ea.		14.85

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1N830A	SYL	101	3.85	3.30	3.00
1N831	SYL	101	6.85	5.85	5.40
1N905A	SYL	101	1.55	1.55	1.09
1N914	SYL	101	.45	.45	.30
1N914A	SYL	101	.50	.50	.33
1N914B	SYL	101	1.35	1.35	.90
1N916	SYL	101	.75	.75	.50
1N916A	SYL	101	.75	.75	.50
			1000-Up Ea.		.32

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N935	IR	94	1.60	1.60	1.45
1N935	MOT	63	2.30	2.00	1.60
			100 Ass't Ea.		1.75
1N935A	IR	94	1.80	1.80	1.60
1N935A	MOT	63	2.60	2.25	1.80
			100 Ass't Ea.		2.00
1N935B	MOT	63	3.55	3.05	2.45
			100 Ass't Ea.		2.70
1N936	IR	94	1.90	1.90	1.70
1N936	MOT	63	2.75	2.35	1.90
			100 Ass't Ea.		2.10
1N936A	IR	94	2.45	2.45	2.20
1N936A	MOT	63	3.55	3.05	2.45
			100 Ass't Ea.		2.70
1N936B	IR	94	2.90	2.90	2.60
1N936B	MOT	63	4.20	3.60	2.90
			100 Ass't Ea.		3.20
1N937	IR	94	3.70	3.70	3.30
1N937	MOT	63	5.35	4.60	3.70
			100 Ass't Ea.		4.05
1N937A	IR	94	4.25	4.25	3.85
1N937A	MOT	63	6.15	5.30	4.25
			100 Ass't Ea.		4.65
1N937B	MOT	63	7.10	6.10	4.90
			100 Ass't Ea.		5.40
1N938	IR	94	4.80	4.80	4.30
1N938	MOT	63	6.95	6.00	4.80
			100 Ass't Ea.		5.30
1N938A	IR	94	5.20	5.20	4.70
1N938A	MOT	63	7.55	6.50	5.20
			100 Ass't Ea.		5.70
1N938B	MOT	63	10.00	8.60	6.90
			100 Ass't Ea.		7.60
1N938B/USN	MOT	63	13.35	11.75	9.40
			100 Ass't Ea.		10.35
1N939	IR	94	12.40	12.40	11.15
1N939	MOT	63	18.00	15.50	12.40
			100 Ass't Ea.		13.65
1N939A	MOT	63	25.35	21.85	17.50
			100 Ass't Ea.		19.25
1N939B	MOT	63	27.35	23.55	18.85
			100 Ass't Ea.		20.75
1N941	MOT	63	3.20	2.75	2.20
			100 Ass't Ea.		2.40
1N941A	MOT	63	3.40	2.90	2.34
			100 Ass't Ea.		2.55
1N942	MOT	63	3.50	3.00	2.40
			100 Ass't Ea.		2.65
1N942A	MOT	63	4.35	3.75	3.00
			100 Ass't Ea.		3.30
1N943	MOT	63	6.90	5.95	4.75
			100 Ass't Ea.		5.20
1N943A	MOT	63	6.95	6.00	4.80
			100 Ass't Ea.		5.30
1N944	MOT	63	10.15	8.75	7.00
			100 Ass't Ea.		7.70

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N945	MOT	63	26.70	23.00	18.40
			100 Ass't Ea.		20.25
1N946	MOT	63	59.30	51.10	40.90
			100 Ass't Ea.		45.00
1N946A	MOT	63	70.30	60.60	48.50
			100 Ass't Ea.		53.35
1N946B	MOT	63	77.00	66.35	53.10
			100 Ass't Ea.		58.40

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N957	MOT	61	2.15	1.85	1.60
1N957A	IR	94	1.00	....	.80
1N957A	MOT	61	2.35	2.00	1.75
1N957B	IR	94	1.00	....	.85
1N957B	MOT	61	2.95	2.55	2.20
1N958	MOT	61	2.15	1.85	1.60
1N958A	IR	94	1.00	....	.80
1N958B	IR	94	1.00	....	.85
1N958B	MOT	61	2.95	2.55	2.20
1N959A	IR	94	1.00	....	.80
1N959B	IR	94	1.00	....	.85
1N959B	MOT	61	2.95	2.55	2.20
1N960	MOT	61	2.15	1.85	1.60
1N960A	IR	94	1.00	....	.80
1N960B	IR	94	1.00	....	.85
1N960B	MOT	61	2.95	2.55	2.20
1N961	MOT	61	2.15	1.85	1.60
1N961A	IR	94	1.00	....	.80
1N961A	MOT	61	2.35	2.00	1.75
1N961B	IR	94	1.00	....	.85
1N961B	MOT	61	2.95	2.55	2.20
1N962	MOT	61	2.15	1.85	1.60
1N962A	MOT	61	2.35	2.00	1.75
1N962B	IR	94	1.00	....	.85
1N962B	MOT	61	2.95	2.55	2.20
1N963	MOT	61	2.15	1.85	1.60
1N963A	IR	94	1.00	....	.80
1N963A	MOT	61	2.35	2.00	1.75
1N963B	IR	94	1.00	....	.85
1N963B	MOT	61	2.95	2.55	2.20
1N964	MOT	61	2.15	1.85	1.60
1N964A	IR	94	1.00	....	.80
1N964A	MOT	61	2.35	2.00	1.75
1N964B	MOT	61	2.95	2.55	2.20
1N965	MOT	61	2.15	1.85	1.60
1N965A	IR	94	1.00	....	.80
1N965A	MOT	61	2.35	2.00	1.75
1N965B	IR	94	1.00	....	.85
1N965B	MOT	61	2.95	2.55	2.20
1N966	MOT	61	2.15	1.85	1.60
1N966A	IR	94	1.00	....	.80
1N966A	MOT	61	2.35	2.00	1.75
1N966B	IR	94	1.00	....	.85
1N966B	MOT	61	2.95	2.55	2.20
1N967	MOT	61	2.15	1.85	1.60
1N967A	IR	94	1.00	....	.80
1N967A	MOT	61	2.35	2.00	1.75
1N967B	IR	94	1.00	....	.85
1N967B	MOT	61	2.95	2.55	2.20
1N968	MOT	61	2.15	1.85	1.60
1N968A	IR	94	1.00	....	.80
1N968A	MOT	61	2.35	2.00	1.75
1N968B	IR	94	1.00	....	.85
1N968B	MOT	61	2.95	2.55	2.20
1N969	MOT	61	2.15	1.85	1.60
1N969A	IR	94	1.00	....	.80
1N969B	IR	94	1.00	....	.85
1N969B	MOT	61	2.95	2.55	2.20
1N970	MOT	61	2.15	1.85	1.60
1N970A	IR	94	1.00	....	.80
1N970B	IR	94	1.00	....	.85
1N970B	MOT	61	2.95	2.55	2.20
1N971	MOT	61	2.15	1.85	1.60
1N971A	IR	94	1.00	....	.80
1N971A	MOT	61	2.35	2.00	1.75
1N971B	IR	94	1.00	....	.85
1N971B	MOT	61	2.95	2.55	2.20
1N972A	IR	94	1.00	....	.80
1N972B	IR	94	1.00	....	.85
1N972B	MOT	61	2.95	2.55	2.20
1N973A	MOT	61	2.35	2.00	1.75
1N973B	IR	94	1.00	....	.85
1N974	MOT	61	2.15	1.85	1.60
1N974A	MOT	61	2.35	2.00	1.75
1N974B	MOT	61	2.95	2.55	2.20
1N975	MOT	61	2.15	1.85	1.60
1N975B	MOT	61	2.95	2.55	2.20
1N976	MOT	61	2.15	1.85	1.60
1N976A	MOT	61	2.35	2.00	1.75
1N976B	MOT	61	2.95	2.55	2.20
1N977	MOT	61	2.15	1.85	1.60
1N977A	MOT	61	2.35	2.00	1.75
1N977B	MOT	61	2.95	2.55	2.20
1N978	MOT	61	2.15	1.85	1.60
1N978A	MOT	61	2.35	2.00	1.75
1N978B	MOT	61	2.95	2.55	2.20
1N979	MOT	61	2.15	1.85	1.60
1N979A	MOT	61	2.35	2.00	1.75
1N979B	MOT	61	2.95	2.55	2.20
1N980	MOT	61	2.15	1.85	1.60
1N980A	MOT	61	2.35	2.00	1.75
1N980B	MOT	61	2.95	2.55	2.20
1N981	MOT	61	2.15	1.85	1.60
1N981B	MOT	61	2.95	2.55	2.20
1N982	MOT	61	2.15	1.85	1.60
1N982A	MOT	61	2.35	2.00	1.75
1N984A	MOT	61	2.35	2.00	1.75
1N985	MOT	61	2.60	2.25	1.95
1N985A	MOT	61	3.00	2.60	2.25

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 32 1N766 TI designates Texas Instruments 1N766

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N985B	MOT	61	3.65	3.15	2.75
1N987	MOT	61	2.60	2.25	1.95
1N987A	MOT	61	3.00	2.60	2.25
1N987B	MOT	61	3.65	3.15	2.75
1N988	MOT	61	2.60	2.25	1.95
1N988A	MOT	61	3.00	2.60	2.25
1N988B	MOT	61	3.65	3.15	2.75
1N989A	MOT	61	3.00	2.60	2.25
1N989B	MOT	61	3.65	3.15	2.75
1N990	MOT	61	2.60	2.25	1.95
1N990A	MOT	61	3.00	2.60	2.25
1N992	MOT	61	2.60	2.25	1.95
1N992A	MOT	61	3.00	2.60	2.25
1N992B	MOT	61	3.65	3.15	2.75
1N995	SYL	101	.30	....	.24
			1000-5000 Ea.		.12

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-Up
1N1081	ST	102	.60	.55	.51
1N1082	ST	102	.65	.57	.53
1N1083	ST	102	.70	.61	.57
1N1084	ST	102	.75	.63	.59
1N1085A	ST	102	3.34	2.86	2.66
1N1086A	ST	102	4.00	3.43	3.20
1N1088A	ST	102	5.35	4.67	4.27

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1095	IR	91	.76	.51
1N1095	RCA	...	.61	.48
			1000-Up Ea.	.40
1N1096	IR	91	.96	.64
1N1096	TI	...	.97	.64

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-Up
1N1108	ST	102	3.15	2.71	2.54
1N1109	ST	102	4.00	3.43	3.20
1N1110	ST	102	4.75	4.15	3.86
1N1111	ST	102	5.65	4.86	4.53
1N1113	ST	102	7.35	6.30	5.87

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1115	IR	91	1.04	.69
1N1116	IR	91	1.10	.75
1N1117	IR	91	1.40	.95
1N1118	IR	91	1.70	1.15
1N1119	IR	91	1.80	1.20
1N1120	IR	91	2.40	1.74
1N1124A	IR	91	2.20	1.45
1N1124A	TI	..	1.86	1.24
1N1125	IR	91	2.75	1.82
1N1125A	TI	...	2.25	1.50
1N1126A	IR	91	3.85	2.58
1N1126A	TI	...	3.05	2.05
1N1135	IR	93	3.75	3.35
1N1137	IR	93	5.00	4.50
1N1140	IR	93	5.65	5.10
1N1142	IR	93	8.35	7.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N1150A	ST	..	5.95	5.31	4.68
1N1183	IR	92	1.95	1.95	1.30
1N1183	MOT	65	1.80	1.80	1.20

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1183A	RCA	85	2.15	1.56
			1000-Up Ea.	1.30
1N1183RA	RCA	85	2.15	1.56
			1000-Up Ea.	1.30

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN1184 IR designates International Rectifier IN1184

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1184	IR	92	2.40	1.60
1N1184	MOT	65	2.10	1.40
1N1184A	RCA	85	2.48	1.90
			1000-Up Ea.	1.50
1N1184RA	RCA	85	2.48	1.80
			1000-Up Ea.	1.50
1N1185	IR	92	2.90	1.95
1N1185	MOT	65	2.60	1.75
1N1186	IR	92	3.40	2.25
1N1186	MOT	65	3.15	2.10
1N1186A	RCA	85	3.55	2.58
			1000-Up Ea.	2.15
1N1186RA	RCA	...	3.55	2.58
			1000-Up Ea.	2.15
1N1187	IR	92	4.70	3.10
1N1187	MOT	65	4.65	3.10
1N1187A	RCA	85	4.95	3.60
			1000-Up Ea.	3.00
1N1188	IR	92	5.80	3.80
1N1188	MOT	65	5.25	3.50
1N1188A	RCA	85	6.19	4.50
			1000-Up Ea.	3.75
1N1188RA	RCA	85	6.19	4.50
			1000-Up Ea.	3.75
1N1189	IR	92	6.40	4.20
1N1189	MOT	65	6.00	4.00
1N1189A	RCA	85	7.43	5.40
			1000-Up Ea.	4.50
1N1190	IR	92	6.80	4.50
1N1190	MOT	65	6.75	4.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N1190	ST	...	4.89	4.19	3.90
1N1190A	RCA	85	8.65	8.65	6.30
			1000-Up Ea.		5.25
1N1190RA	RCA	85	8.65	8.65	6.30
			1000-Up Ea.		5.25
1N1191	MOT	65	1.35	1.35	.90
1N1192	MOT	65	1.50	1.50	1.05
1N1193	MOT	65	1.80	1.80	1.20
1N1194	MOT	65	2.60	2.60	1.75
1N1195	MOT	65	3.80	3.80	2.55
1N1195A	RCA	85	3.88	3.88	2.82
			1000-Up Ea.		2.35
1N1196	MOT	65	4.35	4.35	2.90
1N1196A	RCA	85	4.95	4.95	3.60
			1000-Up Ea.		3.00
1N1197A	RCA	85	5.94	5.94	4.32
			1000-Up Ea.		3.60
1N1198	MOT	65	6.75	6.75	4.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1198A	MOT	65	7.05	4.70
1N1198A	RCA	85	7.01	5.10
			1000-Up Ea.	4.25
1N1199A	IR	92	1.20	.80
1N1199A	RCA	85	1.24	.90
			1000-Up Ea.	.75
1N1199RA	RCA	...	1.24	.90
			1000-Up Ea.	.75

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N1200A	IR	92	1.35	1.35	.94
1N1200A	RCA	85	1.41	1.41	1.02
			1000-Up Ea.		.85
1N1200RA	RCA	...	1.41	1.41	1.02
			1000-Up Ea.		.85
1N1201	IR	...	1.75	1.75	1.20
1N1201A	IR	92	1.75	1.75	1.20
1N1202	IR	...	2.45	2.45	1.65
1N1202	ST	102	1.25	1.07	1.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N1202A	IR	92	2.45	2.45	1.65
1N1202A	RCA	85	2.48	2.48	1.80
			1000-Up Ea.		1.50
1N1203	IR	...	3.45	3.45	2.30
1N1203A	IR	92	3.45	3.45	2.30
1N1203A	RCA	85	3.47	2.47	2.52
			1000-Up Ea.		2.10
1N1203RA	RCA	...	3.47	3.47	2.52
			1000-Up Ea.		2.10
1N1204	IR	...	4.40	4.40	2.95
1N1204	ST	102	1.67	1.43	1.33
1N1204A	IR	92	4.40	4.40	2.95
1N1204A	RCA	85	4.46	4.46	3.24
			1000-Up Ea.		2.70
1N1204RA	RCA	...	4.46	4.46	3.24
			1000-Up Ea.		2.70
1N1205	IR	...	5.25	5.25	3.50
1N1205A	IR	92	5.25	5.25	3.50
1N1205A	RCA	85	5.36	5.36	3.90
			1000-Up Ea.		3.25
1N1206	IR	...	6.10	6.10	4.10
1N1206	ST	102	2.34	2.00	1.86
1N1206A	IR	92	6.10	6.10	4.10
1N1206A	RCA	85	6.19	6.19	4.50
			1000-Up Ea.		3.75
1N1206RA	RCA	...	6.19	6.19	4.50
			1000-Up Ea.		3.75

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-Up
1N1238	ST	...	5.25	4.69	4.13

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N1313	MOT	60	3.10	2.70	2.35
1N1314	MOT	60	3.10	2.70	2.35
1N1315	MOT	60	3.10	2.70	2.35
1N1316	MOT	60	3.10	2.70	2.35
1N1317	MOT	60	3.10	2.70	2.35
1N1320	MOT	60	3.10	2.70	2.35
1N1321	MOT	60	3.10	2.70	2.35
1N1323	MOT	60	3.10	2.70	2.35
1N1324	MOT	60	3.10	2.70	2.35
1N1326	MOT	60	3.10	2.70	2.35

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N1341	IR	...	.95	.95	.75
1N1341	ST	102	1.19	.96	.89
1N1341A	IR	92	.95	.95	.75
1N1341B	RCA	85	1.16	1.16	.84
			1000-Up Ea.		.70
1N1342	IR	...	1.20	1.20	.85
1N1342A	IR	92	1.20	1.20	.85
1N1342B	RCA	85	1.32	1.32	.96
			1000-Up Ea.		.80
1N1343	IR	...	1.55	1.55	1.00
1N1343	ST	102	1.20	1.03	.96
1N1343A	IR	92	1.55	1.55	1.00
1N1344	IR	...	2.05	2.05	1.40
1N1344A	IR	92	2.05	2.05	1.40
1N1344B	RCA	85	2.15	2.15	1.56
			1000-Up Ea.		1.30
1N1345	IR	...	2.85	2.85	2.00
1N1345A	IR	92	2.85	2.85	2.00
1N1345B	RCA	85	3.05	3.05	2.22
			1000-Up Ea.		1.85
1N1346	IR	...	3.75	3.75	2.60
1N1346	ST	102	1.50	1.29	1.20
1N1346A	IR	92	3.75	3.75	2.60
1N1346B	RCA	85	3.96	3.96	2.88
			1000-Up Ea.		2.40
1N1347	IR	...	4.60	4.60	3.10
1N1347A	IR	92	4.60	4.60	3.10
1N1347B	RCA	85	4.79	4.79	3.48
			1000-Up Ea.		2.90
1N1348	IR	...	5.40	5.40	3.65
1N1348A	IR	92	5.40	5.40	3.65
1N1348B	RCA	85	5.78	5.78	4.20
			1000-Up Ea.		3.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1487	IR	91	.49	.32
1N1488	IR	91	.52	.34
1N1489	IR	91	.59	.39
1N1490	IR	91	.67	.44
1N1491	IR	91	.75	.50
1N1492	IR	91	.95	.70
1N1507	IR	94	2.75	2.10
1N1508	IR	94	2.75	2.10
1N1509	IR	94	2.75	2.10
1N1510	IR	94	2.75	2.10
1N1511	IR	94	2.75	2.10
1N1512	IR	94	2.75	2.10
1N1513	IR	94	2.75	2.10
1N1513A	IR	94	3.45	2.65
1N1514	IR	94	2.75	2.10

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1515	IR	94	2.75	2.10
1N1516	IR	94	2.75	2.10
1N1517	IR	95	2.75	2.10
1N1518	IR	94	2.70	2.20
1N1519	IR	94	2.70	2.20
1N1519A	IR	94	3.50	2.75
1N1520	IR	94	2.70	2.20
1N1521	IR	94	2.70	2.20
1N1522	IR	94	2.70	2.20
1N1523	IR	95	2.70	2.20
1N1524	IR	94	2.70	2.20
1N1525	IR	94	2.70	2.20
1N1526	IR	94	2.70	2.20
1N1527	IR	94	2.70	2.20
1N1528	IR	94	2.70	2.20
1N1530	MOT	64	16.55	12.45
			100 Ass't Ea.	14.30
1N1581	TI	...	1.05	.70
1N1588	IR	...	3.80	3.05
1N1589	IR	...	3.80	3.05
1N1590A	IR	...	4.55	3.65
1N1591	IR	...	3.80	3.05
1N1591A	IR	...	4.55	3.65
1N1592	IR	...	3.80	3.05
1N1593A	IR	...	4.55	3.65
1N1594	IR	...	3.80	3.05
1N1594A	IR	...	4.55	3.65
1N1595	IR	...	3.80	3.05
1N1595A	IR	...	4.55	3.65
1N1596	IR	...	3.80	3.05
1N1597	IR	...	3.80	3.05
1N1598	IR	...	3.80	3.05
1N1599	IR	94	5.95	4.75
1N1600	IR	94	5.95	4.75
1N1600A	IR	94	8.00	6.40
1N1601	IR	94	5.95	4.75
1N1601A	IR	94	8.00	6.40
1N1602	IR	94	5.95	4.75
1N1602A	IR	94	8.00	6.40
1N1604	IR	94	5.95	4.75
1N1604A	IR	...	8.00	6.40
1N1605	IR	94	5.95	4.75
1N1605A	IR	...	8.00	6.40
1N1606	IR	94	5.95	4.75
1N1606A	IR	...	8.00	6.40
1N1608	IR	94	5.95	4.75
1N1608A	IR	...	8.00	6.40
1N1609	IR	94	5.95	4.75

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
1N1612	IR	92	1.00	.71	....
1N1612	RCA	85	1.08	.78	.65
1N1612R	RCA	...	1.08	.78	.65
1N1613	IR	92	1.15	.81	....
1N1613	RCA	85	1.24	.90	.75
1N1613R	RCA	...	1.24	.90	.75
1N1614	IR	92	1.90	1.65	....
1N1614	RCA	85	1.90	1.38	1.15
1N1614R	RCA	...	1.90	1.38	1.15
1N1615	IR	92	3.75	3.05	....
1N1615	RCA	85	3.71	2.70	2.25
1N1615R	RCA	...	3.71	2.70	2.25
1N1616	IR	92	5.55	4.35	....
1N1616	RCA	85	5.36	3.90	3.25

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-Up
1N1621	ST	...	2.24	1.92	1.80
1N1622	ST	...	2.80	2.40	2.24
1N1624	ST	...	4.24	3.62	3.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1694	IR	91	.56	.37
1N1731	MOT	65	6.00	4.00
1N1732	MOT	65	6.75	4.50
1N1733	MOT	65	7.80	5.20
1N1734	MOT	65	11.60	7.75

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N1735	MOT	64	5.40	4.65	4.05
1N1736	IR	...	6.52	....	5.55
1N1736	MOT	64	8.75	7.60	6.60
1N1736A	MOT	64	10.70	9.25	8.05
1N1738A	MOT	64	16.20	14.05	12.20
1N1763A	RCA	85	.42	....	.30
			1000-Up Ea.		.25
1N1764A	RCA	85	.52	....	.38
			1000-Up Ea.		.31

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1765	IR	94	2.55	2.05
1N1766	IR	94	2.55	2.05
1N1767	IR	94	2.55	2.05
1N1768	IR	94	2.55	2.05
1N1769	IR	94	2.55	2.05

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N1770	IR	94	2.55	2.05
1N1771	IR	94	2.55	2.05
1N1772	IR	94	2.55	2.05
1N1773	IR	94	2.55	2.05
1N1774	IR	94	2.55	2.05
1N1775	IR	94	2.55	2.05
1N1776	IR	94	2.55	2.05

Type No.	Mfr.	Page No.	EACH 1-24	25-99
1N1826	IR	...	5.70	5.70
			100-999 Ea.	4.55
1N1826	TI	...	5.10	4.50
1N1832	IR	...	5.70	5.70
			100-999 Ea.	4.55
1N1832	TI	...	5.10	4.50
1N1833	IR	...	5.70	5.70
			100-999 Ea.	4.55
1N1833	TI	...	5.10	4.50
1N1835	IR	...	5.70	5.70
			100-999 Ea.	4.55
1N1835	TI	...	5.10	4.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
1N2069	IR	91	.32	.28	...
1N2069	SYL	101	.45	.30	.22
1N2069	TI	95	.45	.29	...
1N2069A	SYL	101	.50	.33	.25
1N2070	IR	91	.41	.35	...
1N2070	SYL	101	.57	.38	.27
1N2070	TI	95	.55	.33	...
1N2070A	SYL	101	.67	.45	.31
1N2071	IR	91	.50	.44	...
1N2071	SYL	101	.72	.48	.33
1N2071	TI	95	.62	.42	...
1N2071A	SYL	101	.75	.50	.35

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N2128A	IR	92	3.35	2.56
1N2129A	IR	92	3.35	2.56
1N2130A	IR	92	4.12	3.07
1N2131A	IR	92	4.80	3.51
1N2132A	IR	92	5.40	3.88
1N2133A	IR	92	6.00	4.20
1N2134A	IR	92	6.00	4.20
1N2135A	IR	92	6.95	4.85
1N2136A	IR	92	6.95	4.85
1N2137A	IR	92	7.85	5.40
1N2138A	IR	92	8.70	5.85
1N2154	IR	92	3.53	3.53
1N2155	IR	92	4.65	4.65
1N2156	IR	92	6.68	6.00
1N2157	IR	92	9.00	9.00
1N2158	IR	92	10.65	10.65
1N2159	IR	92	14.85	14.85
1N2160	IR	92	19.58	19.58

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N2163	MOT	64	3.30	2.85	2.50
1N2163A	MOT	64	3.45	3.00	2.60
1N2164	MOT	64	4.50	3.90	3.40
1N2164A	MOT	64	5.50	4.75	4.15
1N2165	MOT	64	5.65	4.90	4.25
1N2165A	MOT	64	7.30	6.30	5.50
1N2166	MOT	64	6.80	5.85	5.10
1N2166A	MOT	64	8.10	7.00	6.10
1N2167	MOT	64	8.65	7.45	6.50
1N2167A	MOT	64	11.05	9.55	8.30
1N2168	MOT	64	11.90	10.30	8.95
1N2168A	MOT	64	15.95	13.80	12.00
1N2169	MOT	64	16.95	14.65	12.75
1N2169A	MOT	64	25.00	21.60	18.80
1N2170	MOT	64	23.95	20.70	18.00
1N2170A	MOT	64	36.95	31.95	27.80
1N2171	MOT	64	34.85	30.15	26.20
1N2171A	MOT	64	44.50	38.50	33.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N2175	TI	98	6.40	5.05
1N2326	RCA	87	.55	.40
			1000-Up Ea.	.33

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N2389	ST	102	6.10	5.23	4.87
1N2482	ST	102	.33	.29	.27
1N2482	SYL	101	.65	.65	.43
1N2483	ST	102	.35	.30	.28
1N2483	SYL	101	.69	.69	.46
1N2484	ST	102	.37	.32	.29
1N2484	SYL	101	.71	.71	.47
1N2490	ST	102	7.07	6.31	5.56
1N2610	IR	91	1.02	1.02	.68
1N2610	ST	102	.35	.30	.28

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N2611	IR	91	.62	.62	.45
1N2611	ST	102	.37	.32	.29
1N2612	IR	91	.70	.70	.50
1N2613	IR	91	1.71	1.71	1.14
1N2613	ST	102	.43	.37	.35
1N2614	IR	91	.89	.89	.63
1N2615	IR	91	1.00	1.00	.70
1N2615	ST	102	.47	.40	.37

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N2620	MOT	63	4.10	3.55	3.05
1N2620A	MOT	63	4.35	3.75	3.25
1N2620B	MOT	63	4.90	4.20	3.65
1N2621	MOT	63	4.60	3.95	3.45
1N2621A	MOT	63	5.55	4.80	4.15
1N2622	MOT	63	7.60	6.55	5.70
1N2622A	MOT	63	8.15	7.05	6.10
1N2622B	MOT	63	9.35	8.05	7.00
1N2623	MOT	63	8.80	7.60	6.60
1N2623A	MOT	63	10.05	8.70	7.55
1N2623B	MOT	63	13.50	11.65	10.15
1N2624	MOT	63	22.00	19.00	16.55
1N2624A	MOT	63	28.80	24.90	21.65
1N2624B	MOT	63	38.50	33.30	28.95

Type No.	Mfr.	Page No.	EACH 1-24	25-99
1N2630	IR	93	6.25	5.55
1N2631	IR	93	5.50	4.95
1N2633	IR	93	5.50	4.95
1N2637	IR	93	9.65	8.65

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N2804	MOT	62	5.65	4.90	4.25
1N2804A	MOT	62	7.65	6.60	5.75
1N2804B	MOT	62	10.65	9.20	8.00
1N2805	MOT	62	5.65	4.90	4.25
1N2805A	MOT	62	7.65	6.60	5.75
1N2805B	MOT	62	10.65	9.20	8.00
1N2806	MOT	62	5.65	4.90	4.25
1N2806A	MOT	62	7.65	6.60	5.75
1N2806B	MOT	62	10.65	9.20	8.00
1N2807	MOT	62	5.65	4.90	4.25
1N2807A	MOT	62	7.65	6.60	5.75
1N2807B	MOT	62	10.65	9.20	8.00
1N2808	MOT	62	5.65	4.90	4.25
1N2808A	MOT	62	7.65	6.60	5.75
1N2808B	MOT	62	10.65	9.20	8.00
1N2809	MOT	62	5.65	4.90	4.25
1N2809A	MOT	62	7.65	6.60	5.75
1N2809B	MOT	62	10.65	9.20	8.00
1N2810	MOT	62	5.65	4.90	4.25
1N2810A	MOT	62	7.65	6.60	5.75
1N2810B	MOT	62	10.65	9.20	8.00
1N2811	MOT	62	5.65	4.90	4.25
1N2811A	MOT	62	7.65	6.60	5.75
1N2811B	MOT	62	10.65	9.20	8.00
1N2812	MOT	62	5.65	4.90	4.25
1N2812A	MOT	62	7.65	6.60	5.75
1N2812B	MOT	62	10.65	9.20	8.00
1N2813	MOT	62	5.65	4.90	4.25
1N2813A	MOT	62	7.65	6.60	5.75
1N2813B	MOT	62	10.65	9.20	8.00
1N2816	MOT	62	5.65	4.90	4.25
1N2816A	MOT	62	7.65	6.60	5.75
1N2816B	MOT	62	10.65	9.20	8.00
1N2817	MOT	62	5.65	4.90	4.25
1N2817A	MOT	62	7.65	6.60	5.75
1N2817B	MOT	62	10.65	9.20	8.00
1N2818	MOT	62	5.65	4.90	4.25
1N2818A	MOT	62	7.65	6.60	5.75
1N2818B	MOT	62	10.65	9.20	8.00
1N2819	MOT	62	5.65	4.90	4.25
1N2819A	MOT	62	7.65	6.60	5.75
1N2819B	MOT	62	10.65	9.20	8.00
1N2820	MOT	62	5.65	4.90	4.25
1N2820A	MOT	62	7.65	6.60	5.75
1N2820B	MOT	62	10.65	9.20	8.00
1N2821	MOT	62	5.65	4.90	4.25
1N2821A	MOT	62	7.65	6.60	5.75
1N2821B	MOT	62	10.65	9.20	8.00
1N2822	MOT	62	5.65	4.90	4.25
1N2822A	MOT	62	7.65	6.60	5.75
1N2822B	MOT	62	10.65	9.20	8.00
1N2824	MOT	62	5.65	4.90	4.25
1N2824A	MOT	62	7.65	6.60	5.75
1N2824B	MOT	62	10.65	9.20	8.00
1N2825	MOT	62	5.65	4.90	4.25
1N2825A	MOT	62	7.65	6.60	5.75
1N2825B	MOT	62	10.65	9.20	8.00
1N2826	MOT	62	5.65	4.90	4.25
1N2826A	MOT	62	7.65	6.60	5.75
1N2826B	MOT	62	10.65	9.20	8.00
1N2828	MOT	62	5.65	4.90	4.25
1N2828A	MOT	62	7.65	6.60	5.75
1N2828B	MOT	62	10.65	9.20	8.00
1N2829	MOT	62	5.65	4.90	4.25
1N2829A	MOT	62	7.65	6.60	5.75
1N2829B	MOT	62	10.65	9.20	8.00
1N2830	MOT	62	5.65	4.90	4.25
1N2830A	MOT	62	7.65	6.60	5.75
1N2830B	MOT	62	10.65	9.20	8.00
1N2831	MOT	62	5.65	4.90	4.25

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN1770 IR designates International Rectifier IN1770

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N2831A	MOT	62	7.65	6.60	5.75
1N2831B	MOT	62	10.65	9.20	8.00
1N2833	MOT	62	5.65	4.90	4.25
1N2833A	MOT	62	7.65	6.60	5.75
1N2833B	MOT	62	10.65	9.20	8.00
1N2834	MOT	62	5.65	4.90	4.25
1N2834A	MOT	62	7.65	6.60	5.75
1N2834B	MOT	62	10.65	9.20	8.00
1N2835	MOT	62	5.65	4.90	4.25
1N2835A	MOT	62	7.65	6.60	5.75
1N2835B	MOT	62	10.65	9.20	8.00
1N2838	MOT	62	5.65	4.90	4.25
1N2838A	MOT	62	7.65	6.60	5.75
1N2838B	MOT	62	10.65	9.20	8.00
1N2839	MOT	62	6.80	5.85	5.10
1N2839A	MOT	62	11.30	9.75	8.50
1N2839B	MOT	62	17.95	15.50	13.50
1N2840	MOT	62	6.80	5.85	5.10
1N2840A	MOT	62	11.30	9.75	8.50
1N2840B	MOT	62	17.95	15.50	13.50
1N2841	MOT	62	6.80	5.85	5.10
1N2841A	MOT	62	11.30	9.75	8.50
1N2841B	MOT	62	17.95	15.50	13.50
1N2842	MOT	62	6.80	5.85	5.10
1N2842A	MOT	62	11.30	9.75	8.50
1N2842B	MOT	62	17.95	15.50	13.50
1N2843	MOT	62	6.80	5.85	5.10
1N2843A	MOT	62	11.30	9.75	8.50
1N2843B	MOT	62	17.95	15.50	13.50
1N2846	MOT	62	6.80	5.85	5.10
1N2846A	MOT	62	11.30	9.75	8.50
1N2846B	MOT	62	17.95	15.50	13.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
1N2858A	RCA	85	.33	.24	.20
1N2859A	RCA	85	.37	.27	.22
1N2860A	RCA	85	.40	.29	.24
1N2861A	RCA	85	.42	.30	.25
1N2862A	RCA	85	.48	.35	.29
1N2863A	RCA	85	.58	.42	.35
1N2864A	RCA	85	.70	.51	.42

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-499
1N2970	MOT	62	5.45	4.70	4.10
1N2970A	IR	62	3.30	...	2.65
				500-999 Ea.	2.65
1N2970A	MOT	62	5.85	5.05	4.40
1N2970B	IR	62	4.25	...	3.30
				500-999 Ea.	3.30
1N2970B	MOT	62	7.30	6.30	5.50
1N2971	MOT	62	5.45	4.70	4.10
1N2971A	IR	62	3.30	...	2.65
				500-999 Ea.	2.65
1N2971A	MOT	62	5.85	5.05	4.40
1N2971B	IR	62	4.25	...	3.30
				500-999 Ea.	3.30
1N2971B	MOT	62	7.30	6.30	5.50
1N2972	MOT	62	5.45	4.70	4.10
1N2972A	IR	62	3.30	...	2.65
				500-999 Ea.	2.65
1N2972A	MOT	62	5.85	5.05	4.40
1N2972B	IR	62	4.25	...	3.30
				500-999 Ea.	3.30
1N2972B	MOT	62	7.30	6.30	5.50
1N2973	MOT	62	5.45	4.70	4.10
1N2973A	IR	62	3.30	...	2.65
				500-999 Ea.	2.65
1N2973A	MOT	62	5.85	5.05	4.40
1N2973B	IR	62	4.25	...	3.30
				500-999 Ea.	3.30
1N2973B	MOT	62	7.30	6.30	5.50
1N2974	MOT	62	5.45	4.70	4.10
1N2974A	IR	62	3.30	...	2.65
				500-999 Ea.	2.65
1N2974A	MOT	62	5.85	5.05	4.40
1N2974B	IR	62	4.25	...	3.30
				500-999 Ea.	3.30

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN2974B MOT designates Motorola IN2974B

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-499
1N2974B	MOT	62	7.30	6.30	5.50
1N2975	MOT	62	5.45	4.70	4.10
1N2975A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2975A	MOT	62	5.85	5.05	4.40
1N2975B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2975B	MOT	62	7.30	6.30	5.50
1N2976	MOT	62	5.45	4.70	4.10
1N2976A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2976A	MOT	62	5.85	5.05	4.40
1N2976B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2976B	MOT	62	7.30	6.30	5.50
1N2977	MOT	62	5.45	4.70	4.10
1N2977A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2977A	MOT	62	5.85	5.05	4.40
1N2977B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2977B	MOT	62	7.30	6.30	5.50
1N2978	MOT	62	5.45	4.70	4.10
1N2978A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2978A	MOT	62	5.85	5.05	4.40
1N2978B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2978B	MOT	62	7.30	6.30	5.50
1N2979	MOT	62	5.45	4.70	4.10
1N2979A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2979A	MOT	62	5.85	5.05	4.40
1N2979B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2979B	MOT	62	7.30	6.30	5.50
1N2980	MOT	62	5.45	4.70	4.10
1N2980A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2980A	MOT	62	5.85	5.05	4.40
1N2980B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2980B	MOT	62	7.30	6.30	5.50
1N2982	MOT	62	5.45	4.70	4.10
1N2982A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2982A	MOT	62	5.85	5.05	4.40
1N2982B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2982B	MOT	62	7.30	6.30	5.50
1N2984	MOT	62	5.45	4.70	4.10
1N2984A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2984A	MOT	62	5.85	5.05	4.40
1N2984B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2984B	MOT	62	7.30	6.30	5.50
1N2985	MOT	62	5.45	4.70	4.10
1N2985A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2985A	MOT	62	5.85	5.05	4.40
1N2985B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2985B	MOT	62	7.30	6.30	5.50
1N2986	MOT	62	5.45	4.70	4.10
1N2986A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2986A	MOT	62	5.85	5.05	4.40
1N2986B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2986B	MOT	62	7.30	6.30	5.50
1N2987	MOT	62	5.45	4.70	4.10
1N2987A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2987A	MOT	62	5.85	5.05	4.40
1N2987B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2987B	MOT	62	7.30	6.30	5.50
1N2988	MOT	62	5.45	4.70	4.10

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-499
1N2988A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2988A	MOT	62	5.85	5.05	4.40
1N2988B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2988B	MOT	62	7.30	6.30	5.50
1N2989	MOT	62	5.45	4.70	4.10
1N2989A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2989A	MOT	62	5.85	5.05	4.40
1N2989B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2989B	MOT	62	7.30	6.30	5.50
1N2990	MOT	62	5.45	4.70	4.10
1N2990A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2990A	MOT	62	5.85	5.05	4.40
1N2990B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2990B	MOT	62	7.30	6.30	5.50
1N2991	MOT	62	5.45	4.70	4.10
1N2991A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2991A	MOT	62	5.85	5.05	4.40
1N2991B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2991B	MOT	62	7.30	6.30	5.50
1N2992	MOT	62	5.45	4.70	4.10
1N2992A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2992A	MOT	62	5.85	5.05	4.40
1N2992B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2992B	MOT	62	7.30	6.30	5.50
1N2993	MOT	62	5.45	4.70	4.10
1N2993A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2993A	MOT	62	5.85	5.05	4.40
1N2993B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2993B	MOT	62	7.30	6.30	5.50
1N2994	MOT	62	5.45	4.70	4.10
1N2994A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2994A	MOT	62	5.85	5.05	4.40
1N2994B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2994B	MOT	62	7.30	6.30	5.50
1N2995	MOT	62	5.45	4.70	4.10
1N2995A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2995A	MOT	62	5.85	5.05	4.40
1N2995B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2995B	MOT	62	7.30	6.30	5.50
1N2996	MOT	62	5.45	4.70	4.10
1N2996A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2996A	MOT	62	5.85	5.05	4.40
1N2996B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2996B	MOT	62	7.30	6.30	5.50
1N2997	MOT	62	5.45	4.70	4.10
1N2997A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2997A	MOT	62	5.85	5.05	4.40
1N2997B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2997B	MOT	62	7.30	6.30	5.50
1N2998	MOT	62	5.45	4.70	4.10
1N2998A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2998A	MOT	62	5.85	5.05	4.40
1N2998B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2998B	MOT	62	7.30	6.30	5.50
1N2999	MOT	62	5.45	4.70	4.10
1N2999A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N2999A	MOT	62	5.85	5.05	4.40
1N2999B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N2999B	MOT	62	7.30	6.30	5.50
1N3002	MOT	62	5.45	4.70	4.10
1N3002A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3002A	MOT	62	5.85	5.05	4.40
1N3002B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3002B	MOT	62	7.30	6.30	5.50
1N3003	MOT	62	5.45	4.70	4.10
1N3003A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3003A	MOT	62	5.85	5.05	4.40
1N3003B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3003B	MOT	62	7.30	6.30	5.50
1N3004	MOT	62	5.45	4.70	4.10
1N3004A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3004A	MOT	62	5.85	5.05	4.40
1N3004B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3004B	MOT	62	7.30	6.30	5.50
1N3005	MOT	62	5.45	4.70	4.10
1N3005A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3005A	MOT	62	5.85	5.05	4.40

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-499
1N3005B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3005B	MOT	62	7.30	6.30	5.50
1N3006	MOT	62	5.45	4.70	4.10
1N3006A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3006A	MOT	62	5.85	5.05	4.40
1N3006B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3006B	MOT	62	7.30	6.30	5.50
1N3007	MOT	62	5.45	4.70	4.10
1N3007A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3007A	MOT	62	5.85	5.05	4.40
1N3007B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3007B	MOT	62	7.30	6.30	5.50
1N3008	MOT	62	5.45	4.70	4.10
1N3008A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3008A	MOT	62	5.85	5.05	4.40
1N3008B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3008B	MOT	62	7.30	6.30	5.50
1N3009	MOT	62	5.45	4.70	4.10
1N3009A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3009A	MOT	62	5.85	5.05	4.40
1N3009B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3009B	MOT	62	7.30	6.30	5.50
1N3011	MOT	62	5.45	4.70	4.10
1N3011A	IR	62	3.30	....	2.65
				500-999 Ea.	2.65
1N3011A	MOT	62	5.85	5.05	4.40
1N3011B	IR	62	4.25	....	3.30
				500-999 Ea.	3.30
1N3011B	MOT	62	7.30	6.30	5.50
1N3013	MOT	62	6.00	5.15	4.50
1N3013A	IR	62	4.90	....	3.90
				500-999 Ea.	3.90
1N3013A	MOT	62	9.00	7.75	6.75
1N3013B	IR	62	6.50	....	5.40
				500-999 Ea.	5.40
1N3013B	MOT	62	13.75	11.90	10.35
1N3014	MOT	62	6.00	5.15	4.50
1N3014A	IR	62	4.90	....	3.90
				500-999 Ea.	3.90
1N3014A	MOT	62	9.00	7.75	6.75
1N3014B	IR	62	6.50	....	5.40
				500-999 Ea.	5.40
1N3014B	MOT	62	13.75	11.90	10.35
1N3015	MOT	62	6.00	5.15	4.50
1N3015A	IR	62	4.90	....	3.90
				500-999 Ea.	3.90
1N3015A	MOT	62	9.00	7.75	6.75
1N3015B	IR	62	6.50	....	5.40
				500-999 Ea.	5.40
1N3015B	MOT	62	13.75	11.90	10.35
1N3016	MOT	61	2.85	2.45	2.15
				500-999 Ea.	2.15
1N3016A	IR	94	2.76	....	2.15
				500-999 Ea.	2.15
1N3016A	MOT	61	3.20	2.75	2.40
				500-999 Ea.	2.40
1N3016B	IR	94	3.20	....	2.25
				500-999 Ea.	2.25
1N3016B	MOT	61	3.70	3.20	2.80
				500-999 Ea.	2.80
1N3017	MOT	61	2.85	2.45	2.15
				500-999 Ea.	2.15
1N3017A	IR	94	2.76	....	2.15
				500-999 Ea.	2.15
1N3017A	MOT	61	3.20	2.75	2.40
				500-999 Ea.	2.40
1N3017B	IR	94	3.20	....	2.25
1N3017B	MOT	61	3.70	3.20	2.80
1N3018	MOT	61	2.85	2.45	2.15
1N3018A	IR	94	2.76	....	2.15
1N3018A	MOT	61	3.20	2.75	2.40
1N3018B	IR	94	3.20	....	2.25
1N3018B	MOT	61	3.70	3.20	2.80
1N3019	MOT	61	2.85	2.45	2.15
1N3019A	IR	94	2.76	....	2.15
1N3019A	MOT	61	3.20	2.75	2.40
1N3019B	IR	94	3.20	....	2.25
1N3019B	MOT	61	3.70	3.20	2.80
1N3020	MOT	61	2.85	2.45	2.15
1N3020A	IR	94	2.76	....	2.15
1N3020A	MOT	61	3.20	2.75	2.40
1N3020B	IR	94	3.20	....	2.25
1N3020B	MOT	61	3.70	3.20	2.80
1N3021	MOT	61	2.85	2.45	2.15
1N3021A	IR	94	2.76	....	2.15
1N3021A	MOT	61	3.20	2.75	2.40
1N3021B	MOT	61	3.70	3.20	2.80
1N3022	MOT	61	2.85	2.45	2.15
1N3022A	IR	94	2.76	....	2.15
1N3022A	MOT	61	3.20	2.75	2.40
1N3022B	IR	94	3.20	....	2.25
1N3022B	MOT	61	3.70	3.20	2.80
1N3023	MOT	61	2.85	2.45	2.15
1N3023A	IR	94	2.76	....	2.15
1N3023A	MOT	61	3.20	2.75	2.40
1N3023B	IR	94	3.20	....	2.25
1N3023B	MOT	61	3.70	3.20	2.80
1N3024	MOT	61	2.85	2.45	2.15
1N3024A	IR	94	2.76	....	2.15

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3024A	MOT	61	3.20	2.75	2.40
1N3024B	IR	94	3.20	....	2.25
1N3024B	MOT	61	3.70	3.20	2.80
1N3025	MOT	61	2.85	2.45	2.15
1N3025A	IR	94	2.76	....	2.15
1N3025B	MOT	61	3.70	3.20	2.80
1N3026	MOT	61	2.85	2.45	2.15
1N3026A	IR	94	2.76	....	2.15
1N3026A	MOT	61	3.20	2.75	2.40
1N3026B	IR	94	3.20	....	2.25
1N3026B	MOT	61	3.70	3.20	2.80
1N3027	MOT	61	2.85	2.45	2.15
1N3027A	IR	94	2.76	....	2.15
1N3027A	MOT	61	3.20	2.75	2.40
1N3027B	IR	94	3.20	....	2.25
1N3027B	MOT	61	3.70	3.20	2.80
1N3027B/ USN	MOT	...	4.00	3.45	3.00
1N3028	MOT	61	2.85	2.45	2.15
1N3028A	IR	94	2.76	....	2.15
1N3028A	MOT	61	3.20	2.75	2.40
1N3028B	IR	94	3.20	....	2.25
1N3028B	MOT	61	3.70	3.20	2.80
1N3029	MOT	61	2.85	2.45	2.15
1N3029A	IR	94	2.76	....	2.15
1N3029A	MOT	61	3.20	2.75	2.40
1N3029B	IR	94	3.20	....	2.25
1N3029B	MOT	61	3.70	3.20	2.80
1N3030	MOT	61	2.85	2.45	2.15
1N3030A	IR	94	2.76	....	2.15
1N3030A	MOT	61	3.20	2.75	2.40
1N3030B	IR	94	3.20	....	2.25
1N3030B	MOT	61	3.70	3.20	2.80
1N3031	MOT	61	2.85	2.45	2.15
1N3031A	IR	94	2.76	....	2.15
1N3031A	MOT	61	3.20	2.75	2.40
1N3031B	IR	94	3.20	....	2.25
1N3031B	MOT	61	3.70	3.20	2.80
1N3032	MOT	61	2.85	2.45	2.15
1N3032A	IR	94	2.76	....	2.15
1N3032A	MOT	61	3.20	2.75	2.40
1N3032B	IR	94	3.20	....	2.25
1N3032B	MOT	61	3.70	3.20	2.80
1N3033	MOT	61	2.85	2.45	2.15
1N3033A	IR	94	2.76	....	2.15
1N3033A	MOT	61	3.20	2.75	2.40
1N3033B	MOT	61	3.70	3.20	2.80
1N3034	MOT	61	2.85	2.45	2.15
1N3034A	IR	94	2.76	....	2.15
1N3034A	MOT	61	3.20	2.75	2.40
1N3034B	MOT	61	3.70	3.20	2.80
1N3035	MOT	61	2.85	2.45	2.15
1N3035A	IR	94	2.76	....	2.15
1N3035A	MOT	61	3.20	2.75	2.40
1N3035B	IR	94	3.20	....	2.25
1N3035B	MOT	61	3.70	3.20	2.80
1N3036	MOT	61	2.85	2.45	2.15
1N3036A	IR	94	2.76	....	2.15
1N3036A	MOT	61	3.20	2.75	2.40
1N3036B	IR	94	3.20	....	2.25
1N3036B	MOT	61	3.70	3.20	2.80
1N3037	MOT	61	2.85	2.45	2.15
1N3037A	IR	94	2.76	....	2.15
1N3037A	MOT	61	3.20	2.75	2.40
1N3037B	IR	94	3.20	....	2.25
1N3037B	MOT	61	3.70	3.20	2.80
1N3038	MOT	61	2.85	2.45	2.15
1N3038A	IR	94	2.76	....	2.15
1N3038A	MOT	61	3.20	2.75	2.40
1N3038B	MOT	61	3.70	3.20	2.80
1N3039	MOT	61	2.85	2.45	2.15
1N3039A	IR	94	2.76	....	2.15
1N3039A	MOT	61	3.20	2.75	2.40
1N3039B	MOT	61	3.70	3.20	2.80
1N3040	MOT	61	2.85	2.45	2.15
1N3040A	IR	94	2.76	....	2.15
1N3040A	MOT	61	3.20	2.75	2.40
1N3040B	IR	94	3.20	....	2.25
1N3040B	MOT	61	3.70	3.20	2.80
1N3041	MOT	61	2.85	2.45	2.15
1N3041A	IR	94	2.76	....	2.15
1N3041A	MOT	61	3.20	2.75	2.40
1N3041B	IR	94	3.20	....	2.25
1N3041B	MOT	61	3.70	3.20	2.80
1N3042	MOT	61	2.85	2.45	2.15
1N3042A	IR	94	2.76	....	2.15
1N3042A	MOT	61	3.20	2.75	2.40
1N3042B	MOT	61	3.70	3.20	2.80
1N3043	MOT	61	2.85	2.45	2.15
1N3043A	IR	94	2.76	....	2.15
1N3043A	MOT	61	3.20	2.75	2.40
1N3043B	MOT	61	3.70	3.20	2.80
1N3044	MOT	61	2.85	2.45	2.15
1N3044A	IR	94	2.76	....	2.15
1N3044A	MOT	61	3.20	2.75	2.40
1N3044B	IR	94	3.20	....	2.25
1N3044B	MOT	61	3.70	3.20	2.80
1N3045	MOT	61	2.95	2.55	2.20
1N3045A	IR	94	2.76	....	2.15
1N3045A	MOT	61	3.25	2.80	2.45
1N3045B	IR	94	3.20	....	2.25
1N3045B	MOT	61	4.65	4.05	3.50
1N3046	MOT	61	2.95	2.55	2.20
1N3046A	IR	94	2.76	....	2.15
1N3046A	MOT	61	3.25	2.80	2.45
1N3046B	MOT	61	4.65	4.05	3.50
1N3047	MOT	61	2.95	2.55	2.20
1N3047A	IR	94	2.76	....	2.15
1N3047A	MOT	61	3.25	2.80	2.45
1N3047B	IR	94	3.20	....	2.25
1N3047B	MOT	61	4.65	4.05	3.50
1N3048	MOT	61	2.95	2.55	2.20
1N3048A	IR	94	2.76	....	2.15

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3048A	MOT	61	3.25	2.80	2.45
1N3048B	MOT	61	4.65	4.05	3.50
1N3049	MOT	61	2.95	2.55	2.20
1N3049A	IR	94	2.76	....	2.15
1N3050	MOT	61	2.95	2.55	2.20
1N3050A	IR	94	2.76	....	2.15
1N3050A	MOT	61	3.25	2.80	2.45
1N3050B	MOT	61	4.65	4.05	3.50
1N3051	MOT	61	2.95	2.55	2.20
1N3051A	IR	94	2.76	....	2.15
1N3051A	MOT	61	3.25	2.80	2.45
1N3051B	IR	94	3.20	....	2.25
1N3051B	MOT	61	4.65	4.05	3.50
1N3085	IR	...	8.00	....	....
1N3086	IR	...	14.00	....	....
1N3087	IR	...	17.75	....	....
1N3088	IR	...	20.00	....	....
1N3089	IR	...	22.50	....	....
1N3090	IR	...	24.25	....	....
1N3091	IR	...	30.10	....	....
1N3092	IR	...	42.00	....	....
1N3111	IR	...	7.00	....	....

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100 Ass't
1N3154	IR	94	2.20	2.20	....
			100-999 Ea.		1.75
1N3154	MOT	63	2.60	2.25	2.00
			100-999 Ea.		1.80
1N3154A	MOT	63	3.60	3.10	2.75
			100-999 Ea.		2.50
1N3155	IR	94	2.95	2.95	....
			100-999 Ea.		2.35
1N3155	MOT	63	3.55	3.05	2.70
			100-999 Ea.		2.45
1N3156	IR	94	5.20	5.20	....
			100-999 Ea.		4.15
1N3156	MOT	63	6.15	5.30	4.65
			100-999 Ea.		4.25
1N3157	IR	94	6.50	6.50	....
			100-999 Ea.		5.20
1N3157	MOT	63	7.60	6.55	5.75
			100-999 Ea.		5.25

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N3161	ST	102	14.20	12.19	11.36
1N3163	ST	102	15.80	13.50	12.60

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3189	IR	91	2.10	1.80
1N3190	IR	91	3.00	2.45
1N3191	IR	91	4.75	4.00
1N3193	RCA	85	.35	.26
			1000-Up Ea.	.21
1N3194	RCA	85	.38	.28
			1000-Up Ea.	.23
1N3195	RCA	85	.53	.39
			1000-Up Ea.	.32
1N3196	RCA	85	.74	.54
			1000-Up Ea.	.45
1N3208	MOT	65	1.10	.75
1N3209	IR	92	1.25	.85
1N3209	MOT	65	1.25	.85
1N3209R	IR	92	1.25	.85
1N3210	IR	92	1.70	1.20
1N3210	MOT	65	1.70	1.15
1N3210R	MOT	...	1.70	1.15
1N3211	IR	92	2.05	1.55
1N3211	MOT	65	2.30	1.55
1N3211R	MOT	...	2.30	1.55
1N3212	IR	92	2.85	1.90
1N3212	MOT	65	2.55	1.70
1N3213	IR	92	6.65	4.40
1N3213	MOT	65	3.45	2.30
1N3214	IR	92	7.30	4.80
1N3214	MOT	65	3.90	2.60
1N3253	RCA	85	.38	.28
			1000-Up Ea.	.23
1N3254	RCA	85	.42	.30
			1000-Up Ea.	.25
1N3255	RCA	85	.56	.41
			1000-Up Ea.	.34
1N3256	RCA	85	.78	.57
			1000-Up Ea.	.47
1N3282	MOT	65	2.45	1.65
1N3283	MOT	65	3.05	2.05
1N3284	MOT	65	7.95	5.30
1N3285	MOT	65	10.05	6.70
1N3286	MOT	65	17.25	11.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99
1N3289	IR	92	16.15	16.15
1N3290	IR	92	19.85	19.85
1N3291	IR	92	22.80	22.80
1N3292	IR	92	25.50	25.50
1N3293	IR	92	27.80	27.80
1N3294	IR	92	37.80	37.80
1N3295	IR	92	57.50	57.50
1N3296	IR	92	64.00	64.00

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN3024A MOT designates Motorola IN3024A

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3305	IR	94	4.75	....	4.15
1N3305	MOT	62	5.65	4.90	4.25
1N3305A	MOT	62	7.65	6.60	5.75
1N3305B	MOT	62	10.65	9.20	8.00
1N3306	MOT	62	5.65	4.90	4.25
1N3306A	MOT	62	7.65	6.60	5.75
1N3306B	MOT	62	10.65	9.20	8.00
1N3307	MOT	62	5.65	4.90	4.25
1N3307B	MOT	62	10.65	9.20	8.00
1N3308	IR	...	4.75	....	4.15
1N3308	MOT	62	5.65	4.90	4.25
1N3308A	MOT	62	7.65	6.60	5.75
1N3308B	MOT	62	10.65	9.20	8.00
1N3309	IR	94	4.75	....	4.15
1N3309	MOT	62	5.65	4.90	4.25
1N3309A	MOT	62	7.65	6.60	5.75
1N3309B	MOT	62	10.65	9.20	8.00
1N3310	MOT	62	5.65	4.90	4.25
1N3310A	MOT	62	7.65	6.60	5.75
1N3310B	MOT	65	10.65	9.20	8.00
1N3311	IR	94	4.75	....	4.15
1N3311	MOT	62	5.65	4.90	4.25
1N3311A	MOT	62	7.65	6.60	5.75
1N3311B	MOT	62	10.65	9.20	8.00
1N3312	MOT	62	5.65	4.90	4.25
1N3312A	MOT	62	7.65	6.60	5.75
1N3312B	MOT	62	10.65	9.20	8.00
1N3313	IR	94	4.75	....	4.15
1N3313	MOT	62	5.65	4.90	4.25
1N3313A	MOT	62	7.65	6.60	5.75
1N3313B	MOT	62	10.65	9.20	8.00
1N3314	IR	94	4.75	....	4.15
1N3314	MOT	62	5.65	4.90	4.25
1N3314A	MOT	62	7.65	6.60	5.75
1N3314B	MOT	62	10.65	9.20	8.00
1N3315	MOT	62	5.65	4.90	4.25
1N3315A	MOT	62	7.65	6.60	5.75
1N3315B	MOT	62	10.65	9.20	8.00
1N3316	MOT	62	5.65	4.90	4.25
1N3316A	MOT	62	7.65	6.60	5.75
1N3316B	MOT	62	10.65	9.20	8.00
1N3317	MOT	62	5.65	4.90	4.25
1N3317A	MOT	62	7.65	6.60	5.75
1N3317B	MOT	62	10.65	9.20	8.00
1N3318	MOT	62	5.65	4.90	4.25
1N3318A	MOT	62	7.65	6.60	5.75
1N3318B	MOT	62	10.65	9.20	8.00
1N3319	MOT	62	5.65	4.90	4.25
1N3319A	MOT	62	7.65	6.60	5.75
1N3319B	MOT	62	10.65	9.20	8.00
1N3320	MOT	62	5.65	4.90	4.25
1N3320A	MOT	62	7.65	6.60	5.75
1N3320B	MOT	62	10.65	9.20	8.00
1N3321	IR	94	4.75	....	4.15
1N3321	MOT	62	5.65	4.90	4.25
1N3321A	MOT	62	7.65	6.60	5.75
1N3321B	MOT	62	10.65	9.20	8.00
1N3322	MOT	62	5.65	4.90	4.25
1N3322A	MOT	62	7.65	6.60	5.75
1N3322B	MOT	62	10.65	9.20	8.00
1N3323	IR	94	4.75	....	4.15
1N3323	MOT	62	5.65	4.90	4.25
1N3323A	MOT	62	7.65	6.60	5.75
1N3323B	MOT	62	10.65	9.20	8.00
1N3324	IR	94	4.75	....	4.15
1N3324	MOT	62	5.65	4.90	4.25
1N3324A	MOT	62	7.65	6.60	5.75
1N3324B	MOT	62	10.65	9.20	8.00
1N3325	IR	94	4.75	....	4.15
1N3325	MOT	62	5.65	4.90	4.25
1N3325A	MOT	62	7.65	6.60	5.75
1N3325B	MOT	62	10.65	9.20	8.00
1N3326	MOT	62	5.65	4.90	4.25
1N3326A	MOT	62	7.65	6.60	5.75
1N3326B	MOT	62	10.65	9.20	8.00
1N3327	MOT	62	5.65	4.90	4.25
1N3327A	MOT	62	7.65	6.60	5.75
1N3327B	MOT	62	10.65	9.20	8.00
1N3328	MOT	62	5.65	4.90	4.25
1N3328A	MOT	62	7.65	6.60	5.75
1N3328B	MOT	62	10.65	9.20	8.00
1N3329	MOT	62	5.65	4.90	4.25
1N3329A	MOT	62	7.65	6.60	5.75
1N3329B	MOT	62	10.65	9.20	8.00

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN3330 MOT designates Motorola IN3330

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3330	MOT	62	5.65	4.90	4.25
1N3330A	MOT	62	7.65	6.60	5.75
1N3330B	MOT	62	10.65	9.20	8.00
1N3331	MOT	62	5.65	4.90	4.25
1N3331A	MOT	62	7.65	6.60	5.75
1N3331B	MOT	62	10.65	9.20	8.00
1N3333A	MOT	...	7.65	6.60	5.75
1N3333B	MOT	...	10.65	9.20	8.00
1N3334	MOT	62	5.65	4.90	4.25
1N3334A	MOT	62	7.65	6.60	5.75
1N3334B	MOT	62	10.65	9.20	8.00
1N3335	MOT	62	5.65	4.90	4.25
1N3335A	MOT	62	7.65	6.60	5.75
1N3335B	MOT	62	10.65	9.20	8.00
1N3338	MOT	62	5.65	4.90	4.25
1N3338A	MOT	62	7.65	6.60	5.75
1N3338B	MOT	62	10.65	9.20	8.00
1N3339	MOT	62	5.65	4.90	4.25
1N3339A	MOT	62	7.65	6.60	5.75
1N3339B	MOT	62	10.65	9.20	8.00
1N3340	IR	94	4.75	....	4.15
1N3340	MOT	62	5.65	4.90	4.25
1N3340A	MOT	62	7.65	6.60	5.75
1N3340B	MOT	62	10.65	9.20	8.00
1N3341	MOT	62	6.80	5.85	5.10
1N3341A	MOT	62	11.30	9.75	8.50
1N3341B	MOT	62	17.95	15.30	13.50
1N3342	MOT	62	6.80	5.85	5.10
1N3342A	MOT	62	11.30	9.75	8.50
1N3342B	MOT	62	17.95	15.50	13.50
1N3343	MOT	62	6.80	5.85	5.10
1N3343A	MOT	62	11.30	9.75	8.50
1N3344	MOT	62	6.80	5.85	5.10
1N3344A	MOT	62	11.30	9.75	8.50
1N3344B	MOT	62	17.95	15.50	13.50
1N3345	MOT	62	6.80	5.85	5.10
1N3345B	MOT	62	17.95	15.50	13.50
1N3346	MOT	62	6.80	5.85	5.10
1N3346A	MOT	62	11.30	9.75	8.50
1N3346B	MOT	62	17.95	15.50	13.50
1N3347	MOT	62	6.80	5.85	5.10
1N3348	MOT	62	6.80	5.85	5.10
1N3350	MOT	62	6.80	5.85	5.10
1N3350A	MOT	62	11.30	9.75	8.50
1N3350B	MOT	62	17.95	15.50	13.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3491	MOT	65	.67	.45
1N3492	MOT	65	.76	.51
1N3493	MOT	65	1.11	.74
1N3494	MOT	65	1.27	.85
1N3495	MOT	65	1.48	.99
1N3496	IR	94	3.70	2.50
1N3497	IR	94	5.75	4.50
1N3498	IR	94	9.00	7.00
1N3499	IR	99	19.00	15.50
1N3563	RCA	85	.94	.69
			1000-Up Ea.	.57

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3580A	MOT	...	5.20	4.50	3.90
1N3581	MOT	...	5.55	4.80	4.15

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3605	SYL	101	.71	.48
1N3639	IR	91	.55	.36
1N3641	IR	91	1.00	.65
1N3659	MOT	65	.90	.60
1N3660	MOT	65	.99	.66

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3661	MOT	65	1.33	.89
1N3662	MOT	65	1.48	.99
1N3663	MOT	65	1.70	1.14
1N3670	IR	...	7.80	5.25
1N3670A	IR	92	7.80	5.25
1N3671	IR	...	8.70	5.85
1N3671A	IR	92	8.70	5.85
1N3672A	IR	92	9.40	6.30
1N3673	IR	...	9.80	6.60
1N3673A	IR	92	9.80	6.60

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3680	MOT	...	3.45	3.00	2.60
1N3680B	MOT	...	4.90	4.25	3.70
1N3683A	MOT	...	4.10	3.55	3.10
1N3683B	MOT	...	4.90	4.25	3.70
1N3684	MOT	...	3.45	3.00	2.60
1N3685	MOT	...	3.45	3.00	2.60
1N3686B	MOT	...	4.90	4.25	3.70
1N3689	MOT	...	3.45	3.00	2.60
1N3689B	MOT	...	4.90	4.25	3.70
1N3696	MOT	...	3.45	3.00	2.60

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N3731	SYL	101	.85	.85	.68

Type No.	Mfr.	Page No.	EACH 1-24	25-99
1N3738	IR	92	26.60	26.60
1N3740	IR	92	40.00	40.00
1N3741	IR	92	55.00	55.00
1N3742	IR	92	66.00	66.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3754	RCA	85	.32	.23
			1000-Up Ea.	.19
1N3755	RCA	85	.33	.24
			1000-Up Ea.	.20
1N3756	RCA	85	.35	.26
			1000-Up Ea.	.21
1N3765	IR	92	15.36	10.24
1N3766	IR	92	17.58	11.75
1N3768	IR	92	19.13	12.75
1N3779	IR	94	4.50	3.75
1N3780	IR	94	8.25	6.90
1N3781	IR	94	10.90	9.10
1N3782	IR	94	16.80	14.10
1N3783	IR	94	24.50	20.50

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3785	MOT	61	3.75	3.20	2.80
1N3785A	MOT	61	5.30	4.60	4.00
1N3785B	MOT	61	6.95	6.00	5.25
1N3786	MOT	61	3.75	3.20	2.80
1N3786A	MOT	61	5.30	4.60	4.00
1N3786B	MOT	61	6.95	6.00	5.25
1N3787	MOT	61	3.75	3.20	2.80
1N3787A	MOT	61	5.30	4.60	4.00
1N3787B	MOT	61	6.95	6.00	5.25
1N3788	MOT	61	3.75	3.20	2.80
1N3788A	MOT	61	5.30	4.60	4.00
1N3788B	MOT	61	6.95	6.00	5.25
1N3789	MOT	61	3.75	3.20	2.80
1N3789A	MOT	61	5.30	4.60	4.00
1N3789B	MOT	61	6.95	6.00	5.25
1N3790	MOT	62	3.75	3.20	2.80
1N3790A	MOT	62	5.30	4.60	4.00
1N3790B	MOT	62	6.95	6.00	5.25
1N3791	MOT	62	3.75	3.20	2.80
1N3791A	MOT	62	5.30	4.60	4.00
1N3791B	MOT	62	6.95	6.00	5.25
1N3792	MOT	62	3.75	3.20	2.80
1N3792A	MOT	62	5.30	4.60	4.00
1N3792B	MOT	62	6.95	6.00	5.25
1N3793	MOT	62	3.75	3.20	2.80
1N3793A	MOT	62	5.30	4.60	4.00
1N3793B	MOT	62	6.95	6.00	5.25
1N3794	MOT	62	3.75	3.20	2.80
1N3794A	MOT	62	5.30	4.60	4.00
1N3794B	MOT	62	6.95	6.00	5.25
1N3795	MOT	62	3.75	3.20	2.80
1N3795A	MOT	62	5.30	4.60	4.00
1N3795B	MOT	62	6.95	6.00	5.25
1N3796	MOT	62	3.75	3.20	2.80
1N3796A	MOT	62	5.30	4.60	4.00
1N3796B	MOT	62	6.95	6.00	5.25
1N3797	MOT	62	3.75	3.20	2.80
1N3797A	MOT	62	5.30	4.60	4.00
1N3797B	MOT	62	6.95	6.00	5.25
1N3798	MOT	62	3.75	3.20	2.80
1N3798A	MOT	62	5.30	4.60	4.00
1N3798B	MOT	62	6.95	6.00	5.25

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3799	MOT	62	3.75	3.20	2.80
1N3799A	MOT	62	5.30	4.60	4.00
1N3799B	MOT	62	6.95	6.00	5.25
1N3800	MOT	62	3.75	3.20	2.80
1N3800A	MOT	62	5.30	4.60	4.00
1N3800B	MOT	62	6.95	6.00	5.25
1N3801	MOT	62	3.75	3.20	2.80
1N3801A	MOT	62	5.30	4.60	4.00
1N3801B	MOT	62	6.95	6.00	5.25
1N3802	MOT	62	3.75	3.20	2.80
1N3802A	MOT	62	5.30	4.60	4.00
1N3802B	MOT	62	6.95	6.00	5.25
1N3803	MOT	62	3.75	3.20	2.80
1N3803A	MOT	62	5.30	4.60	4.00
1N3803B	MOT	62	6.95	6.00	5.25
1N3804	MOT	62	3.75	3.20	2.80
1N3804A	MOT	62	5.30	4.60	4.00
1N3804B	MOT	62	6.95	6.00	5.25
1N3805	MOT	62	3.75	3.20	2.80
1N3805A	MOT	62	5.30	4.60	4.00
1N3805B	MOT	62	6.95	6.00	5.25
1N3806	MOT	62	3.75	3.20	2.80
1N3806A	MOT	62	5.30	4.60	4.00
1N3806B	MOT	62	6.95	6.00	5.25
1N3807	MOT	62	3.75	3.20	2.80
1N3807A	MOT	62	5.30	4.60	4.00
1N3807B	MOT	62	6.95	6.00	5.25
1N3808	MOT	62	3.75	3.20	2.80
1N3808A	MOT	62	5.30	4.60	4.00
1N3808B	MOT	62	6.95	6.00	5.25
1N3809	MOT	62	3.75	3.20	2.80
1N3809A	MOT	62	5.30	4.60	4.00
1N3809B	MOT	62	6.95	6.00	5.25
1N3810	MOT	62	3.75	3.20	2.80
1N3810A	MOT	62	5.30	4.60	4.00
1N3810B	MOT	62	6.95	6.00	5.25
1N3811	MOT	62	3.75	3.20	2.80
1N3811A	MOT	62	5.30	4.60	4.00
1N3811B	MOT	62	6.95	6.00	5.25
1N3812	MOT	62	3.75	3.20	2.80
1N3812A	MOT	62	5.30	4.60	4.00
1N3812B	MOT	62	6.95	6.00	5.25
1N3813	MOT	62	3.75	3.20	2.80
1N3813A	MOT	62	5.30	4.60	4.00
1N3813B	MOT	62	6.95	6.00	5.25
1N3815	MOT	62	4.75	4.10	3.55
1N3815A	MOT	62	6.45	5.60	4.85
1N3815B	MOT	62	8.35	7.20	6.30
1N3817	MOT	62	4.75	4.10	3.55
1N3817A	MOT	62	7.05	6.10	5.30
1N3817B	MOT	62	8.80	7.60	6.60
1N3818	MOT	62	4.75	4.10	3.55
1N3818A	MOT	62	7.05	6.10	5.30
1N3818B	MOT	62	8.80	7.60	6.60
1N3820	MOT	62	4.75	4.10	3.55
1N3820A	MOT	62	7.05	6.10	5.30
1N3820B	MOT	62	8.80	7.60	6.60
1N3821	IR	94	2.00	....	1.60
1N3821	MOT	61	2.10	1.85	1.60
1N3821A	IR	94	2.50	....	2.00
1N3821A	MOT	61	2.65	2.30	2.00
1N3822	IR	94	2.00	....	1.60
1N3822	MOT	61	2.10	1.85	1.60
1N3822A	IR	94	2.50	....	2.00
1N3822A	MOT	61	2.65	2.30	2.00
1N3823	IR	94	2.00	....	1.60
1N3823	MOT	61	2.10	1.85	1.60
1N3823A	IR	94	2.50	....	2.00
1N3823A	MOT	61	2.65	2.30	2.00
1N3824	IR	94	2.00	....	1.60
1N3824	MOT	61	2.10	1.85	1.60
1N3824A	IR	94	2.50	....	2.00
1N3824A	MOT	61	2.65	2.30	2.00
1N3825	IR	94	2.00	....	1.60
1N3825	MOT	61	2.10	1.85	1.60
1N3825A	IR	94	2.50	....	2.00
1N3825A	MOT	61	2.65	2.30	2.00
1N3826	IR	94	2.00	....	1.60
1N3826	MOT	61	2.10	1.85	1.60
1N3826A	IR	94	2.50	....	2.00
1N3826A	MOT	61	2.65	2.30	2.00
1N3827	IR	94	2.00	....	1.60
1N3827	MOT	61	2.10	1.85	1.60
1N3827A	IR	94	2.50	....	2.00
1N3827A	MOT	61	2.65	2.30	2.00
1N3828	IR	94	2.00	....	1.60
1N3828	MOT	61	2.10	1.85	1.60
1N3828A	IR	94	2.50	....	2.00
1N3828A	MOT	...	2.65	2.30	2.00
1N3829	IR	94	2.00	....	1.60
1N3829	MOT	..	2.10	1.85	1.60
1N3829A	IR	94	2.50	....	2.00
1N3829A	MOT	61	2.65	2.30	2.00
1N3830	MOT	61	2.10	1.85	1.60
1N3830A	MOT	61	2.65	2.30	2.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N3879	MOT	65	4.20	4.20	2.80
1N3880	MOT	65	4.65	4.65	3.10
1N3881	MOT	65	6.60	6.60	4.40
1N3882	MOT	65	9.90	9.90	6.60
1N3883	MOT	65	13.65	13.65	9.10
1N3889	MOT	65	5.00	5.00	3.35
1N3890	MOT	65	5.40	5.40	3.60

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
1N3891	MOT	65	7.80	7.80	5.20
1N3892	MOT	65	11.70	11.70	7.80
1N3893	MOT	65	17.25	17.25	11.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N3900	MOT	...	6.90	4.65
1N3901	MOT	...	9.60	6.45
1N3902	MOT	...	14.85	9.90
1N3903	MOT	...	22.35	14.90
1N3909	MOT	...	8.90	5.95
1N3910	MOT	...	9.60	6.45
1N3911	MOT	...	12.60	8.45
1N3912	MOT	...	18.45	12.30
1N3913	MOT	...	27.60	18.40
1N3987	IR	92	7.25	5.00
1N3988	IR	92	8.25	5.60
1N3989	IR	92	9.00	6.00
1N3990	IR	92	9.50	6.25

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N3993	MOT	62	5.65	4.90	4.25
1N3993A	MOT	62	7.70	6.65	5.80
1N3994	MOT	62	5.65	4.90	4.25
1N3994A	MOT	62	7.70	6.65	5.80
1N3995	MOT	62	5.65	4.90	4.25
1N3995A	MOT	62	7.70	6.65	5.80
1N3996	MOT	62	5.65	4.90	4.25
1N3996A	MOT	62	7.70	6.65	5.80
1N3997	MOT	62	5.65	4.90	4.25
1N3997A	MOT	62	7.70	6.65	5.80
1N3998	MOT	62	5.65	4.90	4.25
1N3998A	MOT	62	7.70	6.65	5.80
1N3999	MOT	62	5.65	4.90	4.25
1N3999A	MOT	62	7.70	6.65	5.80
1N4000	MOT	62	5.65	4.90	4.25
1N4000A	MOT	62	7.70	6.65	5.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999	5000-Up
1N4001	MOT	65	.45	.30	.24	.21
1N4001	SYL	101	.45	.30	.24	....
1N4002	MOT	65	.49	.33	.26	.23
1N4002	SYL	101	.49	.33	.26	....
1N4003	MOT	65	.60	.40	.32	.28
1N4003	SYL	101	.60	.40	.32	....
1N4004	MOT	65	.67	.45	.36	.32
1N4004	SYL	101	.67	.45	.36	....
1N4005	MOT	65	.75	.50	.40	.35
1N4005	SYL	101	.75	.50	.40	....
1N4006	MOT	65	.82	.55	.44	.39
1N4007	MOT	65	.90	.60	.48	.42

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4099	MOT	60	3.85	3.35	2.90
1N4100	MOT	60	3.85	3.35	2.90
1N4100	TI	...	5.05	....	3.80
1N4101	MOT	60	3.85	3.35	2.90
1N4102	MOT	60	3.85	3.35	2.90
1N4102	TI	...	5.05	....	3.80
1N4103	MOT	60	3.85	3.35	2.90
1N4104	MOT	60	3.85	3.35	2.90
1N4105	MOT	60	3.85	3.35	2.90
1N4106	MOT	60	3.85	3.35	2.90
1N4107	MOT	60	3.85	3.35	2.90
1N4109	MOT	60	3.85	3.35	2.90
1N4111	MOT	60	3.85	3.35	2.90
1N4112	MOT	60	3.85	3.35	2.90
1N4113	MOT	60	3.85	3.35	2.90
1N4114	MOT	60	3.85	3.35	2.90
1N4115	MOT	60	3.85	3.35	2.90
1N4117	MOT	60	3.85	3.35	2.90
1N4118	MOT	60	3.85	3.35	2.90
1N4119	MOT	60	3.85	3.35	2.90
1N4120	MOT	60	3.85	3.35	2.90
1N4123	MOT	60	5.05	4.35	3.80
1N4124	MOT	60	5.05	4.35	3.80
1N4125	MOT	60	5.05	4.35	3.80
1N4129	MOT	60	5.05	4.35	3.80
1N4131	MOT	60	5.05	4.35	3.80
1N4135	MOT	60	5.05	4.35	3.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4148	SYL	...	.35	.24
			1000-5000 Ea.	.14
1N4149	SYL	...	.45	.30
			1000-5000 Ea.	.19
1N4151	SYL	...	.80	.56
			1000-5000 Ea.	.32
1N4152	SYL	...	.65	.44
			1000-5000 Ea.	.18
1N4154	SYL	...	.40	.26
			1000-5000 Ea.	.15
1N4360	TI	...	1.05	.85

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4370	MOT	61	2.00	1.70	1.50
1N4370	IR	94	1.00	....	.80

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4370A	MOT	61	2.75	2.35	2.05
1N4371	IR	94	1.00	....	.80
1N4371	MOT	61	2.00	1.70	1.50
1N4371A	MOT	61	2.75	2.35	2.05
1N4372	MOT	61	2.00	1.70	1.50
1N4372	IR	94	1.00	....	.80
1N4372A	MOT	61	2.75	2.35	2.05
1N4372A	TI	...	1.05	....	.85

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4383	SYL	101	.48	.38
			1000-5000 Ea.	.27
1N4384	SYL	101	.58	.41
			1000-5000 Ea.	.30
1N4385	SYL	101	.78	.54
			1000-5000 Ea.	.35
1N4387	MOT	79	42.00	28.00
1N4388	MOT	79	42.00	28.00
1N4436	VA	100	4.15	3.05
1N4436/S/F	VA	100	4.55	3.35
1N4436/T/F	VA	100	4.40	3.25
1N4437	VA	100	5.45	4.00
1N4437/S/F	VA	100	5.85	4.30
1N4437/T/F	VA	100	5.70	4.20
1N4438	VA	100	7.45	5.45
1N4438/S/F	VA	100	7.85	5.75
1N4438/T/F	VA	100	7.70	5.65
1N4441	VA	100	2.01	1.53
1N4446	SYL	...	.40	.26
			1000-5000 Ea.	.15
1N4447	SYL	...	.50	.34
			1000-5000 Ea.	.19
1N4448	SYL	...	.80	.54
			1000-5000 Ea.	.17
1N4449	SYL	...	.50	.34
			1000-5000 Ea.	.19
1N4454	SYL	...	.35	.24
			1000-5000 Ea.	.14

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4549	MOT	62	6.05	5.25	4.55
1N4549A	MOT	62	8.00	6.90	6.00
1N4549B	MOT	62	11.50	9.95	8.65
1N4550	MOT	62	6.05	5.25	4.55
1N4550A	MOT	62	8.00	6.90	6.00
1N4550B	MOT	62	11.50	9.95	8.65
1N4551	MOT	62	6.05	5.25	4.55
1N4551A	MOT	62	8.00	6.90	6.00
1N4551B	MOT	62	11.50	9.95	8.65
1N4552	MOT	62	6.05	5.25	4.55
1N4552A	MOT	62	8.00	6.90	6.00
1N4552B	MOT	62	11.50	9.95	8.65
1N4553	MOT	62	6.05	5.25	4.55
1N4553A	MOT	62	8.00	6.90	6.00
1N4553B	MOT	62	11.50	9.95	8.65
1N4554	MOT	62	6.05	5.25	4.55
1N4554A	MOT	62	8.00	6.90	6.00
1N4554B	MOT	62	11.50	9.95	8.65
1N4557	MOT	62	6.05	5.25	4.55
1N4557A	MOT	62	8.00	6.90	6.00
1N4557B	MOT	62	11.50	9.95	8.65
1N4560	MOT	62	6.05	5.25	4.55
1N4560A	MOT	62	8.00	6.90	6.00
1N4560B	MOT	62	11.50	9.95	8.65
1N4562	MOT	62	6.05	5.25	4.55
1N4562A	MOT	62	8.00	6.90	6.00
1N4562B	MOT	62	11.50	9.95	8.65
1N4571	MOT	63	7.30	6.30	5.50
1N4571A	MOT	63	8.10	7.00	6.10
1N4572	MOT	63	13.25	11.45	9.95
1N4572A	MOT	63	14.75	12.75	11.10
1N4573	MOT	63	24.25	21.00	18.25
1N4573A	MOT	63	27.00	23.35	20.30
1N4574	MOT	63	56.50	48.85	42.50
1N4574A	MOT	63	63.15	54.60	47.50
1N4575	MOT	64	3.00	2.60	2.25
1N4575A	MOT	64	3.30	2.85	2.50
1N4576	MOT	64	3.65	3.15	2.75
1N4576A	MOT	64	4.05	3.50	3.05
1N4577	MOT	64	6.60	5.70	4.95
1N4577A	MOT	64	7.30	6.30	5.50
1N4578	MOT	64	12.15	10.50	9.15
1N4578A	MOT	64	13.50	11.65	10.15
1N4579	MOT	64	28.25	24.45	21.25
1N4579A	MOT	64	31.40	27.15	23.60
1N4580	MOT	64	3.00	2.60	2.25
1N4580A	MOT	64	3.30	2.85	2.50
1N4581	MOT	64	3.65	3.15	2.75
1N4581A	MOT	64	4.05	3.50	3.05
1N4582	MOT	64	6.60	5.70	4.95
1N4582A	MOT	64	7.30	6.30	5.50
1N4583	MOT	64	12.15	10.50	9.15
1N4583A	MOT	64	13.50	11.65	10.15
1N4584	MOT	64	28.25	24.45	21.25
1N4584A	MOT	64	31.40	27.15	23.60

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4585	SYL	101	1.20	.80
			1000-5000 Ea.	.65
1N4586	SYL	101	2.70	1.80
			1000-5000 Ea.	1.62

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN3891 MOT designates Motorola IN3891

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Vara

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
1N4719	MOT	65	.66	.44	.42
1N4720	MOT	65	.73	.49	.46
1N4721	MOT	65	.82	.55	.52
1N4722	MOT	65	1.12	.75	.71
1N4723	MOT	65	1.50	1.00	.95
1N4724	MOT	65	2.25	1.50	1.40
1N4725	MOT	65	3.35	2.25	2.15

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4728	IR	94	1.25	....	.93
1N4728	MOT	61	1.26	1.09	.95
1N4728A	IR	94	1.90	....	1.40
1N4728A	MOT	61	1.93	1.66	1.45
1N4729	IR	94	1.25	....	.93
1N4729	MOT	61	1.26	1.09	.95
1N4729A	IR	94	1.90	....	1.40
1N4729A	MOT	61	1.93	1.66	1.45
1N4730	IR	94	1.25	....	.93
1N4730	MOT	61	1.26	1.09	.95
1N4730A	IR	94	1.90	....	1.40
1N4730A	MOT	61	1.93	1.66	1.45
1N4731	IR	94	1.25	....	.93
1N4731	MOT	61	1.26	1.09	.95
1N4731A	IR	94	1.90	....	1.40
1N4731A	MOT	61	1.93	1.66	1.45
1N4732	IR	94	1.25	....	.93
1N4732	MOT	61	1.26	1.09	.95
1N4732A	IR	94	1.90	....	1.40
1N4732A	MOT	61	1.93	1.66	1.45
1N4733	IR	94	1.25	....	.93
1N4733	MOT	61	1.26	1.09	.95
1N4733A	IR	94	1.90	....	1.40
1N4733A	MOT	61	1.93	1.66	1.45
1N4734	IR	94	1.25	....	.93
1N4734	MOT	61	1.26	1.09	.95
1N4734A	IR	94	1.90	....	1.40
1N4734A	MOT	61	1.93	1.66	1.45
1N4735	IR	94	1.25	....	.93
1N4735	MOT	61	1.26	1.09	.95
1N4735A	IR	94	1.90	....	1.40
1N4735A	MOT	61	1.93	1.66	1.45
1N4736	IR	94	1.25	....	.93
1N4736	MOT	61	1.26	1.09	.95
1N4736A	IR	94	1.90	....	1.40
1N4736A	MOT	61	1.93	1.66	1.45
1N4737	IR	94	1.25	....	.93
1N4737	MOT	61	1.26	1.09	.95
1N4737A	IR	94	1.90	....	1.40
1N4737A	MOT	61	1.93	1.66	1.45
1N4738	IR	94	1.25	....	.93
1N4738	MOT	61	1.26	1.09	.95
1N4738A	IR	94	1.90	....	1.40
1N4738A	MOT	61	1.93	1.66	1.45
1N4739	IR	94	1.25	....	.93
1N4739	MOT	61	1.26	1.09	.95
1N4739A	IR	94	1.90	....	1.40
1N4739A	MOT	61	1.93	1.66	1.45
1N4740	IR	94	1.25	....	.93
1N4740	MOT	61	1.26	1.09	.95
1N4740A	IR	94	1.90	....	1.40
1N4740A	MOT	61	1.93	1.66	1.45
1N4741	IR	94	1.25	....	.93
1N4741	MOT	61	1.26	1.09	.95
1N4741A	IR	94	1.90	....	1.40
1N4741A	MOT	61	1.93	1.66	1.45
1N4742	IR	94	1.25	....	.93
1N4742	MOT	61	1.26	1.09	.95
1N4742A	IR	94	1.90	....	1.40
1N4742A	MOT	61	1.93	1.66	1.45
1N4743	IR	94	1.25	....	.93
1N4743	MOT	61	1.26	1.09	.95
1N4743A	IR	94	1.90	....	1.40
1N4743A	MOT	61	1.93	1.66	1.45
1N4744	IR	94	1.25	....	.93
1N4744	MOT	61	1.26	1.09	.95
1N4744A	IR	94	1.90	....	1.40
1N4744A	MOT	61	1.93	1.66	1.45
1N4745	IR	94	1.25	....	.93
1N4745	MOT	61	1.26	1.09	.95
1N4745A	IR	94	1.90	....	1.40

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN4745A MOT designates Motorola IN4745A

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4745A	MOT	61	1.93	1.66	1.45
1N4746	IR	94	1.25	....	.93
1N4746	MOT	61	1.26	1.09	.95
1N4746A	IR	94	1.90	....	1.40
1N4746A	MOT	61	1.93	1.66	1.45
1N4747	IR	94	1.25	....	.93
1N4747	MOT	61	1.26	1.09	.95
1N4747A	IR	94	1.90	....	1.40
1N4747A	MOT	61	1.93	1.66	1.45
1N4748	IR	94	1.25	....	.93
1N4748	MOT	61	1.26	1.09	.95
1N4748A	IR	94	1.90	....	1.40
1N4748A	MOT	61	1.93	1.66	1.45
1N4749	IR	94	1.25	....	.93
1N4749	MOT	61	1.26	1.09	.95
1N4749A	IR	94	1.90	....	1.40
1N4749A	MOT	61	1.93	1.66	1.45
1N4750	IR	94	1.25	....	.93
1N4750	MOT	61	1.26	1.09	.95
1N4750A	IR	94	1.90	....	1.40
1N4750A	MOT	61	1.93	1.66	1.45
1N4751	IR	94	1.25	....	.93
1N4751	MOT	61	1.26	1.09	.95
1N4751A	IR	94	1.90	....	1.40
1N4751A	MOT	61	1.93	1.66	1.45
1N4752	IR	94	1.25	....	.93
1N4752	MOT	61	1.26	1.09	.95
1N4752A	IR	94	1.90	....	1.40
1N4752A	MOT	61	1.93	1.66	1.45
1N4753	IR	94	1.25	....	.93
1N4753	MOT	61	1.26	1.09	.95
1N4753A	IR	94	1.90	....	1.40
1N4753A	MOT	61	1.93	1.66	1.45
1N4754	IR	94	1.25	....	.93
1N4754	MOT	61	1.26	1.09	.95
1N4754A	IR	94	1.90	....	1.40
1N4754A	MOT	61	1.93	1.66	1.45
1N4755	IR	94	1.25	....	.93
1N4755	MOT	61	1.26	1.09	.95
1N4755A	IR	94	1.90	....	1.40
1N4755A	MOT	61	1.93	1.66	1.45
1N4756	IR	94	1.25	....	.93
1N4756	MOT	61	1.26	1.09	.95
1N4756A	IR	94	1.90	....	1.40
1N4756A	MOT	61	1.93	1.66	1.45
1N4757	IR	94	1.25	....	.93
1N4757	MOT	61	1.26	1.09	.95
1N4757A	IR	94	1.90	....	1.40
1N4757A	MOT	61	1.93	1.66	1.45
1N4758	IR	94	1.25	....	.93
1N4758	MOT	61	1.26	1.09	.95
1N4758A	MOT	61	1.93	1.66	1.45
1N4759	IR	94	1.25	....	.93
1N4759	MOT	61	1.26	1.09	.95
1N4759A	MOT	61	1.93	1.66	1.45
1N4760	IR	94	1.25	....	.93
1N4760	MOT	61	1.26	1.09	.95
1N4760A	MOT	61	1.93	1.66	1.45
1N4761	IR	94	1.25	....	.93
1N4761	MOT	61	1.26	1.09	.95
1N4761A	MOT	61	1.93	1.66	1.45
1N4762	IR	94	1.25	....	.93
1N4762	MOT	61	1.26	1.09	.95
1N4762A	MOT	61	1.93	1.66	1.45
1N4763	IR	94	1.25	....	.93
1N4763	MOT	61	1.26	1.09	.95
1N4763A	MOT	61	1.93	1.66	1.45
1N4764	IR	94	1.25	....	.93
1N4764	MOT	61	1.26	1.09	.95
1N4764A	MOT	61	1.93	1.66	1.45
1N4770	MOT	...	5.85	5.05	4.40
1N4776A	MOT	...	13.05	11.25	9.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4785	RCA	87	1.08	.78
			1000-Up Ea.	.65

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4816	IR	...	.24	.20
1N4817	IR	...	.28	.24
1N4818	IR	...	.32	.28
1N4819	IR	...	.37	.32
1N4820	IR	...	.41	.35
1N4821	IR	...	.45	.38
1N4822	IR	...	.50	.44

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N4896	MOT	63	18.20	15.75	13.70
1N4896A	MOT	63	20.10	17.35	15.10
1N4897	MOT	63	20.90	18.05	15.70
1N4897A	MOT	63	23.40	20.25	17.60
1N4898	MOT	63	42.80	37.05	32.20
1N4898A	MOT	63	47.60	41.15	35.80
1N4899	MOT	63	74.10	64.05	55.70
1N4899A	MOT	63	82.45	71.30	62.00
1N4900	MOT	63	10.50	9.10	7.90
1N4900A	MOT	63	11.70	10.10	8.80
1N4901	MOT	63	13.15	11.40	9.90
1N4901A	MOT	63	14.65	12.65	11.00
1N4902	MOT	63	23.80	20.60	17.90
1N4902A	MOT	63	26.60	23.00	20.00
1N4903	MOT	63	43.75	37.85	32.90
1N4903A	MOT	63	48.65	42.10	36.60
1N4904	MOT	63	5.40	4.65	4.05
1N4904A	MOT	63	6.00	5.15	4.50
1N4905	MOT	63	6.60	5.70	4.95
1N4905A	MOT	63	7.20	6.20	5.41
1N4906	MOT	63	11.85	10.25	8.92
1N4906A	MOT	63	13.15	11.40	9.90
1N4907	MOT	63	21.85	18.90	16.45
1N4907A	MOT	63	24.35	21.05	18.30
1N4908	MOT	63	5.40	4.65	4.05
1N4908A	MOT	63	6.00	5.15	4.50
1N4909	MOT	63	6.60	5.70	4.95
1N4909A	MOT	63	7.20	6.20	5.40
1N4910	MOT	63	11.85	10.25	8.90
1N4910A	MOT	63	13.15	11.40	9.90
1N4911	MOT	63	19.75	17.05	14.85
1N4911A	MOT	63	22.00	19.05	16.55
1N4912	MOT	64	6.00	5.15	4.50
1N4912A	MOT	64	10.15	8.80	7.65
1N4913	MOT	64	7.20	6.20	5.40
1N4913A	MOT	64	13.15	11.40	9.90
1N4914	MOT	64	13.15	11.40	9.90
1N4914A	MOT	64	20.20	17.50	15.20
1N4915	MOT	64	21.95	18.95	16.50
1N4915A	MOT	64	29.40	25.40	22.10
1N4916	MOT	63	20.75	17.95	15.60
1N4916A	MOT	63	23.25	20.10	17.50
1N4917	MOT	63	28.05	24.25	21.10
1N4917A	MOT	63	31.25	27.00	23.50
1N4918	MOT	63	57.20	49.45	43.00
1N4918A	MOT	63	63.45	54.85	47.70
1N4919	MOT	63	14.05	12.15	10.55
1N4919A	MOT	63	15.60	13.50	11.75
1N4920	MOT	63	17.55	15.20	13.20
1N4920A	MOT	63	19.40	16.80	14.60
1N4921	MOT	63	31.80	27.50	23.90
1N4921A	MOT	63	35.35	30.60	26.60
1N4922	MOT	63	7.20	6.20	5.40
1N4922A	MOT	63	8.00	6.90	6.00
1N4923	MOT	63	8.75	7.60	6.60
1N4923A	MOT	63	9.55	8.30	7.20
1N4924	MOT	63	15.80	13.70	11.90
1N4924A	MOT	63	17.55	15.20	13.20
1N4925	MOT	63	7.20	6.20	5.40
1N4925A	MOT	63	8.00	6.90	6.00
1N4926	MOT	63	8.75	7.60	6.60
1N4926A	MOT	63	9.55	8.30	7.20
1N4927	MOT	63	15.80	13.70	11.90
1N4927A	MOT	63	17.55	15.20	13.20
1N4928	MOT	63	26.35	22.75	19.80
1N4928A	MOT	63	29.40	25.40	22.10
1N4929	MOT	64	8.10	7.00	6.10
1N4929A	MOT	64	13.75	11.90	10.35
1N4930	MOT	64	9.70	8.40	7.30
1N4930A	MOT	64	17.80	15.40	13.40
1N4931	MOT	64	17.80	15.40	13.40
1N4931A	MOT	64	26.85	23.25	20.20
1N4932	MOT	64	29.40	25.40	22.10
1N4932A	MOT	64	39.10	33.80	29.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N4933	MOT	...	1.12	.75
1N4934	MOT	...	1.42	.95
1N4935	MOT	...	1.65	1.10
1N4936	MOT	...	2.45	1.65
1N4937	MOT	...	3.90	2.60
1N4997	MOT	65	.66	.44
			1000-4999 Ea.	.42
1N4998	MOT	65	.73	.49
			1000-4999 Ea.	.46
1N4999	MOT	65	.82	.55
			1000-4999 Ea.	.52
1N5000	MOT	65	1.12	.75
			1000-4999 Ea.	.71
1N5001	MOT	65	1.50	1.00
			1000-4999 Ea.	.95
1N5002	MOT	65	2.25	1.50
			1000-4999 Ea.	1.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N5003	MOT	65	3.35	2.25
			1000-4999 Ea.	2.15
1N5052	IR	...	.70	.62
1N5053	IR	...	.85	.75
1N5054	IR	...	1.20	1.02
1N5139	MOT	79	5.85	3.90
1N5139A	MOT	79	6.45	4.30
1N5140	MOT	79	5.85	3.90
1N5140A	MOT	79	6.45	4.30
1N5141	MOT	79	5.85	3.90
1N5141A	MOT	79	6.45	4.30
1N5142	MOT	79	5.85	3.90
1N5142A	MOT	79	6.45	4.30
1N5143	MOT	79	5.85	3.90
1N5143A	MOT	79	6.45	4.30
1N5144	MOT	79	5.85	3.90
1N5144A	MOT	79	6.45	4.30
1N5145	MOT	79	5.85	3.90
1N5145A	MOT	79	6.45	4.30
1N5146	MOT	79	5.85	3.90
1N5146A	MOT	79	6.45	4.30
1N5147	MOT	79	5.85	3.90
1N5147A	MOT	79	6.45	4.30
1N5148	MOT	79	5.85	3.90
1N5148A	MOT	79	6.45	4.30
1N5149	MOT	79	27.00	18.00
1N5150	MOT	79	42.00	28.00
1N5150A	MOT	79	47.00	31.00
1N5151	MOT	79	42.00	28.00
1N5152	MOT	79	42.00	28.00
1N5152A	MOT	...	47.00	31.00
1N5153	MOT	79	42.00	28.00
1N5153A	MOT	...	47.00	31.00
1N5154	MOT	79	42.00	28.00
1N5155	MOT	79	42.00	28.00
1N5155A	MOT	...	47.00	31.00
1N5156	MOT	79	47.00	31.00
1N5157	MOT	79	47.00	31.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
1N5211	RCA	85	.38	.28	.23
1N5212	RCA	85	.42	.30	.25
1N5213	RCA	85	.56	.41	.34
1N5214	RCA	85	.81	.59	.49
1N5215	RCA	85	.42	.30	.25
1N5216	RCA	85	.45	.33	.27
1N5217	RCA	85	.60	.44	.36
1N5218	RCA	85	.85	.62	.51

Motorola Type No.	Page No.	EACH 1-24	25-99	100-249	250-499	500-999
1N5221	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5221A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5221B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5222	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5222A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5222B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5223	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5223A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5223B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5224	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5224A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5224B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5225	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5225A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5225B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5226	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5226A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5226B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5227	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5227A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5227B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5228	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5228A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51
1N5228B	64	1.05	.93	.70	.66	.63
			1000-4999 Ea.			.59
1N5229	64	.67	.60	.45	.43	.40
			1000-4999 Ea.			.38
1N5229A	64	.90	.80	.60	.57	.54
			1000-4999 Ea.			.51

Motorola Type No.	Page No.	EACH 1-24	25-99	100-249	250-499	500-999
1N5229B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5230	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5230A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5230B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5231	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5231A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5231B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5232	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5232A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5232B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5233	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5233A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5233B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5234	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5234A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5234B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5235	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5235A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5235B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5236	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5236A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5236B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5237	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5237A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5237B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5238	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5238A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5238B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5239	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5239A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5239B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5240	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5240A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5240B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5241	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5241A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5241B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5242	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5242A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5242B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5243	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5243A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5243B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5244	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5244A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5244B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5245	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5245A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5245B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5246	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5246A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5246B	63	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5247	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5247A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5247B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5248	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5248A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5248B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5249	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5249A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5249B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5250	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5250A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5250B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5251	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5251A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5251B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5252	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5252A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5252B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5253	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5253A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5253B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5254	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5254A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5254B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5255	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5255A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5255B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5256	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5256A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5256B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5257	64	.67	.60	.45	.43	.40
				1000-4999 Ea.		.38
1N5257A	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5257B	64	1.05	.93	.70	.66	.63
				1000-4999 Ea.		.59
1N5258	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5258A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5258B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5259	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5259A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5259B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5260	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5260A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5260B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5261	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5261A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5261B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5262	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5262A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5262B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5263	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5263A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5263B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5264	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5264A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5264B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5265	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5265A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5265B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5266	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5266A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5266B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5267	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5267A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5267B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N2568	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5268A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5268B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5269	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5269A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5269B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5270	64	.90	.80	.60	.57	.54
				1000-4999 Ea.		.51
1N5270A	64	1.12	1.00	.75	.71	.67
				1000-4999 Ea.		.64
1N5270B	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5271	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5271A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5271B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5272	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5272A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5272B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5273	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5273A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5273B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5274	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5274A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5274B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5275	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5275A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5275B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5276	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5276A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5276B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5277	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5277A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5277B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5278	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5278A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5278B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5279	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5279A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5279B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5280	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5280A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5280B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95
1N5281	64	1.27	1.13	.85	.81	.76
				1000-4999 Ea.		.72
1N5281A	64	1.50	1.33	1.00	.95	.90
				1000-4999 Ea.		.85
1N5281B	64	1.65	1.46	1.10	1.04	.99
				1000-4999 Ea.		.95

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 1N5229B MOT designates Motorola 1N5229B

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 IN5283 MOT designates Motorola IN5283

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100 Ass't	100-999
1N5283	MOT ...		4.45	3.90	3.40	2.95
1N5284	MOT ...		4.45	3.90	3.40	2.95
1N5285	MOT ...		4.45	3.90	3.40	2.95
1N5286	MOT ...		4.45	3.90	3.40	2.95
1N5287	MOT ...		4.45	3.90	3.40	2.95
1N5288	MOT ...		4.45	3.90	3.40	2.95
1N5289	MOT ...		4.45	3.90	3.40	2.95
1N5290	MOT ...		4.45	3.90	3.40	2.95
1N5291	MOT ...		4.45	3.90	3.40	2.95
1N5292	MOT ...		4.45	3.90	3.40	2.95
1N5293	MOT ...		4.45	3.90	3.40	2.95
1N5294	MOT ...		4.45	3.90	3.40	2.95
1N5295	MOT ...		4.45	3.90	3.40	2.95
1N5296	MOT ...		4.45	3.90	3.40	2.95
1N5297	MOT ...		4.45	3.90	3.40	2.95
1N5298	MOT ...		4.45	3.90	3.40	2.95
1N5299	MOT ...		4.45	3.90	3.40	2.95
1N5300	MOT ...		4.45	3.90	3.40	2.95
1N5301	MOT ...		4.45	3.90	3.40	2.95
1N5302	MOT ...		4.45	3.90	3.40	2.95
1N5303	MOT ...		4.45	3.90	3.40	2.95
1N5304	MOT ...		4.45	3.90	3.40	2.95
1N5305	MOT ...		4.45	3.90	3.40	2.95
1N5306	MOT ...		4.45	3.90	3.40	2.95
1N5307	MOT ...		4.45	3.90	3.40	2.95
1N5308	MOT ...		4.45	3.90	3.40	2.95
1N5309	MOT ...		4.45	3.90	3.40	2.95
1N5310	MOT ...		4.45	3.90	3.40	2.95
1N5311	MOT ...		4.45	3.90	3.40	2.95
1N5312	MOT ...		4.45	3.90	3.40	2.95
1N5313	MOT ...		4.45	3.90	3.40	2.95
1N5314	MOT ...		4.45	3.90	3.40	2.95

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N5333A	MOT	60	2.20	1.90	1.65
1N5333B	MOT	60	2.45	2.10	1.85
1N5334A	MOT	60	2.20	1.90	1.65
1N5334B	MOT	60	2.45	2.10	1.85
1N5335A	MOT	60	2.20	1.90	1.65
1N5335B	MOT	60	2.45	2.10	1.85
1N5336A	MOT	60	2.20	1.90	1.65
1N5336B	MOT	60	2.45	2.10	1.85
1N5337A	MOT	60	2.20	1.90	1.65
1N5337B	MOT	60	2.45	2.10	1.85
1N5338A	MOT	60	2.20	1.90	1.65
1N5338B	MOT	60	2.45	2.10	1.85
1N5339A	MOT	60	2.20	1.90	1.65
1N5339B	MOT	60	2.45	2.10	1.85
1N5340A	MOT	60	2.20	1.90	1.65
1N5340B	MOT	60	2.45	2.10	1.85
1N5341A	MOT	60	2.20	1.90	1.65
1N5341B	MOT	60	2.45	2.10	1.85
1N5342A	MOT	60	2.20	1.90	1.65
1N5342B	MOT	60	2.45	2.10	1.85
1N5343A	MOT	60	2.20	1.90	1.65
1N5343B	MOT	60	2.45	2.10	1.85
1N5344A	MOT	60	2.20	1.90	1.65
1N5344B	MOT	60	2.45	2.10	1.85
1N5345A	MOT	60	2.20	1.90	1.65
1N5345B	MOT	60	2.45	2.10	1.85
1N5346A	MOT	60	2.20	1.90	1.65
1N5346B	MOT	60	2.45	2.10	1.85
1N5347A	MOT	60	2.20	1.90	1.65
1N5347B	MOT	60	2.45	2.10	1.85
1N5348A	MOT	60	2.20	1.90	1.65
1N5348B	MOT	60	2.45	2.10	1.85
1N5349A	MOT	60	2.20	1.90	1.65
1N5349B	MOT	60	2.45	2.10	1.85
1N5350A	MOT	60	2.20	1.90	1.65
1N5350B	MOT	60	2.45	2.10	1.85
1N5351A	MOT	60	2.20	1.90	1.65
1N5351B	MOT	60	2.45	2.10	1.85
1N5352A	MOT	60	2.20	1.90	1.65
1N5352B	MOT	60	2.45	2.10	1.85

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
1N5353A	MOT	60	2.20	1.90	1.65
1N5353B	MOT	60	2.45	2.10	1.85
1N5354A	MOT	60	2.20	1.90	1.65
1N5354B	MOT	60	2.45	2.10	1.85
1N5355A	MOT	60	2.20	1.90	1.65
1N5355B	MOT	60	2.45	2.10	1.85
1N5356A	MOT	60	2.20	1.90	1.65
1N5356B	MOT	60	2.45	2.10	1.85
1N5357A	MOT	60	2.20	1.90	1.65
1N5357B	MOT	60	2.45	2.10	1.85
1N5358A	MOT	60	2.20	1.90	1.65
1N5358B	MOT	60	2.45	2.10	1.85
1N5359A	MOT	60	2.20	1.90	1.65
1N5359B	MOT	60	2.45	2.10	1.85
1N5360A	MOT	60	2.20	1.90	1.65
1N5360B	MOT	60	2.45	2.10	1.85
1N5361A	MOT	60	2.20	1.90	1.65
1N5361B	MOT	60	2.45	2.10	1.85
1N5362A	MOT	60	2.20	1.90	1.65
1N5362B	MOT	60	2.45	2.10	1.85
1N5363A	MOT	60	2.20	1.90	1.65
1N5363B	MOT	60	2.45	2.10	1.85
1N5364A	MOT	60	2.20	1.90	1.65
1N5364B	MOT	60	2.45	2.10	1.85
1N5365A	MOT	60	2.20	1.90	1.65
1N5365B	MOT	60	2.45	2.10	1.85
1N5366A	MOT	60	2.20	1.90	1.65
1N5366B	MOT	60	2.45	2.10	1.85
1N5367A	MOT	60	2.20	1.90	1.65
1N5367B	MOT	60	2.45	2.10	1.85
1N5368A	MOT	60	2.20	1.90	1.65
1N5368B	MOT	60	2.45	2.10	1.85
1N5369A	MOT	60	2.20	1.90	1.65
1N5369B	MOT	60	2.45	2.10	1.85
1N5370A	MOT	60	2.20	1.90	1.65
1N5370B	MOT	60	2.45	2.10	1.85
1N5371A	MOT	60	2.20	1.90	1.65
1N5371B	MOT	60	2.45	2.10	1.85
1N5372A	MOT	60	2.20	1.90	1.65
1N5372B	MOT	60	2.45	2.10	1.85
1N5373A	MOT	60	2.20	1.90	1.65
1N5373B	MOT	60	2.45	2.10	1.85
1N5374A	MOT	60	2.20	1.90	1.65
1N5374B	MOT	60	2.45	2.10	1.85
1N5375A	MOT	60	2.20	1.90	1.65
1N5375B	MOT	60	2.45	2.10	1.85
1N5376A	MOT	60	2.20	1.90	1.65
1N5376B	MOT	60	2.45	2.10	1.85
1N5377A	MOT	60	2.20	1.90	1.65
1N5377B	MOT	60	2.45	2.10	1.85
1N5378A	MOT	60	2.20	1.90	1.65
1N5378B	MOT	60	2.45	2.10	1.85
1N5379A	MOT	60	2.60	2.25	1.95
1N5379B	MOT	60	2.85	2.50	2.15
1N5380A	MOT	60	2.60	2.25	1.95
1N5380B	MOT	60	2.85	2.50	2.15
1N5381A	MOT	60	2.60	2.25	1.95
1N5381B	MOT	60	2.85	2.50	2.15
1N5382A	MOT	60	2.60	2.25	1.95
1N5382B	MOT	60	2.85	2.50	2.15
1N5383A	MOT	60	2.60	2.25	1.95
1N5383B	MOT	60	2.85	2.50	2.15
1N5384A	MOT	60	2.60	2.25	1.95
1N5384B	MOT	60	2.85	2.50	2.15
1N5385A	MOT	60	2.60	2.25	1.95
1N5385B	MOT	60	2.85	2.50	2.15
1N5386A	MOT	60	2.60	2.25	1.95
1N5386B	MOT	60	2.85	2.50	2.15
1N5387A	MOT	60	2.60	2.25	1.95
1N5387B	MOT	60	2.85	2.50	2.15
1N5388A	MOT	60	2.60	2.25	1.95
1N5388B	MOT	60	2.85	2.50	2.15
1N5411	RCA	86	.61	...	.44
			1000-Up Ea.		.37

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N5441A	MOT	79	3.75	2.50
1N5441B	MOT	79	4.50	3.00
1N5441C	MOT	79	5.70	3.80
1N5442A	MOT	79	3.75	2.50
1N5442B	MOT	79	4.50	3.00
1N5442C	MOT	79	5.70	3.80
1N5443A	MOT	79	3.75	2.50
1N5443B	MOT	79	4.50	3.00
1N5443C	MOT	79	5.70	3.80
1N5444A	MOT	79	3.75	2.50
1N5444B	MOT	79	4.50	3.00
1N5444C	MOT	79	5.70	3.80
1N5445A	MOT	79	3.75	2.50
1N5445B	MOT	79	4.50	3.00
1N5445C	MOT	79	5.70	3.80
1N5446A	MOT	79	3.75	2.50
1N5446B	MOT	79	4.50	3.00
1N5446C	MOT	79	5.70	3.80
1N5447A	MOT	79	3.75	2.50
1N5447B	MOT	79	4.50	3.00
1N5447C	MOT	79	5.70	3.80
1N5448A	MOT	79	3.75	2.50
1N5448B	MOT	79	4.50	3.00
1N5448C	MOT	79	5.70	3.80
1N5449A	MOT	79	3.75	2.50
1N5449B	MOT	79	4.50	3.00
1N5449C	MOT	79	5.70	3.80
1N5450A	MOT	79	3.75	2.50
1N5450B	MOT	79	4.50	3.00
1N5450C	MOT	79	5.70	3.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999
1N5451A	MOT	79	3.75	2.50
1N5451B	MOT	79	4.50	3.00
1N5451C	MOT	79	5.70	3.80
1N5452A	MOT	79	3.75	2.50
1N5452B	MOT	79	4.50	3.00
1N5452C	MOT	79	5.70	3.80
1N5453A	MOT	79	3.75	2.50
1N5453B	MOT	79	4.50	3.00
1N5453C	MOT	79	5.70	3.80
1N5454A	MOT	79	3.75	2.50
1N5454B	MOT	79	4.50	3.00
1N5454C	MOT	79	5.70	3.80
1N5455A	MOT	79	3.75	2.50
1N5455B	MOT	79	4.50	3.00
1N5455C	MOT	79	5.70	3.80
1N5456A	MOT	79	3.75	2.50
1N5456B	MOT	79	4.50	3.00
1N5456C	MOT	79	5.70	3.80
1N5461A	MOT	79	6.75	4.50
1N5461B	MOT	79	8.70	5.80
1N5461C	MOT	79	12.00	8.00
1N5462A	MOT	79	6.75	4.50
1N5462B	MOT	79	8.70	5.80
1N5462C	MOT	79	12.00	8.00
1N5463A	MOT	79	6.75	4.50
1N5463B	MOT	79	8.70	5.80
1N5463C	MOT	79	12.00	8.00
1N5464A	MOT	79	6.75	4.50
1N5464B	MOT	79	8.70	5.80
1N5464C	MOT	79	12.00	8.00
1N5465A	MOT	79	6.75	4.50
1N5465B	MOT	79	8.70	5.80
1N5465C	MOT	79	12.00	8.00
1N5466A	MOT	79	6.75	4.50
1N5466B	MOT	79	8.70	5.80
1N5466C	MOT	79	12.00	8.00
1N5467A	MOT	79	6.75	4.50
1N5467B	MOT	79	8.70	5.80
1N5467C	MOT	79	12.00	8.00
1N5468A	MOT	79	6.75	4.50
1N5468B	MOT	79	8.70	5.80
1N5468C	MOT	79	12.00	8.00
1N5469A	MOT	79	6.75	4.50
1N5469B	MOT	79	8.70	5.80
1N5469C	MOT	79	12.00	8.00
1N5470A	MOT	79	6.75	4.50
1N5470B	MOT	79	8.70	5.80
1N5470C	MOT	79	12.00	8.00
1N5471A	MOT	79	6.75	4.50
1N5471B	MOT	79	8.70	5.80
1N5471C	MOT	79	12.00	8.00
1N5472A	MOT	79	6.75	4.50
1N5472B	MOT	79	8.70	5.80
1N5472C	MOT	79	12.00	8.00
1N5473A	MOT	79	6.75	4.50
1N5473B	MOT	79	8.70	5.80
1N5473C	MOT	79	12.00	8.00
1N5474A	MOT	79	6.75	4.50
1N5474B	MOT	79	8.70	5.80
1N5474C	MOT	79	12.00	8.00
1N5475A	MOT	79	6.75	4.50
1N5475B	MOT	79	8.70	5.80
1N5475C	MOT	79	12.00	8.00
1N5476A	MOT	79	6.75	4.50
1N5476B	MOT	79	8.70	5.80
1N5476C	MOT	79	12.00	8.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N109	RCA	81	.66	.48	.40
2N118A	TI	97	8.15	5.45	....
2N119	TI	97	11.05	7.35	....
2N173	MOT	76	3.40	2.50	....
2N174	MOT	76	3.60	2.67	....
2N174A	MOT	76	3.80	2.79	....
2N176	MOT	76	1.20	.87	....
2N176	RCA	82	1.31	.95	.79
2N178	MOT	76	1.10	.80	....
2N217	RCA	81	.57	.41	.34
2N242	MOT	76	1.65	1.10	....
2N244	TI	97	16.36	12.24	....
2N250A	TI	...	1.73	1.15	....
2N251A	TI	...	1.88	1.25	....
2N270	RCA	82	.76	.55	.46
2N274	RCA	84	1.24	.90	.75
2N277	MOT	76	2.25	1.66	....
2N278	MOT	76	2.80	2.07	....
2N297A	MOT	76	1.60	1.17	....
2N297A/JAN	MOT	...	2.40	1.78	....
2N307	MOT	76	1.12	.75	....
2N307A	MOT	76	1.87	1.25	....
2N320	MOT	78	.75	.50	....
2N321	MOT	78	.83	.55	....
2N322	MOT	78	.53	.35	....

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N323	MOT	78	.75	.50
2N324	MOT	78	.75	.50
2N331	MOT	78	1.88	1.25
2N331/JAN	MOT	...	2.25	1.50
2N332	TI	97	4.65	3.10
2N333	TI	97	4.65	3.10
2N333A	TI	97	4.90	3.30
2N334	TI	97	4.65	3.10

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N335	TI	97	4.90	3.30
2N335A	TI	97	5.20	3.50
2N336	TI	97	5.95	3.95
2N336A	TI	97	6.25	4.20
2N337	TI	97	4.85	3.20
2N338	TI	97	5.50	3.65
2N339	TI	97	8.12	6.08
2N341	TI	97	14.00	10.49
2N342	TI	97	Each	7.11
2N342/JAN	TI	97	11.64	8.69
2N342A	TI	97	9.52	7.16
2N343	TI	97	14.72	11.03
2N350A	MOT	76	1.65	1.10
2N351A	MOT	76	1.70	1.15
2N370	RCA	84	1.08	.78
			1000-Up Ea.	.65
2N372	RCA	84	1.06	.77
			1000-Up Ea.	.64
2N375	MOT	76	2.20	1.65
2N376A	MOT	76	1.85	1.25
2N378	MOT	76	1.80	1.20
2N379	MOT	76	1.90	1.39
2N381	MOT	78	1.28	.85
2N382	MOT	78	1.73	1.15
2N383	MOT	78	2.18	1.45
2N384	RCA	84	1.65	1.20
			1000-Up Ea.	1.00
2N388	RCA	88	.47	.34
			1000-Up Ea.	.28
2N388A	RCA	88	.88	.64
			1000-Up Ea.	.53
2N388A	TI	95	.88	.64
2N389A	TI	98	21.00	14.00
2N395	TI	87	.50	.33
2N398	MOT	78	1.20	.80
2N398	RCA	87	.83	.60
			1000-Up Ea.	.50
2N398A	MOT	78	1.28	.85
2N398A	RCA	87	.91	.66
			1000-Up Ea.	.55
2N398B	RCA	87	1.16	.84
			1000-Up Ea.	.70
2N404	RCA	87	.42	.30
			1000-Up Ea.	.25
2N404/JAN	RCA	...	.43	.32
			1000-Up Ea.	.26
2N404	TI	95	.42	.28
2N404A	RCA	87	.55	.40
			1000-Up Ea.	.33
2N404A	TI	95	.58	.39
2N405	RCA	81	.48	.35
			1000-Up Ea.	.285
2N406	RCA	81	.41	.30
			1000-Up Ea.	.245
2N407	RCA	82	.54	.39
			1000-Up Ea.	.325
2N408	RCA	82	.48	.35
			1000-Up Ea.	.285
2N409	RCA	84	.55	.40
			1000-Up Ea.	.33
2N410	RCA	84	.48	.35
			1000-Up Ea.	.29
2N412	RCA	84	.53	.39
			1000-Up Ea.	.32
2N414	RCA	87	.42	.30
			1000-Up Ea.	.25
2N428	TI	...	1.23	.82
2N441	MOT	76	1.26	.84
2N442	MOT	76	1.66	1.11
2N443	MOT	76	1.90	1.39
2N456A	MOT	76	1.80	1.20
2N456B	TI	98	1.80	1.20
2N457A	MOT	76	2.20	1.45
2N457A	TI	98	2.18	1.45
2N457B	TI	98	2.18	1.45
2N458A	MOT	76	2.65	1.75
2N458A	TI	98	2.63	1.75
2N458B	TI	98	2.63	1.75
2N459	MOT	76	4.35	2.90
2N460	MOT	78	2.25	1.50
2N461	MOT	78	2.25	1.50
2N461/JAN	MOT	...	2.85	1.90
2N464	MOT	78	1.88	1.25
2N465	MOT	78	1.88	1.25
2N466	MOT	78	2.10	1.40
2N467	MOT	78	2.55	1.70
2N467/JAN	MOT	...	2.70	1.80
2N489	TI	96	7.10	4.75
2N489A	TI	96	7.65	5.10
2N489B	TI	96	9.15	6.10
2N490	TI	96	7.80	5.20
2N490A	TI	96	8.35	5.55
2N491	TI	96	8.40	5.60
2N491A	TI	96	8.90	5.95
2N491B	TI	96	10.40	6.95
2N492	TI	96	9.80	6.55
2N492A	TI	96	10.40	6.95
2N942B	TI	96	11.90	7.95
2N493	TI	96	10.75	7.20
2N493A	TI	...	11.20	7.50
2N493B	TI	...	12.75	8.50
2N494	TI	96	10.90	7.30
2N494A	TI	96	11.40	7.60
2N494C	TI	96	14.95	9.90
2N497	TI	98	1.89	1.26
2N497A	TI	98	2.05	1.37
2N498	TI	98	2.12	1.41
2N499	MOT	71	3.60	2.40
2N499A	MOT	71	4.30	2.85
2N501	SPR	...	6.35	4.65
2N502	SPR	...	2.90	2.15
2N502	MOT	71	3.25	2.15
2N502A	MOT	71	3.75	2.50
2N502B	MOT	71	4.20	2.80
2N508	MOT	78	.75	.50
2N508A	MOT	78	.90	.60
2N511B	TI	97	5.18	3.45
2N513	TI	97	6.00	4.00
2N513A	TI	97	6.65	4.43
2N514	TI	...	8.25	5.50
2N524	MOT	78	1.20	.80
2N525	MOT	78	1.20	.80
2N526	MOT	78	1.20	.80
2N527	MOT	78	1.43	.95
2N542	TI	97	6.20	4.10
2N543	TI	97	7.95	5.30
2N554	MOT	76	.60	.40
2N555	MOT	76	.75	.50
2N581	RCA	87	.50	.36
			1000-Up Ea.	.30
2N582	RCA	87	.66	.48
			1000-Up Ea.	.40
2N585	RCA	88	.99	.72
			1000-Up Ea.	.60
2N586	RCA	88	1.73	1.26
			1000-Up Ea.	1.05
2N588	SPR	...	1.45	1.05
2N591	RCA	81	.58	.42
			1000-Up Ea.	.35
2N594	TI	95	2.75	1.83
2N595	TI	95	4.25	2.83
2N596	TI	95	5.65	3.77
2N618	MOT	76	2.45	1.82
2N647	RCA	82	1.08	.78
			1000-Up Ea.	.65
2N649	RCA	82	.86	.63
			1000-Up Ea.	.52
2N650	MOT	78	2.03	1.35
2N650A	MOT	...	2.10	1.40
2N651	MOT	78	2.03	1.35
2N651A	MOT	...	2.10	1.40
2N652	MOT	78	2.30	1.55
2N652A	MOT	...	2.80	1.85
2N653	MOT	78	2.50	1.65
2N654	MOT	78	2.60	1.75
2N655	MOT	78	2.80	1.85
2N656	MOT	71	2.03	1.35
2N656	TI	98	2.03	1.35
2N656A	TI	98	2.40	1.60
2N657	MOT	71	2.20	1.47
2N657	TI	98	2.20	1.47
2N657A	TI	98	2.92	1.94
2N659	TI	95	1.30	.87
2N660	TI	95	1.48	.99
2N662	TI	...	1.40	.93
2N665/JAN	MOT	76	8.90	6.60
2N669	MOT	76	1.42	.95
2N681	IR	90	3.00	2.00
2N681	MOT	69	3.30	2.20
2N682	IR	90	3.60	2.40
2N682	MOT	69	4.10	2.75
2N683	IR	90	4.72	3.15
2N683	MOT	69	5.60	3.75
2N684	IR	90	5.47	3.65
2N684	MOT	69	6.30	4.20
2N684	RCA	87	4.19	3.05
			1000-Up Ea.	2.54
2N685	IR	90	5.92	3.95
2N685	MOT	69	6.60	4.40
2N685	RCA	87	4.81	3.50
			1000-Up Ea.	2.92
2N686	IR	90	6.30	4.20
2N686	MOT	69	6.95	4.65
2N686	RCA	87	5.36	3.90
			1000-Up Ea.	3.25
2N687	IR	90	6.75	4.50
2N687	MOT	69	14.60	9.75
2N687	RCA	87	5.77	4.20
			1000-Up Ea.	3.50
2N688	IR	90	8.25	5.50
2N688	MOT	69	17.10	11.40
2N688	RCA	87	6.74	4.90
			1000-Up Ea.	4.08
2N689	IR	90	10.12	6.75
2N689	MOT	69	20.60	13.75
2N689	RCA	87	8.05	5.85
			1000-Up Ea.	4.87
2N690	IR	90	12.00	8.00
2N690	RCA	87	8.67	6.30
			1000-Up Ea.	5.25
2N691	IR	90	19.27	12.85
2N692	IR	90	25.00	18.56
2N696	MOT	70	.52	.46
			1000-4999 Ea.	.40
			5000-4999 Ea.	.38
2N696	TI	97	.52	.46
2N697	MOT	70	.52	.46
			1000-4999 Ea.	.40
			5000-9999 Ea.	.38
2N697	RCA	81	.63	.46
			1000-Up Ea.	.38
2N697	TI	97	.52	.46
2N697/JAN	TI	...	1.35	.99
2N698	TI	97	1.57	1.05
2N699	MOT	70	1.32	.88
2N699	RCA	81	1.16	.84
			1000-Up Ea.	.70
2N700	MOT	73	7.35	4.90
2N700A	MOT	73	11.85	8.70
2N702	MOT	70	6.75	4.50
2N702	TI	...	6.75	4.50
2N703	MOT	70	6.75	4.50
2N703	TI	...	6.75	4.50
2N705	MOT	71	1.03	.69
2N706	MOT	70	.46	.40
			1000-4999 Ea.	.35
			5000-9999 Ea.	.34
2N706/JAN	MOT	70	.58	.50

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 32 2N335 TI designates Texas Instruments 2N335

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N706	RCA	87	.55	.40
			1000-Up Ea.	.33
2N706A	MOT	70	1.18	.79
2N706A	RCA	87	.73	.53
			1000-Up Ea.	.44
2N706A	TI	96	1.19	.79
2N706B	MOT	70	1.48	.99
2N707	MOT	72	6.30	4.20
2N708	MOT	70	.49	.43
			1000-4999 Ea.	.38
			5000-9999 Ea.	.36
2N709	RCA	87	1.32	.96
			1000-Up Ea.	.80
2N709	TI	96	2.48	1.65
2N710	MOT	71	1.33	.89
2N711	MOT	71	.88	.59
2N711	TI	97	.89	.59
2N711A	MOT	71	.88	.59
2N711B	MOT	71	.94	.63
2N711B	TI	97	.94	.63
2N717	TI	97	.99	.66
2N718	MOT	70	.46	.40
			1000-4999 Ea.	.35
			5000-9999 Ea.	.34
2N718	TI	97	.46	.40
2N718A	MOT	70	.79	.68
			1000-4999 Ea.	.60
			5000-9999 Ea.	.57
2N718A	RCA	81	1.08	.78
			1000-Up Ea.	.65
2N718A	TI	97	.78	.68
2N719	TI	...	2.35	1.56
2N720	TI	97	1.32	.88
2N720A	MOT	72	1.32	.88
2N720A	RCA	81	1.32	.88
			1000-Up Ea.	.80
2N721	MOT	72	1.46	1.27
2N722	MOT	70	1.46	1.27
2N726	TI	96	3.00	2.00
2N727	TI	96	3.15	2.10
2N730	TI	97	.99	.66
2N731	TI	97	1.30	.86
2N735	MOT	72	2.50	1.65
2N735	TI	97	2.50	1.65
2N736	MOT	72	2.50	1.65
2N736	TI	97	2.50	1.65
2N739	MOT	72	2.70	1.80
2N740	MOT	72	2.70	1.80
2N741	MOT	73	2.18	1.45
2N741A	MOT	73	3.30	2.20
2N743	MOT	70	6.20	4.15
2N743	TI	96	1.95	1.30
2N744	MOT	70	2.90	1.95
2N744	TI	96	1.90	1.25
2N753	MOT	70	1.97	1.31
2N753	TI	96	.72	.48
2N760	TI	96	1.80	1.20
2N769	SPR	...	6.75	4.95
2N779A	MOT	71	3.75	2.50
2N779A	SPR	...	3.50	2.55
2N797	TI	97	4.27	2.85
2N828	MOT	71	3.30	2.20
2N829	MOT	71	4.45	2.95
2N834	MOT	70	2.00	1.35
2N834	RCA	87	1.98	1.44
			1000-Up Ea.	1.20
2N835	MOT	70	1.50	1.00
2N840	MOT	72	3.60	2.45
2N841	MOT	72	4.40	2.95
2N859	SPR	...	9.35	6.95
2N861	SPR	...	6.00	4.40
2N863	SPR	...	4.50	3.30
2N869	MOT	72	5.85	3.90
2N869A	MOT	70	4.50	3.00
2N870	TI	97	5.25	3.50
2N871	TI	97	5.25	3.20
2N877	TI	98	3.00	2.00
2N878	TI	...	3.30	2.20
2N879	TI	...	5.40	3.60
2N880	TI	...	6.30	4.20
2N888	TI	...	19.13	12.75
2N910	MOT	72	2.37	1.58
2N911	MOT	72	5.55	3.70
2N914	MOT	70	.95	.63
2N914	TI	96	.95	.63

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 2N915 MOT designates Motorola 2N915

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N915	MOT	72	4.95	3.30
2N916	MOT	72	3.65	2.45
2N916	TI	96	3.65	2.90
2N917	RCA	83	1.27	.92
			1000-Up Ea.	.77
2N917	TI	96	2.48	1.65
2N918	MOT	72	3.30	2.20
2N918/JAN	MOT	72	4.10	2.75
2N918	RCA	83	1.41	1.02
			1000-Up Ea.	.85
2N918	TI	96	3.30	2.20
2N929	MOT	72	2.25	1.50
2N929	TI	96	2.25	1.50
2N929A	MOT	72	4.50	4.00
2N930	MOT	72	2.60	1.75
2N930A	MOT	72	5.40	3.60
2N956	MOT	70	.85	.74
			1000-4999 Ea.	.65
			5000-9999 Ea.	.61
2N960	MOT	71	.96	.64
2N961	MOT	71	.91	.61
2N962	MOT	71	.85	.57
2N963	MOT	71	.82	.55
2N964	MOT	71	.99	.66
2N964A	MOT	71	5.25	3.50
2N965	MOT	71	.94	.63
2N966	MOT	71	.88	.59
2N967	MOT	71	.87	.58
2N967	TI	97	.87	.58
2N968	MOT	71	.90	.60
2N970	MOT	71	.81	.54
2N973	TI	...	.89	.59
2N974	TI	...	.83	.55
2N976	SPR	...	4.35	3.20
2N984	SPR	...	1.00	.75
2N985	MOT	71	2.88	1.92
2N985	TI	...	2.83	1.89
2N995	MOT	72	5.85	3.90
2N997	TI	...	13.50	9.00
2N998	MOT	78	13.50	9.00
2N999	MOT	78	14.85	9.90
2N1008	MOT	78	1.10	.75
2N1008A	MOT	78	1.20	.80
2N1008B	MOT	78	1.30	.85
2N1011	MOT	78	1.95	1.45
2N1021A	TI	98	3.08	2.05
2N1022	MOT	76	3.60	2.40
2N1022	TI	98	3.60	2.40
2N1022A	TI	98	3.60	2.40
2N1023	RCA	84	2.72	1.98
			1000-Up Ea.	1.65
2N1038	MOT	76	2.85	1.90
2N1038	TI	97	1.80	1.20
2N1039	MOT	76	3.75	2.50
2N1039	TI	97	2.40	1.60
2N1039/JAN	TI	...	2.48	1.65
2N1040	MOT	76	5.70	3.80
2N1041	MOT	76	7.50	5.00
2N1041	TI	97	4.50	3.00
2N1042	TI	97	2.85	1.90
2N1043	TI	97	4.20	2.80
2N1045	TI	...	7.20	4.80
2N1046	TI	...	8.25	5.50
2N1047A	TI	...	14.30	9.55
2N1047B	TI	98	25.95	17.30
2N1049A	TI	98	16.75	11.15
2N1049B	TI	...	33.75	22.50
2N1050A	TI	98	22.10	14.20
2N1050B	TI	98	46.90	31.20
2N1073	MOT	76	2.40	1.78
2N1073B	MOT	76	4.50	3.30
2N1099	MOT	76	3.90	2.87
2N1100	MOT	76	4.50	3.34
2N1118	SPR	...	11.55	8.25
2N1131	MOT	70	5.60	3.75
2N1131/JAN	TI	...	6.00	4.00
2N1132	MOT	70	1.46	1.27
			1000-4999 Ea.	1.10
2N1132	TI	97	1.46	1.27
2N1132A	MOT	70	12.00	8.00
2N1141	MOT	73	4.83	3.22
2N1142	MOT	73	4.20	2.80
2N1142	TI	96	4.05	2.70
2N1142/JAN	TI	...	4.35	2.90
2N1143	MOT	73	3.50	2.33
2N1151	TI	...	8.65	5.75
2N1152	TI	...	11.35	7.55
2N1162	MOT	76	4.45	3.30
2N1162AML	MOT	...	5.08	3.75
2N1164	MOT	76	6.35	4.70
2N1164AML	MOT	76	6.95	5.15
2N1165	MOT	76	6.35	4.70
2N1166	MOT	76	7.55	5.60
2N1166AML	MOT	76	8.10	6.00
2N1667	MOT	76	7.55	5.60
2N1167AML	MOT	...	8.10	6.00
2N1175	MOT	78	1.12	.75
2N1177	RCA	84	1.01	.74
			1000-Up Ea.	.61
2N1178	RCA	84	.99	.72
			1000-Up Ea.	.60
2N1179	RCA	84	.99	.72
			1000-Up Ea.	.60
2N1180	RCA	84	.80	.58
			1000-Up Ea.	.48
2N1183	RCA	82	1.82	1.32
			1000-Up Ea.	1.10
2N1183A	RCA	82	2.31	1.68
			1000-Up Ea.	1.40
2N1183B	RCA	82	2.89	2.10
			1000-Up Ea.	1.75
2N1184	RCA	82	2.48	1.80
			1000-Up Ea.	1.50
2N1184A	RCA	82	2.81	2.04
			1000-Up Ea.	1.70
2N1184B	RCA	82	4.13	3.00
			1000-Up Ea.	2.50
2N1185	MOT	78	3.60	2.40
2N1186	MOT	78	3.80	2.55
2N1187	MOT	78	3.80	2.55
2N1188	MOT	78	4.70	3.15
2N1189	MOT	78	2.25	1.50
2N1191	MOT	78	1.40	.95
2N1192	MOT	78	1.40	.95
2N1193	MOT	78	1.87	1.25
2N1194	MOT	78	2.03	1.35
2N1195	MOT	73	3.95	2.63
2N1204	MOT	71	1.65	1.10
2N1204A	MOT	71	1.65	1.10
2N1224	RCA	84	1.24	.90
			1000-Up Ea.	.75
2N1225	RCA	84	1.41	1.02
			1000-Up Ea.	.85
2N1226	RCA	84	1.49	1.08
			1000-Up Ea.	.90
2N1247	TI	97	13.50	9.00
2N1252	TI	...	6.90	4.55
2N1277	TI	97	4.25	2.84
2N1278	TI	97	4.75	3.15
2N1302	RCA	88	.42	.30
			1000-Up Ea.	.25
2N1302	TI	95	.42	.30
2N1303	RCA	87	.42	.30
			1000-Up Ea.	.25
2N1303	TI	95	.42	.30
2N1303/JAN	TI	...	.47	.31
2N1304	RCA	88	.50	.36
			1000-Up Ea.	.30
2N1304	TI	95	.50	.36
2N1305	RCA	87	.48	.35
			1000-Up Ea.	.29
2N1305	TI	95	.48	.35
2N1306	RCA	88	.62	.45
			1000-Up Ea.	.37
2N1306	TI	95	.62	.45
2N1307	RCA	87	.58	.42
			1000-Up Ea.	.35
2N1307	TI	95	.58	.42
2N1308	RCA	88	.91	.66
			1000-Up Ea.	.55
2N1308	TI	95	.91	.66
2N1309	RCA	87	.91	.66
			1000-Up Ea.	.55
2N1309/JAN	TI	...	.96	.70
2N1358	MOT	76	4.15	3.06
2N1359	MOT	76	1.40	1.05
2N1360	MOT	76	1.70	1.25
2N1362	MOT	76	2.85	2.12
2N1363	MOT	76	3.10	2.30
2N1364	MOT	76	4.75	3.54
2N1365	MOT	76	5.00	3.70
2N1370	TI	...	.72	.48
2N1371	TI	...	1.14	.76
2N1372	TI	95	.81	.54
2N1373	TI	95	1.20	.80
2N1374	TI	95	1.02	.68
2N1375	TI	95	1.38	.92
2N1376	TI	95	1.29	.86
2N1377	TI	95	1.50	1.00
2N1378	TI	95	1.29	.86
2N1379	TI	95	1.44	.96
2N1381	TI	95	.72	.48
2N1383	TI	...	.92	.61
2N1395	RCA	84	1.82	1.32
			1000-Up Ea.	1.10
2N1396	RCA	84	1.93	1.40
			1000-Up Ea.	1.17
2N1397	RCA	84	2.15	1.56
			1000-Up Ea.	1.30
2N1404	TI	95	.58	.39
2N1412	MOT	76	4.50	3.34
2N1412A/JAN	MOT	76	9.00	6.00
2N1413	MOT	78	.83	.55
2N1414	MOT	78	.90	.60
2N1415	MOT	78	1.05	.70
2N1420	MOT	70	.65	.56
			1000-4999 Ea.	.50
			5000-9999 Ea.	.48

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-Up
2N1479	RCA	81	2.15	1.56	1.30
2N1480	RCA	81	2.31	1.68	1.40
2N1481	RCA	81	2.48	1.80	1.50
2N1482	RCA	81	3.30	2.40	2.00
2N1483	RCA	82	2.89	2.10	1.75
2N1483TX/JAN	RCA	...	7.85	5.70	4.75
2N1484	RCA	82	3.63	2.64	2.20
2N1484TX/JAN	RCA	...	8.60	6.25	5.20
2N1485	RCA	82	4.46	3.24	2.70
2N1485/JAN	RCA	...	5.28	3.84	3.20
2N1485TX/JAN	RCA	...	9.40	6.85	5.70
2N1486	RCA	82	6.77	4.92	4.10
2N1486TX/JAN	RCA	...	10.30	8.55	7.10
2N1487	RCA	82	4.54	3.30	2.75
2N1488	RCA	82	4.95	3.60	3.00
2N1489	RCA	82	7.43	5.40	4.50
2N1490	RCA	82	8.25	6.00	5.00
2N1491	RCA	84	1.82	1.32	1.10
2N1493	RCA	84	7.01	5.10	4.25

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N1494	MOT	71	2.17	1.45
2N1495	MOT	71	3.30	2.20
2N1496	MOT	71	3.80	2.55
2N1499A	MOT	...	1.60	1.05
2N1499A	SPR	...	1.40	1.05
2N1499B	SPR	...	1.55	1.15
2N1500	MOT	71	7.65	5.10
2N1500	SPR	...	6.95	5.10
2N1507	TI	97	1.20	.80
2N1524	RCA	84	.47	.34
			1000-Up Ea.	.28
2N1529	MOT	76	1.45	1.08
2N1530	MOT	76	1.60	1.15
2N1531	MOT	76	2.30	1.70
2N1532	MOT	76	3.00	2.24
2N1532A	MOT	76	3.58	2.65
2N1533	MOT	76	4.35	3.25
2N1534	MOT	76	1.40	1.05
2N1535	MOT	76	1.50	1.14
2N1535AML	MOT	76	2.10	1.55
2N1536	MOT	76	1.70	1.25
2N1536AML	MOT	76	2.20	1.65
2N1537	MOT	76	3.90	2.90
2N1537AML	MOT	76	4.45	3.30
2N1538	MOT	76	5.50	4.05
2N1539	MOT	76	1.50	1.12
2N1540	MOT	76	1.58	1.18
2N1540	TI	98	1.58	1.18
2N1540AML	MOT	76	2.10	1.62
2N1541	MOT	76	1.85	1.38
2N1541AML	MOT	76	2.35	1.75
2N1542	MOT	76	2.35	1.75
2N1542AML	MOT	76	3.04	2.25
2N1543	MOT	76	3.60	2.65
2N1544	MOT	76	1.65	1.24
2N1544AML	MOT	76	2.22	1.64
2N1545	MOT	76	1.85	1.35
2N1545AML	MOT	76	2.35	1.75
2N1546	MOT	76	2.30	1.70
2N1546AML	MOT	76	2.95	2.20
2N1547	MOT	76	2.75	2.05
2N1547AML	MOT	76	3.45	2.55
2N1548	MOT	76	4.00	2.95
2N1550	MOT	76	3.05	2.05
2N1551	MOT	76	4.85	3.25
2N1552	MOT	76	5.55	3.70
2N1553	MOT	76	1.85	1.35
2N1554	MOT	76	2.30	1.70
2N1554AML	MOT	76	2.85	2.10
2N1555	MOT	76	2.75	2.05
2N1555AML	MOT	76	3.45	2.55
2N1556	MOT	76	4.00	2.95
2N1556AML	MOT	76	4.65	3.45
2N1557	MOT	76	2.15	1.58
2N1557AML	MOT	76	2.70	2.00
2N1558	MOT	76	2.80	2.06
2N1558AML	MOT	76	3.40	2.50
2N1559	MOT	76	3.25	2.40
2N1559AML	MOT	76	3.90	2.90
2N1560	MOT	76	4.45	3.30
2N1560AML	MOT	76	5.00	3.70
2N1561	MOT	72	21.75	14.50
2N1562	MOT	72	14.25	9.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N1564	TI	97	2.50	1.65
2N1565	TI	97	2.50	1.65
2N1566A	TI	97	2.50	1.65
2N1595	MOT	68	2.15	1.45
2N1595	TI	98	3.00	2.00
2N1596	MOT	68	2.60	1.75
2N1596	TI	98	4.50	3.05
2N1597	MOT	68	4.95	3.30
2N1597	TI	98	9.35	6.20
2N1598	MOT	68	8.60	5.75
2N1599	MOT	68	12.35	8.25
2N1600	IR	90	5.10	3.40
2N1601	IR	90	5.70	3.95
2N1601	TI	98	5.70	3.45
2N1602	IR	90	9.45	6.30
2N1602	TI	98	9.45	6.30
2N1603	IR	90	13.50	9.00
2N1603	TI	98	13.50	9.00
2N1604	IR	90	16.80	10.80
2N1604	TI	98	16.80	10.80
2N1605	RCA	88	.62	.45
			1000-Up Ea.	.37
2N1605	TI	95	.62	.45
2N1605A	RCA	88	1.09	.80
			1000-Up Ea.	.66
2N1613	MOT	70	.79	.68
			1000-4999 Ea.	.60
			5000-9999 Ea.	.57
2N1613	RCA	81	.75	.54
			1000-Up Ea.	.45
2N1631	RCA	84	.65	.47
			1000-Up Ea.	.39
2N1632	RCA	84	.58	.42
			1000-Up Ea.	.35
2N1637	RCA	84	.57	.41
			1000-Up Ea.	.34
2N1638	RCA	84	.50	.36
			1000-Up Ea.	.30
2N1639	RCA	84	.53	.39
			1000-Up Ea.	.32
2N1651	MOT	76	4.85	3.25
2N1652	MOT	76	10.10	6.75
2N1653	MOT	76	14.60	9.75
2N1671	TI	96	2.95	1.98
2N1671A	TI	96	3.20	2.14
2N1671B	TI	96	3.55	2.36
2N1692	MOT	...	22.50	17.00
2N1693	MOT	...	18.00	12.00
2N1700	RCA	81	1.90	1.38
			1000-Up Ea.	1.15
2N1701	RCA	82	2.31	1.68
			1000-Up Ea.	1.40
2N1702	RCA	82	4.54	3.30
			1000-Up Ea.	2.75
2N1707	MOT	78	.83	.55
2N1708	MOT	70	3.20	2.20
2N1711	MOT	70	.85	.74
			1000-4999 Ea.	.65
			5000-9999 Ea.	.61
2N1711	RCA	81	.94	.69
			1000-Up Ea.	.57
2N1714	TI	98	6.00	4.00
2N1715	TI	98	8.25	5.50
2N1718	TI	98	6.75	4.50
2N1719	TI	98	9.00	6.00
2N1720	TI	98	8.25	5.50
2N1722A	TI	...	60.00	40.00
2N1723	TI	...	43.50	29.00
2N1724	MOT	75	27.75	18.50
2N1726	SPR	...	1.15	.85
2N1742	MOT	71	2.70	1.80
2N1742	SPR	...	2.93	2.15
2N1743	SPR	...	2.87	2.11
2N1744	SPR	...	2.25	1.65
2N1745	SPR	...	1.80	1.32
2N1746	SPR	...	1.00	.75
2N1748	SPR	...	1.05	.80
2N1748A	SPR	...	1.15	.85
2N1751	MOT	76	14.25	9.50
2N1754	MOT	...	1.42	.95
2N1754	SPR	...	1.35	.95
2N1770	IR	90	3.02	2.43
2N1770A	IR	90	6.15	4.10
2N1771	IR	90	3.47	2.79
2N1771	TI	98	4.65	3.10
2N1771A	IR	90	6.97	4.65
2N1772	IR	90	5.72	3.80
2N1772	TI	98	5.75	3.85
2N1772A	IR	90	8.95	5.95
2N1773	IR	90	6.92	4.60
2N1773A	IR	90	11.05	7.35
2N1774	IR	90	8.12	5.40
2N1774	TI	98	8.15	5.45
2N1774A	IR	90	13.45	8.95
2N1775	IR	90	9.32	6.20
2N1775	TI	...	9.35	6.25
2N1775A	IR	90	15.50	10.45
2N1776	IR	90	10.60	7.05
2N1776A	IR	90	18.35	12.20
2N1777	IR	90	12.40	8.25
2N1777A	IR	90	23.60	15.50
2N1778	IR	90	18.15	12.05
2N1792	IR	90	24.00	18.50
2N1793	IR	90	28.00	21.50
2N1794	IR	90	33.00	25.40
2N1795	IR	90	38.00	29.20
2N1798	IR	90	66.00	51.00
2N1842	MOT	68	3.00	2.00
2N1842A	MOT	68	3.15	2.10
2N1842A	RCA	86	2.20	1.60
			1000-Up Ea.	1.33
2N1843	MOT	68	3.75	2.50
2N1843A	MOT	68	4.05	2.70
2N1844	MOT	68	5.00	3.35
2N1845	IR	90	5.65	3.30
2N1845	MOT	68	5.70	3.80
2N1845A	MOT	68	6.05	4.05
2N1845B	TI	98	5.94	3.96
2N1846	IR	90	5.78	3.55
2N1846	MOT	68	6.00	4.00
2N1846A	MOT	68	6.35	4.25
2N1846A	RCA	86	4.46	3.75
			1000-Up Ea.	2.71
2N1847	MOT	68	6.30	4.20
2N1847A	MOT	68	6.75	4.50
2N1847A	RCA	86	5.10	3.70
			1000-Up Ea.	3.09
2N1848	IR	90	6.07	4.05
2N1848	MOT	68	13.25	8.85
2N1848A	MOT	68	14.25	9.50
2N1848A	RCA	86	5.51	4.00
			1000-Up Ea.	3.34
2N1849	IR	90	7.42	4.95
2N1849	MOT	68	15.00	10.00
2N1849A	MOT	68	16.10	10.75
2N1849A	RCA	86	6.54	4.75
			1000-Up Ea.	3.96
2N1850	MOT	68	18.15	12.10
2N1850A	MOT	68	19.80	13.20
2N1850A	RCA	86	7.56	5.50
			1000-Up Ea.	4.58
2N1890	TI	...	5.30	3.55
2N1893	MOT	71	1.57	1.05
2N1893	RCA	81	1.08	.78
			1000-Up Ea.	.65
2N1905	RCA	83	4.13	3.00
			1000-Up Ea.	2.50
2N1906	RCA	83	6.60	4.80
			1000-Up Ea.	4.00
2N1907	TI	...	7.88	5.25
2N1908	TI	...	11.25	7.50

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99
2N1913	IR	90	31.50	24.20
2N1916	IR	90	53.00	38.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N1924	MOT	78	1.80	1.20
2N1925	MOT	78	2.03	1.35
2N1926	MOT	78	2.40	1.60
2N1959	MOT	70	4.45	2.95
2N1970	MOT	76	2.35	1.73
2N1973	TI	97	2.37	1.58
2N1974	TI	97	2.37	1.58
2N1975	TI	97	5.30	4.00
2N1982	MOT	...	7.80	5.20
2N1983	MOT	72	2.50	1.67
2N1984	MOT	72	2.33	1.56
2N1990	MOT	72	2.25	1.50
2N1991	MOT	70	3.95	2.96
2N1994	TI	...	2.33	1.55
2N1995	TI	95	3.75	2.50
2N1996	TI	95	5.14	3.43
2N1997	TI	95	1.77	1.18
2N1999	TI	95	2.07	1.38
2N2000	TI	95	2.50	1.67
2N2001	TI	95	2.17	1.45
2N2015	RCA	82	9.08	6.60
			1000-Up Ea.	5.50
2N2016	RCA	82	9.90	7.20
			1000-Up Ea.	6.00

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99
2N2025	IR	90	28.50	21.70
2N2027	IR	90	37.00	27.40
2N2028	IR	90	43.50	30.70

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N2042	MOT	78	2.85	1.90
2N2043	MOT	78	3.20	2.15
2N2048	MOT	...	1.60	1.05
2N2048	SPR	...	1.80	1.32
2N2060	MOT	77	21.00	14.00
2N2060A	MOT	77	36.00	24.00
2N2076	MOT	76	3.60	2.67
2N2076AML	MOT	76	4.75	3.17
2N2077	MOT	76	2.85	2.12
2N2078	MOT	76	1.90	1.39
2N2079	MOT	76	7.20	5.34
2N2080	MOT	76	5.10	3.78
2N2080AML	MOT	...	6.40	4.28
2N2081	MOT	76	3.15	2.32
2N2102	RCA	81	1.13	.82
			1000-Up Ea.	.68
2N2138	MOT	76	2.10	1.40
2N2139	MOT	76	2.25	1.50
2N2140	MOT	76	3.90	2.60
2N2141	MOT	76	7.85	5.25
2N2142	MOT	76	2.30	1.55
2N2143	MOT	76	2.45	1.65
2N2144	MOT	76	3.75	2.50
2N2145	MOT	76	4.50	3.00
2N2147	RCA	82	1.57	1.14
			1000-Up Ea.	.95
2N2148	RCA	82	1.08	.78
			1000-Up Ea.	.65
2N2151	TI	98	24.75	16.50
2N2152	MOT	76	3.60	2.40

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 32 2N1564 TI designates Texas Instruments 2N1564

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N2152AML	MOT	76	4.35	2.90
2N2153	MOT	76	5.55	3.70
2N2153AML	MOT	...	6.30	4.20
2N2154	MOT	76	10.10	6.75
2N2155	MOT	76	15.35	10.25
2N2156	MOT	76	4.10	2.75
2N2157	MOT	76	6.35	4.25
2N2157AML	MOT	76	7.10	4.75
2N2158	MOT	76	10.85	7.25
2N2158AML	MOT	76	11.60	7.75
2N2159	MOT	76	16.25	10.85
2N2160	TI	96	1.49	.99
2N2171	MOT	78	1.95	1.30
2N2185	SPR	...	15.00	11.00
2N2188	TI	96	1.28	.82
2N2189	TI	96	1.64	1.09
2N2190	TI	96	1.47	.98
2N2191	TI	96	1.85	1.23
2N2192	MOT	71	4.20	2.80
2N2192A	MOT	71	4.40	2.95
2N2193	MOT	71	2.90	1.95
2N2193A	MOT	71	3.15	2.10
2N2194	MOT	71	2.18	1.45
2N2194A	MOT	71	2.40	1.60
2N2195	MOT	71	1.38	.92
2N2195A	MOT	71	1.53	1.02
2N2212	MOT	76	8.60	5.75
2N2217	MOT	72	3.35	2.25
2N2217	TI	97	3.02	2.01
2N2218	MOT	72	.75	.50
2N2218/JAN	MOT	...	1.80	1.20
2N2218A	MOT	72	4.50	3.00
2N2218A	SPR	89	1.90	1.25
2N2219	MOT	72	1.05	.70
2N2219/JAN	MOT	...	1.80	1.20
2N2219	SPR	89	.97	.65
2N2219A	MOT	72	5.25	3.50
2N2220	TI	97	3.02	2.01
2N2221	MOT	72	.75	.50
2N2221A	MOT	72	4.10	2.75
2N2222	MOT	72	1.05	.70
2N2222	TI	97	1.05	.70
2N2222A	MOT	72	4.85	3.25
2N2222A/ JAN	MOT	...	5.65	3.75
2N2223	MOT	77	10.05	6.70
2N2223A	MOT	77	15.00	10.00
2N2224	MOT	70	3.75	2.50
2N2242	MOT	70	5.80	3.90
2N2243	TI	97	4.80	3.20
2N2256	MOT	70	1.12	.75
2N2257	MOT	70	1.27	.85
2N2258	MOT	72	1.12	.75
2N2259	MOT	72	1.27	.85
2N2270	RCA	81	.91	.66
			1000-Up Ea.	.55
2N2280	SPR	...	4.50	3.30
2N2285	MOT	76	4.85	3.25
2N2286	MOT	76	10.10	6.75
2N2287	MOT	76	14.60	9.75
2N2288	MOT	76	2.65	1.78
2N2289	MOT	76	4.00	2.65
2N2290	MOT	76	4.95	3.30
2N2291	MOT	76	2.75	1.85
2N2292	MOT	76	6.00	4.00
2N2293	MOT	76	11.85	7.90
2N2303	MOT	70	8.25	5.50
2N2322	MOT	68	2.30	1.55
2N2323	MOT	68	2.85	1.90
2N2324	MOT	68	3.75	2.50
2N2325	MOT	68	4.95	3.30
2N2326	MOT	68	5.40	3.60
2N2330	MOT	...	14.62	9.75
2N2338	RCA	82	6.60	4.80
			1000-Up Ea.	4.00
2N2357	MOT	76	7.10	4.75
2N2358	MOT	76	14.25	9.50
2N2359	MOT	76	17.60	11.75
2N2360	SPR	89	3.95	2.75
2N2361	SPR	89	3.30	2.20
2N2362	SPR	89	2.10	1.55
2N2368	MOT	70	1.07	.93
			1000-4999 Ea.	.82
2N2368	TI	96	1.07	.93

SEE PAGE 7 FOR INTEGRATED CIRCUITS

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 2N2369 MOT designates Motorola 2N2369

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N2369	MOT	70	1.07	.93
			1000-4999 Ea.	.82
2N2369A	MOT	70	1.65	1.10
2N2369A	RCA	87	1.65	1.20
			1000-Up Ea.	1.00
2N2382	MOT	71	5.15	3.45
2N2386	TI	96	2.70	1.80
2N2396	TI	97	11.55	7.70
2N2398	SPR	89	3.90	2.95
2N2400	SPR	..	1.25	.95
2N2402	SPR	...	2.25	1.65
2N2405	MOT	71	1.82	1.25
2N2405	RCA	81	1.57	1.14
			1000-Up Ea.	.95
2N2410	MOT	70	4.50	3.00
2N2411	TI	96	3.15	2.10
2N2412	TI	96	6.00	4.00
2N2415	MOT	73	6.00	4.00
2N2453	MOT	77	24.00	16.00
2N2453A	MOT	77	32.50	21.60
2N2475	RCA	87	1.62	1.18
			1000-Up Ea.	.98
2N2476	MOT	70	1.65	1.14
2N2476	RCA	87	1.16	.84
			1000-Up Ea.	.70
2N2477	MOT	70	2.06	1.35
2N2477	RCA	87	1.32	.96
			1000-Up Ea.	.80
2N2480	MOT	77	12.75	8.50
2N2480A	MOT	77	15.35	10.25
2N2481	MOT	70	2.63	1.75
2N2484	TI	96	3.30	2.20
2N2490	MOT	76	1.88	1.39
2N2492	MOT	76	3.38	2.50
2N2493	MOT	76	6.00	4.45
2N2498	TI	96	3.70	2.45
2N2499	TI	96	3.60	2.40
2N2500	TI	96	5.25	3.50
2N2501	MOT	70	4.70	3.15
2N2527	MOT	76	9.30	6.20
2N2528	MOT	76	14.85	9.90
2N2537	MOT	70	4.95	3.30
2N2538	MOT	70	5.85	3.90
2N2552	TI	97	1.88	1.25
2N2553	TI	97	2.48	1.65
2N2557	TI	97	2.48	1.65
2N2564	TI	97	3.00	2.00
2N2574	MOT	69	3.90	2.60
2N2575	MOT	69	5.00	3.35
2N2576	MOT	69	5.70	3.80
2N2577	MOT	69	11.20	7.50
2N2579	MOT	69	15.40	10.30
2N2586	TI	96	6.00	4.00
2N2604	MOT	72	3.50	2.30
2N2604	TI	96	3.50	2.30
2N2605	MOT	72	4.00	2.70
2N2605	TI	96	4.00	2.70
2N2613	RCA	81	.55	.40
			1000-Up Ea.	.33
2N2614	RCA	81	.50	.36
			1000-Up Ea.	.30
2N2619	IR	90	21.30	14.20
2N2631	RCA	84	3.47	2.52
			1000-Up Ea.	2.10
2N2635	MOT	71	.94	.63
2N2639	MOT	77	22.50	15.00
2N2640	MOT	77	17.25	11.50
2N2640	TI	97	6.75	4.50
2N2641	MOT	77	7.20	4.80
2N2642	MOT	77	25.50	17.00
2N2643	MOT	77	22.20	14.80
2N2644	MOT	77	8.25	5.50
2N2646	MOT	69	2.10	1.40
2N2647	MOT	69	3.00	2.00
2N2652	MOT	77	18.00	12.00
2N2652A	MOT	77	21.00	14.00
2N2659	TI	97	1.65	1.10
2N2660	TI	97	1.95	1.30
2N2661	TI	97	2.85	1.90
2N2662	TI	97	1.65	1.10
2N2663	TI	97	2.40	1.60
2N2665	TI	97	2.40	1.60
2N2667	TI	97	3.75	2.50
2N2668	TI	97	2.33	1.55
2N2695	MOT	70	4.35	2.90
2N2708/JAN	MOT	...	5.15	3.42
2N2708	RCA	84	2.31	1.68
			1000-Up Ea.	1.40
2N2710	MOT	70	7.50	5.00
2N2711	SPR	89	.23	.15
			1000-9999 Ea.	.12
			10000-24999 Ea.	.10
2N2712	SPR	89	.24	.16
			1000-9999 Ea.	.13
			10000-24999 Ea.	.11
2N2713	SPR	89	.38	.26
			1000-9999 Ea.	.21
			10000-24999 Ea.	.17
2N2714	SPR	89	.36	.24
			1000-9999 Ea.	.19
			10000-24999 Ea.	.16
2N2720	MOT	77	21.75	14.50
2N2721	MOT	77	17.25	11.50
2N2722	MOT	77	26.25	17.50
2N2723	MOT	78	15.00	10.00
2N2724	MOT	78	16.50	11.00
2N2725	MOT	78	21.00	14.00
2N2785	MOT	78	11.25	7.50
2N2800	MOT	70	6.75	4.50
2N2801	MOT	70	7.10	4.75
2N2802	MOT	77	20.00	13.40
2N2803	MOT	77	12.00	8.05
2N2804	MOT	77	7.00	4.70
2N2805	MOT	77	20.50	13.60
2N2806	MOT	77	17.25	11.50
2N2807	MOT	77	6.00	4.00
2N2832	MOT	76	4.50	3.00
2N2833	MOT	76	4.85	3.25
2N2834	MOT	76	5.25	3.50
2N2838	MOT	70	7.10	4.75
2N2845	MOT	70	4.95	3.30
2N2845	SPR	89	4.95	3.30
2N2846	MOT	70	4.95	3.30
2N2847	MOT	70	5.10	3.40
2N2848	MOT	70	5.10	3.40
2N2848	SPR	89	5.85	3.90
2N2857	MOT	72	4.05	2.70
			1000-4999 Ea.	2.45
2N2857	RCA	84	4.46	3.24
			1000-Up Ea.	2.70
2N2862	TI	96	6.00	4.00
2N2869/ 2N301	RCA	83	1.52	1.11
			1000-Up Ea.	.92
2N2870/ 2N301A	RCA	83	3.15	2.29
			1000-Up Ea.	1.91
2N2876	RCA	84	12.75	10.55
			1000-Up Ea.	8.80
2N2894	MOT	70	1.95	1.30
2N2894	TI	96	1.95	1.30
2N2895	MOT	70	1.41	.97
2N2895	RCA	81	1.41	1.02
			1000-Up Ea.	.85
2N2896	MOT	70	2.06	1.43
2N2896	RCA	81	2.06	1.50
			1000-Up Ea.	1.25
2N2897	MOT	70	1.16	.80
2N2897	RCA	81	1.16	.84
			1000-Up Ea.	.70
2N2903	MOT	77	15.00	10.00
2N2903A	MOT	77	18.00	12.00
2N2904	MOT	72	1.90	1.65
			1000-4999 Ea.	1.45
2N2904A	MOT	72	4.90	3.25
2N2905	MOT	72	1.90	1.65
			1000-4999 Ea.	1.45
2N2905/JAN	MOT	...	2.85	1.90
2N2905A	MOT	72	5.60	3.75
2N2906	MOT	72	1.90	1.65
			1000-4999 Ea.	1.45
2N2906	TI	97	1.90	1.65
2N2906A	MOT	72	4.65	3.10
2N2907	MOT	72	1.90	1.65
			1000-4999 Ea.	1.45
2N2907A	MOT	72	5.40	3.60
2N2907A	TI	97	5.40	3.60
2N2912	MOT	76	8.10	5.40
2N2913	MOT	77	3.00	2.00
2N2914	MOT	77	3.40	2.25
2N2915	MOT	77	10.50	7.00
2N2916	MOT	77	12.00	8.00
2N2917	MOT	77	7.50	5.00
2N2918	MOT	77	9.75	6.50
2N2919	MOT	77	11.25	7.50
2N2920	MOT	77	14.25	9.50
2N2923	SPR	89	.25	.17
			1000-9999 Ea.	.14
			10000-24999 Ea.	.11
2N2924	SPR	89	.27	.18
			1000-9999 Ea.	.15
			10000-24999 Ea.	.12
2N2925	SPR	89	.33	.22
			1000-9999 Ea.	.18
			10000-24999 Ea.	.15
2N2926	SPR	89	.24	.16
			1000-9999 Ea.	.13
			10000-24999 Ea.	.10
2N2929	MOT	73	6.75	4.50
2N2944	MOT	74	2.76	1.84
2N2944	SPR	89	5.50	3.68
2N2945	MOT	74	2.52	1.68
2N2945A	MOT	74	3.00	2.00
2N2946	MOT	74	2.88	1.92
2N2946	SPR	89	5.50	3.68
2N2946A	MOT	74	3.65	2.45
2N2947	MOT	72	22.50	15.00
2N2949	MOT	72	10.50	7.00
			1000-4999 Ea.	6.30
2N2950	MOT	72	11.25	7.50
2N2951	MOT	72	4.50	3.00
2N2952	MOT	...	4.95	3.30
2N2953	RCA	81	.50	.36
			1000-Up Ea.	.30
2N2955	MOT	71	2.48	1.65
2N2956	MOT	71	2.63	1.75
2N2957	MOT	71	3.37	2.25
2N2958	MOT	70	2.25	1.50
2N2959	MOT	70	2.70	1.80
2N2994	TI	98	13.90	9.25
2N2996	TI	96	1.43	.95
2N2997	TI	96	3.08	2.05
2N3005	TI	...	3.30	2.20
2N3009	MOT	70	1.98	1.32
2N3010	MOT	70	1.90	1.27
2N3011	MOT	70	1.00	.67
2N3011	RCA	...	.99	.72
			1000-Up Ea.	.60
2N3012	TI	96	1.95	1.30
2N3013	MOT	70	7.00	4.69
2N3013	TI	96	7.00	4.69
2N3014	MOT	70	3.60	2.40
2N3014	TI	96	3.60	2.40
2N3015	MOT	70	1.93	1.29
2N3015	TI	96	3.50	2.00
2N3019	MOT	72	6.00	4.00
2N3020	MOT	72	5.70	3.80
2N3026	MOT	75	49.50	33.00
2N3036	TI	97	5.50	3.70

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
2N3043	MOT	77	39.00	39.00	26.00
2N3044	MOT	77	33.00	33.00	22.00
2N3045	MOT	77	14.25	14.25	9.50
2N3046	MOT	77	36.00	36.00	24.00
2N3047	MOT	77	30.00	30.00	20.00
2N3048	MOT	77	12.75	12.75	8.50
2N3049	MOT	77	34.50	34.50	23.00
2N3050	MOT	77	24.00	24.00	16.00
2N3053	MOT	70	.83		.57
2N3053	RCA	81	.75		.54
			1000-Up Ea.		.45
2N3054	RCA	82	1.16		.84
			1000-Up Ea.		.70
2N3055	MOT	75	2.05		1.45
2N3055	RCA	82	1.82		1.32
			1000-Up Ea.		1.10
2N3114	MOT	72	6.00		4.00
2N3115	MOT	70	1.95		1.30
2N3116	MOT	70	2.40		1.60
2N3118	RCA	...	4.95		3.60
			1000-Up Ea.		3.00
2N3119	RCA	87	5.36		3.90
			1000-Up Ea.		3.25
2N3127	MOT	73	5.00		3.40
2N3133	MOT	70	4.95		3.30
2N3134	MOT	70	5.85		3.90
2N3135	MOT	70	4.95		3.30
2N3136	MOT	70	5.85		3.90
2N3137	MOT	72	3.45		2.30
2N3146	TI	...	4.35		2.90
2N3210	MOT	70	.83		.55
2N3211	MOT	70	1.27		.85
2N3217	SPR	89	2.55		1.70
2N3218	SPR	89	2.25		1.50
2N3219	SPR	89	2.55		1.70
2N3227	MOT	70	2.40		1.60
2N3228	RCA	86	1.62		1.18
			1000-Up Ea.		.98
2N3229	RCA	84	17.10		14.15
			1000-Up Ea.		11.80
2N3232	MOT	75	3.75		2.50
2N3335	MOT	75	3.75		2.50
2N3241A	RCA	81	.73		.53
			1000-Up Ea.		.44
2N3242A	RCA	81	.83		.60
			1000-Up Ea.		.50
2N3244	MOT	71	15.75		10.50
2N3245	MOT	71	15.75		10.50
2N3248	MOT	70	3.90		2.60
2N3249	MOT	70	4.65		3.10
2N3250	MOT	70	3.90		2.60
2N3250A	MOT	70	4.50		3.00
2N3251	MOT	70	4.65		3.10
2N3251A	MOT	70	5.25		3.50
2N3252	MOT	71	9.75		6.50
2N3253	MOT	71	9.75		6.50
2N3261	RCA	87	1.32		.96
			1000-Up Ea.		.80

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N3262	RCA	87	7.43	5.40
			1000-Up Ea.	4.50
2N3265	RCA	82	76.85	63.50
			1000-Up Ea.	53.00
2N3266	RCA	82	50.75	42.00
			1000-Up Ea.	35.00
2N3279	MOT	73	4.50	3.00
2N3280	MOT	73	4.10	2.75
2N3282	MOT	73	2.15	1.45
2N3283	MOT	73	1.50	1.00
2N3284	MOT	73	1.42	.95
2N3286	MOT	73	.97	.65
2N3287	MOT	72	5.60	3.75
			1000-4999 Ea.	3.35
2N3288	MOT	72	5.10	3.40
			1000-4999 Ea.	3.00
2N3290	MOT	72	4.00	2.65
			1000-4999 Ea.	2.40
2N3293	MOT	72	1.65	1.10
			1000-4999 Ea.	1.00
2N3294	MOT	72	1.50	1.00
			1000-4999 Ea.	.90
2N3295	MOT	72	6.00	4.00
2N3296	MOT	72	15.00	10.00
2N3298	MOT	72	2.40	1.60
2N3299	MOT	70	.75	.50
2N3300	MOT	70	1.05	.70
2N3301	MOT	70	.75	.50
2N3302	MOT	...	1.05	.70
2N3303	MOT	...	13.50	9.00
2N3304	MOT	70	4.50	3.00
2N3307	MOT	72	10.50	7.00
2N3308	MOT	72	9.00	6.00
2N3323	MOT	73	.90	.60
2N3324	MOT	73	.82	.55
2N3325	MOT	73	.75	.50
2N3329	TI	96	6.50	4.30
2N3331	TI	96	6.50	4.30
2N3348	TI	97	19.50	13.00
2N3350	TI	97	25.00	16.75
2N3351	TI	97	21.50	14.40
2N3375	MOT	72	10.80	8.95
2N3375	RCA	84	10.80	8.95
			1000-Up Ea.	7.45
2N3375TX/JAN	RCA	...	21.60	17.85
			1000-Up Ea.	14.90

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-9999	10,000-24,999
2N3391	SPR	89	.39	.26	.21	.17
2N3391A	SPR	89	.45	.30	.24	.20
2N3392	SPR	89	.25	.17	.14	.11
2N3393	SPR	89	.25	.17	.14	.11
2N3394	SPR	89	.25	.17	.14	.11
2N3395	SPR	89	.33	.22	.18	.15
2N3396	SPR	89	.25	.17	.14	.11
2N3397	SPR	89	.24	.16	.13	.10
2N3398	SPR	89	.24	.16	.13	.10
2N3402	SPR	89	.33	.22	.18	.14
2N3403	SPR	89	.35	.23	.19	.15
2N3404	SPR	89	.50	.33	.26	.21
2N3405	SPR	89	.60	.40	.32	.26
2N3409	MOT	77	13.50	9.00	....	....
2N3410	MOT	77	15.00	10.00	....	....
2N3414	SPR	89	.28	.19	.16	.12
2N3415	SPR	89	.30	.20	.17	.13
2N3416	SPR	89	.45	.30	.24	.19
2N3417	SPR	89	.55	.37	.30	.24

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N3418	TI	98	10.45	6.95
2N3423	MOT	77	18.00	12.00
2N3424	MOT	77	24.00	16.00
2N3425	MOT	77	5.25	3.50
2N3427	MOT	78	1.95	1.30
2N3428	MOT	78	2.25	1.50
2N3439	MOT	75	3.70	2.55
2N3439	RCA	83	3.71	2.70
			1000-Up Ea.	2.25
2N3440	MOT	75	1.80	1.22
2N3440	RCA	83	1.82	1.32
			1000-Up Ea.	1.10
2N3441	RCA	83	2.48	1.80
			1000-Up Ea.	1.50
2N3441/JAN	RCA	...	3.05	2.22
			1000-Up Ea.	1.85
2N3442	RCA	83	4.54	3.30
			1000-Up Ea.	2.75
2N3442/JAN	RCA	...	5.69	4.14
			1000-Up Ea.	3.45
2N3444	MOT	71	12.00	8.00
2N3445	MOT	75	9.00	6.00
2N3446	MOT	75	13.50	9.00
2N3447	MOT	75	14.40	9.60
2N3448	MOT	75	18.00	12.00
2N3467	MOT	71	9.75	6.50
2N3478	RCA	84	1.90	1.38
			1000-Up Ea.	1.15
2N3486	MOT	70	10.20	6.80
2N3486A	MOT	70	13.50	9.00
2N3494	MOT	71	9.75	6.50
2N3495	MOT	71	12.75	8.50
2N3496	MOT	71	9.75	6.50
2N3498	MOT	71	6.60	4.40
2N3499	MOT	71	7.40	4.95
2N3500	MOT	71	11.25	7.50
2N3501	MOT	71	12.60	8.40
2N3504	TI	97	1.90	1.65
2N3505	TI	97	2.50	2.25

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N3506	MOT	71	11.55	7.70
2N3507	MOT	71	13.20	8.80
2N3509	MOT	70	5.40	3.60
2N3510	MOT	70	1.42	.95
2N3511	MOT	70	1.80	1.20
2N3512	RCA	87	1.08	.78
			1000-Up Ea.	.65
2N3515	MOT	77	27.00	18.00
2N3518	MOT	77	33.00	22.00
2N3525	RCA	86	2.31	1.68
			1000-Up Ea.	1.40
2N3528	RCA	86	1.58	1.14
			1000-Up Ea.	.95
2N3529	RCA	86	1.96	1.43
			1000-Up Ea.	1.19
2N3546	MOT	70	5.25	3.50
2N3553	MOT	72	4.37	3.18
			1000-4999 Ea.	2.61
2N3553	RCA	84	4.37	3.18
			1000-Up Ea.	2.65
2N3553TX/JAN	RCA	...	8.74	6.36
			1000-Up Ea.	5.30
2N3555	TI	98	7.45	4.95
2N3556	TI	98	8.95	5.95
2N3558	TI	98	14.20	9.45
2N3559	TI	98	5.75	3.83
2N3572	TI	96	5.90	3.95
2N3574	TI	96	17.25	11.50
2N3575	TI	96	18.60	12.50
2N3576	TI	96	9.40	6.25
2N3583	RCA	83	2.48	1.80
			1000-Up Ea.	1.50
2N3584	RCA	83	4.13	3.00
			1000-Up Ea.	2.50
2N3585	RCA	83	6.60	4.80
			1000-Up Ea.	4.00
2N3600	RCA	84	3.80	2.76
			1000-Up Ea.	2.30
2N3611	MOT	76	1.15	.78
2N3612	MOT	76	1.30	.88
2N3613	MOT	76	1.25	.85
2N3614	MOT	76	1.40	.94
2N3615	MOT	76	1.65	1.10
2N3616	MOT	76	2.10	1.39
2N3617	MOT	76	1.88	1.25
2N3618	MOT	76	2.37	1.58
2N3632	RCA	84	12.75	10.55
			1000-Up Ea.	8.80
2N3634	MOT	71	13.20	8.80
2N3635	MOT	71	14.40	9.60
2N3636	MOT	71	19.40	12.95
2N3637	MOT	71	21.30	14.20
2N3647	MOT	70	2.25	1.50
2N3648	MOT	70	2.70	1.80
2N3668	RCA	86	2.39	1.74
			1000-Up Ea.	1.45
2N3669	RCA	86	2.81	2.04
			1000-Up Ea.	1.70
2N3670	RCA	86	3.80	2.76
			1000-Up Ea.	2.30
2N3671	MOT	70	4.50	3.00
2N3672	MOT	70	4.50	3.00
2N3673	MOT	70	5.20	3.40
2N3677	MOT	70	2.76	1.84
2N3702	TI	95	.37	.32
2N3703	TI	95	.34	.29
2N3704	TI	95	.34	.29
2N3705	TI	95	.29	.25
2N3706	TI	95	.27	.24
2N3707	TI	95	.34	.29
2N3708	TI	95	.27	.24
2N3709	TI	95	.29	.25
2N3710	TI	95	.30	.27
2N3711	TI	95	.32	.28
2N3712	MOT	72	2.25	1.50
2N3712	TI	97	3.00	2.00
2N3713	MOT	75	4.40	2.95
2N3714	MOT	75	4.70	3.15
2N3715	MOT	75	4.85	3.25
2N3716	MOT	75	6.75	4.50
2N3719	MOT	75	9.75	6.50
2N3720	MOT	75	10.85	7.25
2N3721	SPR	89	.24	.16
			1000-9999 Ea.	.13
			10000-24999 Ea.	.10
2N3722	MOT	...	6.00	4.00
2N3723	MOT	...	13.00	8.65
2N3730	RCA	83	1.24	.90
			1000-Up Ea.	.75
2N3731	RCA	83	1.62	1.18
			1000-Up Ea.	.98
2N3732	RCA	83	1.07	.78
			1000-Up Ea.	.65
2N3733	MOT	72	34.20	22.80
2N3733	RCA	84	15.80	13.10
			1000-Up Ea.	10.90
2N3734	MOT	71	6.00	4.00
2N3735	MOT	71	6.00	4.00
2N3736	MOT	71	6.60	4.40
2N3737	MOT	71	6.60	4.40
2N3738	MOT	75	2.25	1.50
2N3739	MOT	75	2.45	1.65
2N3740	MOT	75	2.90	1.95
2N3741	MOT	75	3.15	2.10
2N3742	MOT	71	12.60	8.40
2N3743	MOT	71	29.25	19.50
2N3762	MOT	71	7.50	5.00
2N3763	MOT	71	7.50	5.00
2N3765	MOT	71	8.25	5.50
2N3766	MOT	75	2.10	1.40
2N3767	MOT	75	2.30	1.55
2N3771	RCA	82	4.13	3.00
			1000-Up Ea.	2.50

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 1 2N3262 RCA designates RCA 2N3262

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N3772	RCA	82	4.13	3.00
			1000-Up Ea.	2.50
2N3773	RCA	83	7.43	5.40
			1000-Up Ea.	4.50
2N3785	MOT	73	6.75	4.50
2N3789	MOT	75	7.50	5.00
2N3790	MOT	75	8.90	5.95
2N3791	MOT	75	8.75	5.85
2N3792	MOT	75	9.50	6.35
2N3796	MOT	74	3.75	2.50
			1000-4999 Ea.	2.00
2N3797	MOT	74	3.75	2.50
			1000-4999 Ea.	2.00
2N3798	MOT	72	6.15	4.10
2N3799	MOT	72	6.75	4.50
2N3800	MOT	77	14.25	9.50
2N3801	MOT	77	15.75	10.50
2N3802	MOT	77	21.00	14.00
2N3803	MOT	77	22.50	15.00
2N3804	MOT	77	26.25	17.50
2N3804A	MOT	...	34.20	22.80
2N3805	MOT	77	27.75	18.50
2N3805A	MOT	...	36.15	24.10
2N3806	MOT	77	14.25	9.50
2N3807	MOT	77	15.75	10.50
2N3808	MOT	77	21.00	14.00
2N3809	MOT	77	22.50	15.00
2N3810	MOT	77	26.25	17.50
2N3810A	MOT	...	34.20	22.80
2N3811	MOT	77	27.75	18.50
2N3811A	MOT	...	36.15	24.10
2N3812	MOT	77	18.75	12.50
2N3813	MOT	77	20.25	13.50
2N3814	MOT	77	28.50	19.00
2N3815	MOT	77	30.00	20.00
2N3816	MOT	77	38.25	25.50
2N3816A	MOT	77	49.20	32.80
2N3817	MOT	77	39.75	26.50
2N3817A	MOT	77	51.75	34.50
2N3819	TI	95	.56	.49
2N3820	TI	95	.72	.63
2N3822	MOT	74	2.77	1.85
			1000-4999 Ea.	1.45
2N3823	MOT	74	2.55	1.70
			1000-4999 Ea.	1.30
2N3823	TI	..	2.48	1.65
2N3824	MOT	74	2.40	1.60
			1000-4999 Ea.	1.20
2N3826	TI	...	.54	.36
2N3827	TI	...	.58	.39
2N3829	TI	96	6.00	4.00
2N3832	TI	96	7.50	5.00
2N3838	TI	97	27.75	18.50
2N3839	MOT	72	13.80	11.40
2N3839	RCA	84	13.80	11.40
			1000-Up Ea.	9.50
2N3840	MOT	74	4.80	3.20

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-9999	10,000-24,999
2N3843	SPR	89	.41	.27	.23	.18
2N3843A	SPR	89	.43	.29	.24	.19
2N3844	SPR	89	.43	.29	.24	.19
2N3844A	SPR	89	.45	.30	.25	.20
2N3845	SPR	89	.45	.30	.25	.20
2N3845A	SPR	89	.47	.32	.26	.21
2N3854	SPR	89	.29	.20	.17	.13
2N3854A	SPR	89	.32	.21	.18	.14
2N3855	SPR	89	.32	.21	.18	.14
2N3855A	SPR	89	.34	.23	.19	.15
2N3856	SPR	89	.34	.23	.19	.15
2N3856A	SPR	89	.36	.24	.20	.16
2N3858	SPR	89	.25	.17	.14	.11
2N3858A	SPR	89	.33	.22	.18	.14
2N3859	SPR	89	.29	.18	.15	.12
2N3859A	SPR	89	.36	.24	.19	.15
2N3860	SPR	89	.32	.21	.17	.13

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N3866	MOT	72	2.97	2.05
			1000-4999 Ea.	1.67
2N3866	RCA	84	2.97	2.16
			1000-Up Ea.	1.80
2N3870	RCA	87	3.88	2.82
			1000-Up Ea.	2.35
2N3871	RCA	87	4.54	3.30
			1000-Up Ea.	2.75
2N3872	RCA	87	6.11	4.44
			1000-Up Ea.	3.70
2N3873	RCA	87	8.22	5.98
			1000-Up Ea.	4.98
2N3877	SPR	89	.45	.30
			1000-9999 Ea.	.24
			10000-24999 Ea.	.19
2N3877A	SPR	89	.49	.33
			1000-9999 Ea.	.26
			10000-24999 Ea.	.21
2N3878	RCA	83	4.95	3.60
			1000-Up Ea.	3.00
2N3879	RCA	83	6.60	4.80
			1000-Up Ea.	4.00
2N3896	RCA	87	4.37	3.18
			1000-Up Ea.	2.65
2N3897	RCA	87	5.03	3.66
			1000-Up Ea.	3.05
2N3898	RCA	87	6.60	4.80
			1000-Up Ea.	4.00
2N3899	RCA	87	8.75	6.36
			1000-Up Ea.	5.30
2N3900	SPR	89	.36	.24
			1000-9999 Ea.	.19
			10000-24999 Ea.	.16
2N3900A	SPR	89	.39	.26
			1000-9999 Ea.	.21
			10000-24999 Ea.	.17
2N3903	MOT	71	.75	.50
			1000-4999 Ea.	.37
			5000-9999 Ea.	.35
2N3904	MOT	71	.82	.55
			1000-4999 Ea.	.41
			5000-9999 Ea.	.38
2N3905	MOT	71	.75	.50
			1000-4999 Ea.	.37
			5000-9999 Ea.	.35
2N3906	MOT	...	.82	.55
			1000-4999 Ea.	.41
			5000-9999 Ea.	.38
2N3909	TI	96	2.00	1.35
2N3910	MOT	74	3.93	2.62
2N3911	MOT	74	4.05	2.70
2N3912	MOT	74	4.25	2.85
2N3924	MOT	72	4.00	2.80
			1000-4999 Ea.	2.40
2N3925	MOT	72	6.00	4.10
			1000-4999 Ea.	3.50
2N3932	RCA	84	1.40	1.02
			1000-Up Ea.	.85
2N3933	RCA	84	1.62	1.18
			1000-Up Ea.	.98
2N3946	MOT	70	2.40	1.60
2N3947	MOT	70	2.75	1.85
2N3948	MOT	72	5.15	3.42
			1000-4999 Ea.	2.80
2N3950	MOT	72	34.20	22.80
2N3959	MOT	70	10.50	7.00
			1000-4999 Ea.	6.30
2N3960	MOT	70	13.10	8.75
			1000-4999 Ea.	7.90
2N3961	MOT	72	8.70	5.80
			1000-4999 Ea.	5.20
2N3973	SPR	89	.33	.26
			1000-9999 Ea.	.22
			10000-24999 Ea.	.17
2N3974	SPR	89	.35	.29
			1000-9999 Ea.	.23
			10000-24999 Ea.	.19
2N3975	SPR	89	.38	.26
			1000-9999 Ea.	.21
			10000-24999 Ea.	.17
2N3976	SPR	89	.41	.27
			1000-9999 Ea.	.23
			10000-24999 Ea.	.18
2N3977	MOT	74	3.30	2.20
2N3978	MOT	74	3.00	2.00
2N3980	MOT	...	3.40	2.25
2N4001	TI	98	7.65	5.10
2N4006	MOT	74	3.90	2.60
2N4007	MOT	74	4.80	3.20
2N4008	MOT	74	6.45	4.30
2N4009	MOT	74	9.50	6.35
2N4010	MOT	74	11.45	7.65
2N4011	MOT	74	15.00	10.00
2N4012	MOT	72	14.20	11.75
2N4012	RCA	84	14.20	11.75
			1000-Up Ea.	9.80
2N4036	RCA	87	1.32	.96
			1000-Up Ea.	.80
2N4037	RCA	87	1.16	.84
			1000-Up Ea.	.70
2N4048	MOT	76	5.60	3.75
2N4049	MOT	76	7.50	5.00
2N4050	MOT	76	9.30	6.20
2N4051	MOT	76	6.45	4.30
2N4058	TI	95	.35	.31

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N4059	TI	95	.29	.25
2N4060	TI	95	.30	.27
2N4061	TI	95	.32	.28
2N4062	TI	95	.34	.29
2N4063	RCA	83	3.80	2.76
			1000-Up Ea.	2.30
2N4064	RCA	83	1.90	1.38
			1000-Up Ea.	1.15
2N4068	RCA	83	1.34	.97
			1000-Up Ea.	.81
2N4069	RCA	83	1.40	1.02
			1000-Up Ea.	.85
2N4072	MOT	72	2.25	1.50
			1000-4999 Ea.	1.35
2N4073	MOT	72	2.70	1.80
			1000-4999 Ea.	1.62
2N4074	RCA	81	.73	.53
			1000-Up Ea.	.44
2N4091	MOT	74	5.25	3.45
			1000-4999 Ea.	2.82
2N4092	MOT	74	4.00	2.65
			1000-4999 Ea.	1.64
2N4093	MOT	74	3.45	2.30
			1000-4999 Ea.	1.75
2N4101	RCA	86	3.05	2.22
			1000-Up Ea.	1.85
2N4102	RCA	86	2.64	1.92
			1000-Up Ea.	1.60
2N4103	RCA	86	5.12	3.72
			1000-Up Ea.	3.10
2N4123	MOT	71	.52	.35
			1000-4999 Ea.	.26
			5000-9999 Ea.	.24
2N4124	MOT	71	.60	.40
			1000-4999 Ea.	.30
			5000-9999 Ea.	.28
2N4125	MOT	71	.52	.35
			1000-4999 Ea.	.26
			5000-9999 Ea.	.24
2N4126	MOT	71	.60	.40
			1000-4999 Ea.	.30
			5000-9999 Ea.	.28
2N4151	MOT	68	1.45	1.05
2N4152	MOT	68	1.60	1.10
2N4153	MOT	68	1.75	1.25
2N4154	MOT	68	1.95	1.35
2N4155	MOT	68	2.40	1.60
2N4156	MOT	68	2.80	1.85
2N4160	MOT	68	1.60	1.10
2N4162	MOT	68	1.95	1.35
2N4164	MOT	68	2.80	1.85
2N4167	MOT	68	1.60	1.20
2N4168	MOT	68	1.75	1.25
2N4169	MOT	68	1.90	1.40
2N4170	MOT	68	2.10	1.50
2N4171	MOT	68	2.55	1.75
2N4172	MOT	68	2.95	2.00
2N4173	MOT	68	5.15	3.50
2N4174	MOT	68	6.90	4.65
2N4175	MOT	68	1.60	1.20
2N4177	MOT	68	1.90	1.40
2N4178	MOT	68	2.10	1.50
2N4179	MOT	68	2.55	1.75
2N4180	MOT	68	2.95	2.00
2N4182	MOT	68	6.90	4.65
2N4183	MOT	68	1.59	1.19
2N4184	MOT	68	1.74	1.24
2N4185	MOT	68	1.89	1.39
2N4186	MOT	68	2.09	1.49
2N4187	MOT	68	2.54	1.74
2N4188	MOT	68	2.94	1.99
2N4189	MOT	68	5.14	3.49
2N4190	MOT	68	6.89	4.64
2N4191	MOT	68	1.59	1.19
2N4192	MOT	68	1.74	1.24
2N4193	MOT	68	1.89	1.39
2N4194	MOT	68	2.09	1.49
2N4195	MOT	68	2.54	1.74
2N4196	MOT	68	2.94	1.99
2N4198	MOT	68	6.89	4.64

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
2N4199	MOT	69	21.25	19.10	15.00
2N4200	MOT	69	28.75	25.80	20.00
2N4202	MOT	69	44.25	38.40	29.50
2N4203	MOT	69	51.75	45.05	34.50
2N4204	MOT	69	63.75	55.70	42.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N4212	MOT	68	2.15	1.45
2N4213	MOT	68	2.60	1.75
2N4214	MOT	68	3.30	2.20
2N4215	MOT	68	4.50	3.00
2N4216	MOT	68	4.95	3.30
2N4220	MOT	74	2.25	1.50
			1000-4999 Ea.	1.30
2N4220A	MOT	74	2.47	1.65
			1000-4999 Ea.	1.45
2N4221	MOT	74	2.17	1.45
			1000-4999 Ea.	1.25
2N4221A	MOT	74	2.40	1.60
			1000-4999 Ea.	1.40
2N4222	MOT	74	2.17	1.45
			1000-4999 Ea.	1.25
2N4222A	MOT	74	2.40	1.60
			1000-4999 Ea.	1.40

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N4223	MOT	74	2.25	1.50
			1000-4999 Ea.	1.25
2N4224	MOT	74	2.10	1.40
			1000-4999 Ea.	1.20
2N4231	MOT	75	2.10	1.40
2N4232	MOT	75	2.40	1.60
2N4233	MOT	75	3.20	2.15
2N4234	MOT	75	3.00	2.00
2N4235	MOT	75	3.60	2.39
2N4236	MOT	75	4.00	2.66
2N4237	MOT	75	2.25	1.50
2N4238	MOT	75	2.75	1.85
2N4239	MOT	75	3.05	2.05
2N4240	RCA	83	2.89	2.10
			1000-Up Ea.	1.75
2N4252	TI	96	1.85	1.23
2N4259	RCA	84	1.90	1.38
			1000-Up Ea.	1.15
2N4260	MOT	70	12.35	8.25
2N4261	MOT	70	14.60	9.75
2N4264	MOT	71	.48	.32
			1000-4999 Ea.	.24
2N4265	MOT	71	.54	.36
			1000-4999 Ea.	.27
2N4276	MOT	76	3.50	2.35
2N4314	RCA	87	1.24	.90
			1000-Up Ea.	.75
2N4346	RCA	83	2.31	1.68
			1000-Up Ea.	1.40
2N4347	RCA	83	2.97	2.16
			1000-Up Ea.	1.80
2N4348	RCA	83	4.13	3.00
			1000-Up Ea.	2.50
2N4351	MOT	74	5.25	3.50
			1000-4999 Ea.	2.80
2N4352	MOT	74	5.25	3.50
			1000-4999 Ea.	2.80
2N4383	SPR	89	1.05	.70
2N4384	SPR	89	1.05	.70
2N4390	RCA	83	0.75	.54
			1000-Up Ea.	.45
2N4391	MOT	74	6.45	4.30
			1000-4999 Ea.	3.75
2N4392	MOT	74	4.95	3.30
			1000-4999 Ea.	2.75
2N4393	MOT	74	5.70	3.80
			1000-4999 Ea.	3.25
2N4398	MOT	75	11.25	7.50
2N4399	MOT	75	13.50	9.05

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
2N4400	MOT	71	.60	.40	.30	.28
2N4401	MOT	71	.75	.50	.38	.35
2N4402	MOT	71	.60	.40	.30	.28
2N4403	MOT	71	.75	.50	.38	.35
2N4404	MOT	72	8.25	5.50	....	....
2N4405	MOT	72	9.75	6.50	....	....
2N4406	MOT	72	11.25	7.50	....	....
2N4407	MOT	72	12.75	8.50	....	....
2N4409	MOT	73	.67	.45	.34	.31
2N4410	MOT	73	.96	.64	.48	.45

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N4411	MOT	70	18.00	12.00
2N4416	MOT	...	3.75	2.50
			1000-4999 Ea.	1.50
2N4424	SPR	89	.39	.26
			1000-9999 Ea.	.21
			10000-24999 Ea.	.17
2N4425	SPR	89	.43	.29
			1000-9999 Ea.	.23
			10000-24999 Ea.	.19
2N4427	MOT	72	2.25	1.50
			1000-4999 Ea.	1.52

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
2N4427	RCA	84	2.15	1.56
			1000-Up Ea.	1.30
2N4440	RCA	84	11.90	9.85
			1000-Up Ea.	8.20
2N4440/JAN	RCA	...	18.00	15.00
			1000-Up Ea.	13.00
2N4440TX/ JAN	RCA	..	24.00	20.00
			1000-Up Ea.	16.50
2N4441	RCA	68	1.20	.80
2N4442	RCA	68	1.50	1.00
2N4443	RCA	68	2.00	1.35
2N4444	MOT	68	4.50	3.00
2N4851	MOT	69	1.10	.75
2N4852	MOT	69	1.10	.75
2N4853	MOT	69	2.25	1.50
2N4870	MOT	69	.75	.50
2N4871	MOT	69	.68	.45
2N4890	MOT	71	1.12	.75
2N4898	MOT	75	1.95	1.30
2N4899	MOT	75	2.60	1.75
2N4900	MOT	75	2.90	1.95
2N4901	MOT	75	2.75	1.84
2N4902	MOT	75	3.30	2.21
2N4903	MOT	75	4.25	2.84
2N4904	MOT	75	3.35	2.25
2N4905	MOT	75	4.45	2.98
2N4906	MOT	75	5.60	3.75

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N4910	MOT	75	1.55	1.05
2N4911	MOT	75	1.80	1.20
2N4912	MOT	75	2.10	1.40
2N4913	MOT	75	2.40	1.60
2N4914	MOT	75	2.60	1.75
2N4915	MOT	75	4.20	2.80
2N4918	MOT	75	1.65	1.11
2N4919	MOT	75	1.90	1.27
2N4920	MOT	75	2.25	1.50
2N4921	MOT	75	1.33	.89
2N4922	MOT	75	1.48	.99
2N4923	MOT	75	1.80	1.20
2N4924	MOT	72	2.03	1.35
2N4925	MOT	72	2.50	1.65
2N4926	MOT	72	2.95	1.95
2N4927	MOT	72	3.15	2.10
2N4928	MOT	71	4.05	2.70
2N4929	MOT	71	4.95	3.30
2N4930	MOT	71	5.90	3.95
2N4931	MOT	71	6.75	4.50
2N4932	RCA	84	29.00	24.00
			1000-Up Ea.	20.00
2N4933	RCA	84	29.00	24.00
			1000-Up Ea.	20.00
2N4937	MOT	77	7.15	4.75
2N4938	MOT	77	5.70	3.80
2N4939	MOT	77	3.40	2.25
2N4940	MOT	77	15.75	10.50
2N4941	MOT	77	12.30	8.20
2N4942	MOT	77	8.85	5.90
2N4948	MOT	69	1.35	.90
2N4949	MOT	69	2.40	1.60
2N4957	MOT	72	20.25	13.50
			1000-4999 Ea.	8.25
2N4958	MOT	72	10.35	6.90
			1000-4999 Ea.	5.50
2N4959	MOT	72	6.75	4.50
			1000-4999 Ea.	3.95
2N4974	MOT	...	9.00	6.00
2N4975	MOT	...	7.50	5.00
2N5016	RCA	84	43.50	36.00
			1000-Up Ea.	30.00
2N5024	MOT	...	7.35	4.90
			1000-4999 Ea.	4.40
2N5034	RCA	82	1.34	.98
			1000-Up Ea.	.81
2N5035	RCA	82	1.32	.96
			1000-Up Ea.	.80
2N5036	RCA	82	1.42	1.04
			1000-Up Ea.	.86
2N5037	RCA	82	1.41	1.02
			1000-Up Ea.	.85

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5038	RCA	88	29.00	24.00	20.00
2N5039	RCA	88	21.75	18.00	15.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N5060	MOT	68	.69	.46
			1000-4999 Ea.	.39
2N5061	MOT	68	.78	.52
			1000-4999 Ea.	.44
2N5062	MOT	68	.90	.60
			1000-4999 Ea.	.51
2N5063	MOT	68	.95	.63
			1000-4999 Ea.	.54
2N5067	MOT	75	1.80	1.20
2N5068	MOT	75	2.25	1.50
2N5069	MOT	75	2.85	1.90
2N5070	RCA	84	29.00	24.00
			1000-Up Ea.	20.00
2N5071	RCA	84	29.00	24.00
			1000-Up Ea.	20.00
2N5086	MOT	73	.75	.50
2N5087	MOT	73	.81	.54
2N5088	MOT	73	.75	.50
2N5089	MOT	73	.98	.65
2N5090	RCA	84	11.40	8.30
			1000-Up Ea.	6.90
2N5102	RCA	84	21.75	18.00
			1000-Up Ea.	15.00
2N5108	RCA	84	12.90	10.70
			1000-Up Ea.	8.90
2N5109	RCA	84	3.47	2.52
			1000-Up Ea.	2.10
2N5146	MOT	78	47.60	31.75
2N5155	MOT	76	4.10	2.75
2N5160	MOT	72	6.75	4.50
			1000-4999 Ea.	4.05
2N5161	MOT	72	18.75	12.50
2N5162	MOT	72	27.00	18.00
2N5164	MOT	69	3.30	2.20
2N5165	MOT	69	4.65	3.10
2N5166	MOT	69	6.45	4.30
2N5167	MOT	69	9.75	6.50
2N5168	MOT	69	3.70	2.45
2N5169	MOT	69	5.00	3.35
2N5170	MOT	69	6.80	4.55
2N5171	MOT	69	10.10	6.75
2N5172	SPR	89	.19	.12
			1000-9999 Ea.	.10
			10000-24999 Ea.	.09

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5179	MOT	...	1.25	.90	.70
2N5179	RCA	82	.81	.59	.49
2N5180	RCA	83	.48	.35	.29
2N5182	RCA	...	.40	.29	.24
2N5183	RCA	81	.32	.23	.19

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5184	RCA	83	.45	.33	.27
2N5185	RCA	83	.52	.38	.31
2N5186	RCA	87	.40	.29	.24
2N5187	RCA	87	.45	.33	.27
2N5188	RCA	87	.55	.40	.33
2N5189	RCA	87	.65	.47	.39
2N5190	MOT	75	1.57	1.05	....
2N5191	MOT	75	1.92	1.28	....
2N5192	MOT	75	2.50	1.67	....
2N5193	MOT	75	2.00	1.33	....
2N5194	MOT	75	2.25	1.50	....
2N5195	MOT	75	2.90	1.95	....
2N5202	RCA	...	4.53	3.30	2.75

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999	5000-9999
2N5208	MOT	...	.54	.36	.27	....
2N5209	MOT	...	.66	.44	.33	.31
2N5210	MOT	...	.72	.48	.36	.34
2N5219	MOT	...	.28	.19	.17	.14
2N5220	MOT	...	.27	.18	.16	.13
2N5221	MOT	...	.30	.20	.18	.15
2N5222	MOT	...	.24	.16	.14	.12
2N5223	MOT	...	.21	.14	.12	.11
2N5224	MOT	71	.24	.16	.14	.12
2N5225	MOT	73	.27	.18	.16	.13
2N5226	MOT	...	.30	.20	.18	.15
2N5227	MOT	...	.24	.16	.14	.12
2N5228	MOT	...	.28	.19	.17	.14

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N5229	MOT	74	2.49	1.66
2N5230	MOT	74	3.00	2.00
2N5231	MOT	74	3.75	2.50

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5239	RCA	83	8.25	6.00	....
			1000-Up Ea.		5.00
2N5240	RCA	83	11.55	8.00	....
			1000-Up Ea.		7.00
2N5262	RCA	87	1.62	1.18	.98

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
2N5265	MOT	74	5.25	3.50	3.00
2N5266	MOT	74	4.27	2.85	2.55
2N5267	MOT	74	3.97	2.65	2.35
2N5268	MOT	74	3.75	2.50	2.20
2N5269	MOT	74	3.97	2.65	2.35
2N5270	MOT	74	4.27	2.85	2.55

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5293	RCA	82	.91	.66	.55
2N5294	RCA	82	.91	.66	.55
2N5295	RCA	82	.91	.66	.55
2N5296	RCA	82	.91	.66	.55
2N5297	RCA	82	1.04	.76	.63
2N5298	RCA	82	1.04	.76	.63
2N5301	MOT	75	6.90	4.60	....
2N5302	MOT	75	7.65	5.10	....
2N5303	MOT	75	18.00	12.00	....
2N5320	RCA	81	2.15	1.56	1.30
2N5321	RCA	81	1.57	1.14	.95
2N5322	RCA	87	2.15	1.56	1.30

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2N5323	RCA	87	1.57	1.14
			1000-Up Ea.	.95
2N5324	MOT	76	4.50	3.00
2N5325	MOT	76	6.00	4.00
2N5334	MOT	75	6.30	4.20
2N5335	MOT	75	7.20	4.80
2N5336	MOT	75	12.75	8.50
2N5337	MOT	75	14.40	9.60
2N5338	MOT	75	15.30	10.20
2N5339	MOT	75	17.85	11.90
2N5344	MOT	75	18.00	12.00
2N5345	MOT	75	22.50	15.00
2N5346	MOT	75	36.00	24.00
2N5347	MOT	75	41.20	26.75
2N5348	MOT	75	45.80	30.50
2N5349	MOT	75	52.50	34.95
2N5357	MOT	76	15.00	10.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
2N5358	MOT	76	4.50	3.00	2.50
2N5359	MOT	74	3.90	2.60	2.10
2N5360	MOT	74	3.45	2.30	1.80
2N5361	MOT	74	3.00	2.00	1.50
2N5362	MOT	74	3.45	2.30	1.80
2N5363	MOT	74	3.90	2.60	2.10
2N5364	MOT	74	4.50	3.00	2.50
2N5400	MOT	73	.75	.50	.45
2N5401	MOT	73	.91	.61	.55

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5415	RCA	82	3.30	2.40	2.00
2N5416	RCA	82	4.95	3.60	3.00
2N5427	MOT	75	13.40	8.95	....
2N5428	MOT	75	15.20	10.15	....
2N5429	MOT	75	16.40	10.95	....

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 2N4910 MOT designates Motorola 2N4910

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Cenant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5430	MOT	75	18.75	12.50	....
2N5431	MOT	69	5.70	3.80	....
2N5435	MOT	76	10.85	7.25	....
2N5436	MOT	76	15.35	10.25	....
2N5437	MOT	76	18.00	12.00	....
2N5438	MOT	76	14.60	9.75	....
2N5439	MOT	76	18.35	12.25	....
2N5440	MOT	76	22.50	15.00	....
2N5441	RCA	86	8.17	5.94	4.95
2N5442	RCA	86	11.47	8.34	6.95
2N5443	RCA	86	13.63	11.28	9.40
2N5444	RCA	86	8.66	6.30	5.25
2N5445	RCA	86	10.51	8.70	7.25
2N5446	RCA	86	14.21	11.76	9.80

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
2N5457	MOT	74	.90	.60	.45
2N5458	MOT	74	.82	.55	.41
2N5459	MOT	74	.90	.60	.45
2N5460	MOT	74	1.00	.67	.50
2N5461	MOT	74	.75	.50	.37
2N5462	MOT	74	1.00	.67	.50
2N5463	MOT	74	1.50	1.00	.75
2N5464	MOT	74	1.20	.80	.60
2N5465	MOT	74	1.50	1.00	.75

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
2N5470	RCA	84	87.00	72.00	60.00
2N5471	MOT	74	8.25	5.50	4.50
2N5472	MOT	75	6.00	4.00	3.25
2N5473	MOT	74	4.50	3.00	2.50
2N5474	MOT	74	3.75	2.50	2.00
2N5475	MOT	74	2.70	1.80	1.50
2N5476	MOT	74	3.75	2.50	2.00
2N5477	MOT	75	33.00	22.00	....
2N5478	MOT	75	37.10	24.75	....
2N5479	MOT	75	42.50	28.30	....
2N5480	MOT	75	49.40	32.95	....
2N5484	MOT	...	1.05	.70	.57
2N5485	MOT	...	1.12	.75	.61
2N5486	MOT	...	1.20	.80	.66
2N5490	RCA	82	1.07	.78	.65
2N5491	RCA	82	1.07	.78	.65
2N5492	RCA	82	1.19	.86	.72
2N5493	RCA	82	1.19	.86	.72
2N5494	RCA	82	1.19	.86	.72
2N5495	RCA	82	1.19	.86	.72
2N5496	RCA	82	1.29	.94	.78
2N5497	RCA	82	1.29	.94	.78
2N5550	MOT	73	.69	.46	.41
2N5551	MOT	73	.84	.56	.50
2N5555	MOT	74	1.20	.80	.65
2N5556	MOT	74	12.00	9.50	8.00
2N5557	MOT	74	10.00	8.00	7.00
2N5558	MOT	74	9.50	7.50	6.50
2N5567	RCA	86	3.38	2.46	2.05
2N5568	RCA	86	4.41	3.20	2.67
2N5569	RCA	86	3.88	2.82	2.35
2N5570	RCA	86	4.90	3.56	2.97
2N5571	RCA	86	3.47	2.52	2.10
2N5572	RCA	86	4.65	3.38	2.82
2N5573	RCA	86	3.96	2.88	2.40
2N5574	RCA	86	5.15	3.74	3.12
2N5575	RCA	88	36.25	30.00	25.00
2N5576	RCA	88	36.25	30.00	25.00
2N5577	RCA	88	40.60	33.60	28.00
2N5578	RCA	88	43.50	36.00	30.00
2N5579	RCA	88	43.50	36.00	30.00
2N5580	RCA	88	47.85	39.60	33.00
2N5671	RCA	...	43.50	36.00	30.00
2N5672	RCA	...	58.00	48.00	40.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
3N74	TI	97	14.70	9.80
3N79	TI	97	4.20	2.80

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-4999
3N108	TI	...	29.50	19.65	....
3N111	TI	97	11.25	7.50	....
3N116	SPR	...	3.75	2.50	....
3N124	MOT	74	3.37	2.25	1.90
3N126	MOT	74	3.37	2.25	1.90

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
3N128	RCA	83	1.45	1.06	.88
3N138	RCA	83	3.30	2.40	2.00
3N139	RCA	83	2.89	2.10	1.75
3N140	MOT	...	1.62	1.18	.98
3N140	RCA	83	1.62	1.18	.98
3N141	RCA	83	1.55	1.13	.94
3N142	RCA	83	1.08	.78	.65
3N143	RCA	83	1.39	1.01	.84
3N152	RCA	83	1.78	1.30	1.08
3N153	RCA	83	1.58	1.15	.96
3N154	RCA	83	1.62	1.18	.98
3N155	MOT	74	6.30	4.20	3.40
3N155A	MOT	74	7.75	5.50	4.45
3N156	MOT	74	6.30	4.20	3.40
3N156A	MOT	74	7.75	5.50	4.45
3N157	MOT	74	6.30	4.20	3.40
3N157A	MOT	74	7.75	5.50	4.45
3N158	MOT	74	6.30	4.20	3.40
3N158A	MOT	74	7.75	5.50	4.45
3N159	RCA	83	2.18	1.58	1.32

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
¼M2.4AZ	MOT	...	2.10	1.95	1.70
¼M2.4AZ5	MOT	...	4.00	3.65	3.20
¼M2.4AZ10	MOT	...	2.60	2.40	2.10
¼M3.0AZ	MOT	...	2.10	1.95	1.70
¼M3.0AZ5	MOT	...	4.00	3.65	3.20
¼M3.3AZ	MOT	...	2.10	1.95	1.70
¼M3.3AZ5	MOT	...	4.00	3.65	3.20
¼M3.6AZ	MOT	...	2.10	1.95	1.70
¼M3.6AZ5	MOT	...	4.00	3.65	3.20
¼M3.9AZ10	MOT	...	2.60	2.40	2.10
¼M4.3AZ	MOT	...	2.10	1.95	1.70
¼M4.7AZ	MOT	...	2.10	1.95	1.70
¼M5.1AZ	MOT	...	2.10	1.95	1.70
¼M5.1AZ10	MOT	...	2.60	2.40	2.10
¼M5.6AZ	MOT	...	2.10	1.95	1.70
¼M6.2AZ	MOT	...	2.10	1.95	1.70
¼M6.2AZ5	MOT	...	4.00	3.65	3.20
¼M6.8AZ	MOT	...	2.10	1.95	1.70
¼M6.8Z	MOT	...	2.10	1.95	1.70
¼M7.5Z	MOT	...	2.10	1.95	1.70
¼M8.2Z	MOT	...	2.10	1.95	1.70
¼M10Z	MOT	...	2.10	1.95	1.70
¼M10Z5	MOT	...	4.00	3.65	3.20
¼M11Z	MOT	...	2.10	1.95	1.70
¼M11Z10	MOT	...	2.60	2.40	2.10
¼M12Z	MOT	...	2.10	1.95	1.70
¼M14Z10	MOT	...	2.60	2.40	2.10
¼M15Z	MOT	...	2.10	1.95	1.70
¼M15Z5	MOT	...	4.00	3.65	3.20
¼M24Z5	MOT	...	4.00	3.65	3.20

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
1MA4	IR	...	.80	.72	.63

Type No.	Mfr.	Page No.	EACH 1-99	100-999
2F4	ST	...	.50	.40
3Z6.2T5	IR	...	4.55	3.65
5A2	IR	91	.32	.28
5A4	IR	91	.41	.35
5A5	IR	91	.45	.38
5A6	IR	91	.50	.44
5A8	IR	91	.85	.75
5A10	IR	91	1.20	1.02
5MA4	IR	...	.94	.76
5MA6	IR	...	1.70	1.35
6DP6A	IR	93	2.90	2.60
6DP10A	IR	93	5.25	4.70

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-499
8D4	IR	...	.44	.44	.40
8D6	IR	...	.67	.53	.48
9DD6A	IR	93	2.30	2.30	2.05
9DD10A	IR	93	2.60	2.60	2.30
10B1	IR	91	.50	.50	.37
10B2	IR	91	.55	.55	.40
10B3	IR	91	.65	.65	.51
10B4	IR	91	.80	.80	.64
10B5	IR	91	.95	.95	.75
10B6	IR	91	1.10	1.10	.88
10B8	IR	91	1.60	1.60	1.28
10B10	IR	91	2.05	2.05	1.64
10C1	IR	91	.32	.32	.29
10C2	IR	91	.35	.35	.32
10C3	IR	91	.38	.38	.36
10C4	IR	91	.42	.42	.38
10C6	IR	91	.52	.52	.46

Type No.	Mfr.	Page No.	EACH 1- 9	10- 99	100- 499
10C8	IR	91	.75	.75	.65
10C10	IR	91	1.70	1.70	1.20
10D2	IR	91	.32	.32	.28
10D3	IR	91	.37	.37	.32
10D4	IR	91	.41	.41	.35
10D5	IR	91	.45	.45	.38
10D6	IR	91	.50	.50	.44
10D8	IR	91	.85	.85	.75
10D10	IR	91	1.20	1.20	1.02

Type No.	Mfr.	Page No.	EACH 1-99	100-999
10DB1P	IR	93	1.00	.75
10DB2P	IR	93	1.10	.83
10DB4P	IR	93	1.20	.90
10DB6P	IR	93	1.49	1.11
16RC10A	IR	90	8.00	5.30
16RC20A	IR	90	11.05	7.35
16RC40A	IR	90	17.05	11.35
16RC60A	IR	90	23.20	15.45
16RC80A	IR	90	35.95	23.95
16RC100A	IR	...	53.00	30.00
18DB2A	IR	93	2.38	2.14
18DB6A	IR	93	2.90	2.75
16DB10A	IR	93	5.12	4.95
16DC2A	IR	93	2.10	1.85
18DC6A	IR	93	2.30	2.05
18DC10A	IR	93	2.60	2.30
18DJ2A	IR	93	2.10	1.85
18DJ6A	IR	93	2.30	2.05
18DJ10A	IR	93	2.60	2.30
20A05	IR	92	.45	.32
20A1	IR	92	.50	.35
20A2	IR	92	.55	.39
20A3	IR	92	.60	.43
20A4	IR	92	.70	.50
20A5	IR	92	.80	.56
20A6	IR	92	.90	.63
20A8	IR	92	1.30	.91
20A10	IR	92	1.60	1.10
21PT5	IR	92	1.10	.82
21PT10	IR	92	1.20	.90
21PT20	IR	92	1.30	.98
21PT40	IR	92	1.70	1.27
21PT60	IR	92	2.25	1.70

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
40HF5	IR	92	1.15	1.15	.80
40HF20	IR	92	2.00	2.00	1.40
40HF30	IR	92	2.55	2.55	1.85
40HF40	IR	92	3.05	3.05	2.20
40HF50	IR	92	3.85	3.85	2.80
40HF60	IR	92	4.55	4.55	3.30
40HF70	IR	92	5.75	5.75	4.10
40HF80	IR	92	7.05	7.05	5.05
40HF90	IR	92	8.20	8.20	6.10
40HF100	IR	92	9.90	9.90	7.20
40RCS5	IR	90	12.90	12.90	9.15
40RCS10	IR	90	14.00	14.00	9.90
40RCS20	IR	90	16.40	16.40	11.75
40RCS30	IR	90	19.10	19.10	13.35
40RCS40	IR	90	22.00	22.00	15.20
40RCS50	IR	90	25.90	25.90	17.50
40RCS60	IR	90	29.85	29.85	19.90

Type No.	Mfr.	Page No.	EACH 1-99	100-999
50FB1L	IR	93	2.75	2.05
50FB2L	IR	93	3.20	2.40
50FB3L	IR	93	3.60	2.70
50FB4L	IR	93	4.20	3.15
50FB5L	IR	93	4.70	3.50
50FB6L	IR	93	5.20	3.90

Type No.	Mfr.	Page No.	EACH 1-24	25-99
60AC40	IR	90	60.50	58.50
60AC60	IR	90	131.00	92.00
60AC80	IR	90	184.00	112.00
60AC100	IR	90	223.00	148.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
60FB05L	IR	93	3.20	2.45
60FB1L	IR	93	3.45	2.65
60FB2L	IR	93	4.25	3.20
60FB3L	IR	93	4.70	3.50
60FB4L	IR	93	5.70	4.25
60FB6L	IR	93	7.00	5.25

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
60J2	ST	...	6.80	5.81	5.45
60LA	ST	...	6.45	5.52	5.15
60M	ST	...	.85	.70	.66

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-999
61-8969	IR	...	2.95	2.35	1.95

Type No.	Mfr.	Page No.	EACH 1-24	25-99
67D020H53PNN	IR	93	5.50	4.95
67D030H53PNN	IR	93	6.00	5.40
67D050H04TNN	IR	93	5.00	4.50
67D050H55FNN	IR	93	8.70	7.85
67D075H04TNN	IR	93	7.50	6.75
67D100H04TNN	IR	93	10.00	9.00
67D120H04TNN	IR	93	12.00	10.80
67D150H04TNN	IR	93	15.50	13.50
67D300H04TNN	IR	93	30.00	27.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
100PB05	IR	...	4.05	3.25
100PB1P	IR	93	4.30	3.35
100PB2P	IR	93	5.15	4.15
100PB3P	IR	93	5.55	4.50
100PB4P	IR	93	6.35	5.15
100PB6P	IR	93	9.95	8.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99
115PA50	IR	91	90.00	66.00
115PA80	IR	91	156.00	120.00
115PA100	IR	91	221.00	171.00
115PA120	IR	91	290.00	236.00
175PA50	IR	91	122.00	110.00
175PA80	IR	91	206.00	175.00
175PA100	IR	91	258.00	223.00
175PA120	IR	91	325.00	275.00
200UB5	IR	92	6.30	5.70
200UB10	IR	92	7.10	6.40
200UB20	IR	92	11.60	10.50
200UB30	IR	92	13.40	12.10
200UB40	IR	92	15.30	13.80
200UB50	IR	92	17.80	16.10
250PA50	IR	91	152.00	137.00
250PA80	IR	91	258.00	220.00
250PA100	IR	91	325.00	280.00
250PA120	IR	91	409.00	345.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
650C0	TI	...	4.85	4.15
650C3	TI	...	4.85	4.15
651C0	TI	...	4.85	4.15
651C4	TI	...	4.85	4.15
651C9	TI	...	4.85	4.15
652C0	TI	...	4.85	4.15
652C2	TI	...	4.85	4.15
652C5	TI	...	4.85	4.15
652C7	TI	...	4.85	4.15
653C0	TI	...	4.85	4.15
653C2	TI	...	4.85	4.15
653C3	TI	...	4.85	4.15
653C4	TI	...	4.85	4.15
653C9	TI	...	4.85	4.15
654C9	TI	...	4.85	4.15
655C9	TI	...	4.85	4.15
7715-3	VA	100	2.20	1.80
7715-3X	VA	100	4.06	3.32
7715-5	VA	100	2.75	2.25
7715-5X	VA	100	5.07	4.15
7715-6	VA	100	3.03	2.48
7715-7	VA	100	3.30	2.70
7715-7X	VA	100	6.08	5.00
7715-10	VA	100	4.40	3.60
7715-10X	VA	100	8.10	6.65
7715-15	VA	100	6.60	5.40
7715-15X	VA	100	12.20	9.95
7715-20	VA	100	7.70	6.30
7715-20X	VA	100	14.20	11.60
7715-30	VA	100	9.90	8.10
7715-30X	VA	100	18.27	14.94
7715-40	VA	100	12.10	9.90
7715-40X	VA	100	22.32	18.27
7715-50	VA	100	15.40	12.60
7715-50X	VA	100	28.41	23.25

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
40022	RCA	87	.83	.60	.50
40050	RCA	87	.99	.72	.60
40051	RCA	87	1.21	.88	.73
40080	RCA	84	1.08	.78	.65
40081	RCA	84	1.41	1.02	.85
40082	RCA	84	4.04	2.94	2.45
40084	RCA	81	.99	.72	.60
40108	RCA	85	.99	.72	.60
40109	RCA	85	1.16	.84	.70
40109R	RCA	...	1.16	.84	.70
40110	RCA	85	1.57	1.14	.95
40110R	RCA	...	1.57	1.14	.95
40111	RCA	85	2.15	1.56	1.30
40112	RCA	85	2.48	1.80	1.50
40114	RCA	85	3.71	2.70	2.25
40115	RCA	85	6.60	4.80	4.00
40208	RCA	85	.99	.72	.60
40209	RCA	85	1.32	.96	.80
40210	RCA	85	1.78	1.30	1.08
40210R	RCA	...	1.78	1.30	1.08
40212	RCA	85	2.89	2.10	1.75
40213	RCA	85	3.63	2.64	2.20
40214	RCA	85	4.21	3.06	2.55
40214R	RCA	...	4.21	3.06	2.55
40216	RCA	87	42.20	34.90	29.10
40231	RCA	81	.47	.34	.28
40232	RCA	81	.53	.39	.32

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
40233	RCA	81	.60	.44	.36
40234	RCA	81	.42	.30	.25
40235	RCA	84	.57	.41	.34
40236	RCA	84	.48	.35	.29
40237	RCA	84	.38	.28	.23
40238	RCA	84	.43	.32	.26
40242	RCA	84	.57	.41	.34
40243	RCA	84	.47	.34	.28
40244	RCA	84	.38	.28	.23
40245	RCA	84	.40	.29	.24
40246	RCA	84	.38	.28	.23
40250	RCA	82	1.16	.84	.70
40250V1	RCA	82	1.24	.90	.75
40251	RCA	82	1.90	1.38	1.15
40254	RCA	87	.78	.57	.47
40263	RCA	81	.50	.36	.30
40265	RCA	85	.35	.25	.21
40266	RCA	85	.29	.21	.175
40267	RCA	85	.33	.24	.20
40280	RCA	84	4.62	3.36	2.80
40281	RCA	84	10.60	8.75	7.30
40282	RCA	84	11.45	9.50	7.90
40290	RCA	84	2.48	1.80	1.50
40292	RCA	84	10.45	8.65	7.20
40309	RCA	81	.70	.51	.42
40309V1	RCA	...	.78	.57	.47
40309V2	RCA	...	.78	.57	.47
40310	RCA	82	.99	.72	.60
40311	RCA	81	.73	.53	.44
40311V1	RCA	...	.81	.59	.49
40311V2	RCA	...	.81	.59	.49
40312	RCA	82	1.03	.75	.62
40313	RCA	82	2.23	1.62	1.35
40314	RCA	81	.78	.57	.47
40314V1	RCA	...	.86	.63	.52
40314V2	RCA	...	.86	.63	.52
40315	RCA	81	.75	.54	.45
40315V1	RCA	...	.83	.60	.50
40315V2	RCA	...	.83	.60	.50
40316	RCA	82	.99	.72	.60
40317	RCA	81	.78	.57	.47
40317V1	RCA	...	.86	.63	.52
40317V2	RCA	...	.86	.63	.52
40318	RCA	82	2.10	1.52	1.27
40319	RCA	82	1.16	.84	.70
40319V1	RCA	...	1.24	.90	.75
40319V2	RCA	...	1.24	.90	.75
40320	RCA	81	.78	.57	.47
40320V1	RCA	...	.86	.63	.52
40320V2	RCA	...	.86	.63	.52
40321	RCA	81	1.24	.90	.75
40321V1	RCA	...	1.32	.96	.80
40321V2	RCA	...	1.32	.96	.80
40322	RCA	82	2.15	1.56	1.30
40323	RCA	81	.70	.51	.42
40323V1	RCA	...	.78	.57	.47
40323V2	RCA	...	.78	.57	.47
40324	RCA	82	.99	.72	.60
40325	RCA	82	1.98	1.38	1.15
40326	RCA	81	.78	.57	.47
40326V1	RCA	...	.86	.63	.52
40326V2	RCA	...	.86	.63	.52
40327	RCA	81	1.24	.90	.75
40327V1	RCA	...	1.32	.96	.80
40327V2	RCA	...	1.32	.96	.80
40328	RCA	82	2.19	1.60	1.33
40329	RCA	81	.47	.34	.28
40340	RCA	84	29.00	24.00	20.00
40341	RCA	84	29.00	24.00	20.00
40346	RCA	83	1.14	.83	.69
40346V1	RCA	...	1.23	.89	.74
40346V2	RCA	...	1.23	.89	.74
40347	RCA	81	.66	.48	.40
40347V1	RCA	81	.75	.54	.45
40347V2	RCA	81	.75	.54	.45
40348	RCA	81	1.06	.77	.64
40348V1	RCA	81	1.14	.83	.69
40348V2	RCA	81	1.14	.83	.69
40349	RCA	81	1.56	1.13	.94
40349V1	RCA	81	1.64	1.19	.99
40354	RCA	81	1.18	.86	.71
40355	RCA	81	1.24	.90	.75
40359	RCA	81	.32	.23	.19
40360	RCA	81	.91	.66	.55
40360V1	RCA	...	.99	.72	.60
40360V2	RCA	...	.99	.72	.60
40361	RCA	81	1.03	.75	.62
40361V1	RCA	...	1.11	.81	.67
40361V2	RCA	...	1.11	.81	.67
40362	RCA	82	1.24	.90	.75
40362V1	RCA	...	1.32	.96	.80
40362V2	RCA	...	1.32	.96	.80
40363	RCA	82	1.82	1.32	1.10
40364	RCA	82	4.79	3.48	2.90
40366	RCA	81	7.84	5.70	4.75
40366V1	RCA	...	7.92	5.75	4.80
40366V2	RCA	...	7.92	5.75	4.80
40367	RCA	81	7.84	5.70	4.75
40369	RCA	82	13.05	10.80	9.00
40372	RCA	82	1.24	.90	.75
40373	RCA	83	2.56	1.86	1.55
40374	RCA	83	2.56	1.86	1.55
40375	RCA	82	5.03	3.66	3.05
40378	RCA	...	1.47	1.07	.89
40379	RCA	...	1.85	1.34	1.12
40385V1	RCA	...	9.55	6.95	5.80
40385V2	RCA	...	9.55	6.95	5.80
40389	RCA	81	.91	.66	.55
40390	RCA	81	2.15	1.56	1.30
40391	RCA	87	1.24	.90	.75
40392	RCA	81	.91	.66	.55
40394	RCA	87	1.24	.90	.75
40395	RCA	81	.38	.28	.23
40396	RCA	82	.83	.60	.50
40397	RCA	81	.66	.48	.40
40398	RCA	81	.60	.44	.36
40399	RCA	81	.55	.40	.33
40400	RCA	81	.50	.36	.30
40405	RCA	83	1.65	1.20	1.00
40406	RCA	82	1.19	.87	.72
40407	RCA	81	.81	.59	.49
40408	RCA	81	1.08	.78	.65
40409	RCA	81	1.14	.83	.69
40410	RCA	82	1.32	.96	.80
40411	RCA	82	4.29	3.12	2.60
40412	RCA	81	1.06	.77	.64
40412V1	RCA	...	1.14	.83	.69
40421	RCA	83	1.28	.93	.77
40429	RCA	86	2.06	1.50	1.25
40430	RCA	86	2.39	1.74	1.45
40431	RCA	86	2.56	1.86	1.55
40432	RCA	86	2.97	2.16	1.80
40433	RCA	...	2.97	2.16	1.80
40437	RCA	...	.99	.72	.60
40439	RCA	83	1.98	1.44	1.20
40440	RCA	83	1.32	.96	.80
40442	RCA	87	.83	.60	.50
40446	RCA	84	4.29	3.12	2.60
40450	RCA	81	.80	.58	.48
40451	RCA	81	.90	.65	.54
40452	RCA	81	.80	.58	.48
40453	RCA	81	.73	.53	.44
40454	RCA	81	.66	.48	.40
40455	RCA	81	.62	.45	.37
40456	RCA	81	.57	.41	.34
40458	RCA	81	.78	.57	.47
40459	RCA	81	.85	.62	.51
40462	RCA	83	1.16	.84	.70
40467A	RCA	83	1.24	.90	.75
40468A	RCA	83	.75	.54	.45
40485	RCA	86	2.06	1.50	1.25
40486	RCA	86	2.39	1.74	1.45
40487	RCA	84	.30	.22	.18
40488	RCA	84	.22	.16	.13
40489	RCA	84	.28	.20	.165
40490	RCA	81	.38	.28	.23
40495	RCA	85	.30	.22	.18
40502	RCA	86	2.23	1.62	1.35
40503	RCA	86	2.56	1.86	1.55
40504	RCA	86	1.78	1.30	1.08
40505	RCA	86	2.48	1.80	1.50
40506	RCA	86	3.22	2.34	1.95
40507	RCA	86	1.63	1.19	.99
40508	RCA	86	2.01	1.46	1.22
40509	RCA	86	2.23	1.62	1.35
40510	RCA	86	2.56	1.86	1.55
40511	RCA	86	2.72	1.98	1.65
40512	RCA	86	3.14	2.28	1.90
40513	RCA	82	1.24	.90	.75
40514	RCA	82	1.26	.92	.76
40517	RCA	84	15.10	12.50	10.40
40518	RCA	84	20.30	16.80	14.00
40519	RCA	83	1.41	1.02	.85
40525	RCA	86	1.57	1.14	.95
40526	RCA	86	1.62	1.18	.98
40527	RCA	86	2.31	1.68	1.40
40528	RCA	86	1.57	1.14	.95
40529	RCA	86	1.62	1.18	.98
40530	RCA	86	2.31	1.68	1.40
40531	RCA	86	1.73	1.26	1.05
40532	RCA	86	1.78	1.30	1.08
40533	RCA	86	2.48	1.80	1.50
40534	RCA	86	1.73	1.26	1.05
40535	RCA	86	1.78	1.30	1.08
40536	RCA	86	2.48	1.80	1.50
40537	RCA	82	1.24	.90	.75
40538	RCA	82	1.36	.99	.82
40539	RCA	81	.66	.48	.40
40542	RCA	82	1.31	.95	.79
40543	RCA	82	1.37	1.00	.83
40544	RCA	81	.75	.54	.45
40553	RCA	86	2.75	2.00	1.67
40554	RCA	86	4.44	3.22	2.68
40555	RCA	86	4.76	3.47	2.89
40559A	RCA	...	.70	.51	.42
40561	RCA	87	4.54	3.30	2.75
40562	RCA	87	4.54	3.30	2.75
40563	RCA	87	4.54	3.30	2.75
40564	RCA	87	4.54	3.30	2.75
40565	RCA	87	4.54	3.30	2.75
40566	RCA	87	7.43	5.40	4.50
40567	RCA	87	6.52	4.74	3.95
40568	RCA	87	7.01	5.10	4.25
40569	RCA	87	7.43	5.40	4.50
40570	RCA	87	10.75	7.80	6.50
40571	RCA	87	8.60	6.24	5.20
40572	RCA	87	7.01	5.10	4.25
40573	RCA	87	8.15	5.94	4.95
40574	RCA	87	10.75	7.80	6.50
40575	RCA	86	2.48	1.80	1.50
40576	RCA	86	3.29	2.38	1.98
40581	RCA	84	4.87	3.54	2.95
40582	RCA	84	5.12	3.72	3.10
40594	RCA	81	2.23	1.62	1.35
40595	RCA	82	2.23	1.62	1.35
40600	RCA	...	1.24	.90	.75
40601	RCA	83	1.16	.84	.70
40602	RCA	83	.83	.60	.50
40603	RCA	83	1.04	.76	.63
40604	RCA	83	.98	.71	.59
40606	RCA	84	38.30	31.70	....
			1000-4999 Ea.		26.40
40608	RCA	84	2.48	1.80	1.50
40611	RCA	81	.71	.52	.43
40612	RCA	83	.71	.52	.43
40613	RCA	82	.73	.53	.44
40616	RCA	81	.73	.53	.44

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 1 40233 RCA designates RCA 40233

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999	1000-Up
40618	RCA	82	.74	.54	.45
40621	RCA	82	.86	.62	.52
40622	RCA	82	.88	.64	.53
40623	RCA	83	.86	.62	.52
40624	RCA	82	1.14	.83	.69
40625	RCA	81	.89	.65	.54
40626	RCA	83	.89	.65	.54
40627	RCA	82	1.20	.83	.73
40628	RCA	81	.94	.68	.57
40629	RCA	82	.74	.54	.45
40630	RCA	82	.86	.62	.52
40631	RCA	82	.97	.71	.59
40632	RCA	82	1.24	.90	.75
40633	RCA	82	1.27	.92	.77
40634	RCA	82	1.29	.94	.78
40635	RCA	81	.74	.54	.45
40636	RCA	82	2.31	1.68	1.40
40637	RCA	83	.83	.60	.50
40638	RCA	86	2.15	1.56	1.30
40639	RCA	86	2.48	1.80	1.50
40640	RCA	86	3.53	2.57	2.14
40641	RCA	86	3.53	2.57	2.14
40642	RCA	85	.99	.72	.60
40643	RCA	85	.94	.68	.57
40644	RCA	85	.84	.61	.51
40653	RCA	86	2.61	1.90	1.58
40654	RCA	86	1.62	1.18	.98
40655	RCA	86	2.03	1.48	1.23
40656	RCA	86	1.70	1.24	1.03
40657	RCA	86	2.11	1.54	1.28
40658	RCA	86	1.86	1.36	1.13
40659	RCA	86	2.19	1.60	1.33
40660	RCA	86	5.78	4.20	3.50
40661	RCA	86	8.22	5.98	4.98
40662	RCA	86	6.27	4.56	3.80
40663	RCA	86	8.71	6.34	5.28
40664	RCA	86	1.95	1.42	1.18
40667	RCA	86	2.05	1.49	1.24
40668	RCA	86	1.62	1.18	.98
40669	RCA	86	1.82	1.32	1.10
40671	RCA	86	11.14	8.10	6.75
40672	RCA	86	10.37	8.58	7.15
40673	RCA	..	2.06	1.50	1.25

Type No.	Mfr.	Page No.	EACH 1-99	100-999
A1B	IR	93	1.22	.82
A1H	IR	93	.43	.30
AF139	MOT	73	1.95	1.30
AF239	MOT	73	2.17	1.45
B	CO	...	2.10	....
B-C	CO	...	2.10	....
BCR-100	IR	...	8.95	....
BHS	CO	...	1.53	....
B1B	IR	93	1.28	.86
B1H	IR	93	.40	.28
C1B	IR	93	1.46	1.00
C1H	IR	93	.42	.29

Type No.	Mfr.	Page No.	EACH 1-29	30-Up
CR102	RCA	85	7.20	6.85
CR103	RCA	85	8.15	7.75
CR104	RCA	85	9.60	9.10
CR105	RCA	85	10.55	10.05
CR106	RCA	85	12.00	11.40
CR107	RCA	85	12.95	12.30
CR108	RCA	85	13.90	13.20
CR109	RCA	85	15.35	14.60
CR110	RCA	85	16.30	15.50
CR201	RCA	85	3.10	2.96
CR203	RCA	85	4.80	4.56
CR204	RCA	85	5.75	5.47
CR208	RCA	85	8.40	8.00
CR212	RCA	85	12.00	11.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
CR273/8008	RCA	86	60.00	60.00
CR274/872A	RCA	86	60.00	60.00
CR275/866A/ 3B28/3825	RCA	86	13.10	13.10

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-29	EACH 30-Up
CR401	RCA	86	28.00	26.60
CR402	RCA	86	32.00	30.40
CR403	RCA	86	44.00	41.80
CR404	RCA	86	30.00	28.50
CR405	RCA	86	36.00	34.20
CR406	RCA	86	54.00	51.30
CR407	RCA	86	40.00	38.00
CR408	RCA	86	48.00	45.60
CR409	RCA	86	64.00	60.80
CR501	RCA	86	40.00	38.00
CR502	RCA	86	48.00	45.60
CR503	RCA	86	50.00	47.50
CR504	RCA	86	62.00	58.90
CR505	RCA	86	64.00	60.80
CR506	RCA	86	84.00	79.80

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000-24,999
D29A4	SPR	89	.42	.28	.21	.17
D29A5	SPR	89	.48	.30	.23	.19

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99	EACH 100-999
DD170	IR	...	1.95	1.75	....
DD175	IR	...	.99	.89	....
DD176	IR	...	.59	.53	....
DD177	IR	...	.99	.89	....
E075L	IR	...	.44	.44	.35
E150L	IR	...	.62	.62	.44
E300L	IR	...	.92	.92	.61
E500L	IR	...	1.02	1.02	.76
E650L	IR	...	1.73	1.73	1.50

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-499
F-8	ST	102	.52	.44	.41
FA6	ST	...	1.50	1.28	1.20
FA8	ST	...	1.60	1.37	1.28

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
G01	TI	...	.85	.66
G02	TI	...	.60	.49
G129	TI	99	1.00	.75
H11	TI	98	4.00	2.80
H35	TI	98	5.00	3.50
H38	TI	98	4.00	2.80
H60	TI	98	8.00	5.60
H61	TI	98	9.00	6.25
H62	TI	98	13.50	10.00

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
HVC180	ST	102	3.35	2.86	2.66
HVC240	ST	102	3.60	3.08	2.87
HVC300	ST	102	3.85	3.28	3.07
HVC400	ST	102	4.00	3.44	3.20
HVC500	ST	102	4.15	3.67	3.34
HVC600	ST	102	4.55	3.92	3.66
HVC650	ST	102	5.00	4.29	4.00
HVC750	ST	102	5.40	4.64	4.34
HVC840	ST	102	5.85	5.00	4.66
HVC960	ST	102	6.65	5.72	5.34
HVC1000	ST	102	7.10	6.07	5.66
HVC1200	ST	102	8.35	7.15	6.66
HVC1500	ST	102	10.40	8.94	8.34
HVC1800	ST	102	12.50	10.70	10.00
HVC2100	ST	102	14.60	12.50	11.67
HVC2500	ST	102	17.50	15.00	14.00
HVC3000	ST	102	20.80	17.90	16.70

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
IR106A1	IR	90	1.18	.79
IR106B1	IR	90	1.34	.89
IR106C1	IR	90	1.70	1.15
IR106F1	IR	90	1.10	.73
IR106V1	IR	90	.94	.63

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99
J14C1	IR	93	1.50	1.25
J14C5	IR	93	3.90	3.30
J14C8	IR	93	5.30	4.50
J29B04	IR	93	1.70	1.40
J29B1	IR	93	2.48	2.10
J29B5	IR	93	7.00	5.90
J29B8	IR	93	10.20	8.20
J58B1	IR	93	4.90	4.15
J58B5	IR	93	13.80	11.90
J58B8	IR	93	19.30	16.40
J116B04	IR	93	6.00	5.15
J116B1	IR	93	8.90	7.50
J116B5	IR	93	26.40	22.40
J116B8	IR	93	37.10	31.40
J135B04	IR	93	7.70	6.20
J135B1	IR	93	10.80	9.10
J135B5	IR	93	32.70	27.50
J280D25	IR	93	75.00	56.00

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99
JD116K	IR	93	1.75	1.49
JD117K	IR	93	2.34	2.00

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99
JD241K	IR	93	3.35	3.04
JD4346B	IR	93	19.03	16.10
K505	IR	...	7.95	7.95
KD2501	RCA	...	.90	.90
KD2503	RCA	...	1.08	1.08
KD2504	RCA	...	1.08	1.08
KD2505	RCA	...	1.08	1.08

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
KSA1DAF	IR	93	1.35	1.01
KSA2DAF	IR	93	1.55	1.16
KSA3DAF	IR	93	1.75	1.31
KSA4DAF	IR	93	1.95	1.46
KSA5DAF	IR	93	2.15	1.61
KSA6DBF	IR	93	2.35	1.76
KSA7DBF	IR	93	2.55	1.91
KSA8DBF	IR	93	2.75	2.06
KSA9DBF	IR	93	2.95	2.21
KSA10DBF	IR	93	3.15	2.36
KSA11DBF	IR	93	3.35	2.51
KSA12DBF	IR	93	3.55	2.66
KSA14DBF	IR	93	3.95	2.96
KSA16DBF	IR	93	4.35	3.26
KSA18DBF	IR	93	4.75	3.56
KSA20DBF	IR	93	5.15	3.86
KSL2DAF	IR	93	3.60	2.71
KSL5DAF	IR	93	6.90	5.20
KSL10DBF	IR	93	12.40	9.35
KSL19DBF	IR	93	22.30	16.82
KZ1DPF	IR	93	.66	.49
KZ2DPF	IR	93	.77	.57
KZ3DPF	IR	93	.88	.65
KZ4DPF	IR	93	.99	.73
KZ5DPF	IR	93	1.10	.81
KZ6DPF	IR	93	1.21	.89
KZ7DPF	IR	93	1.32	.97
KZ8DPF	IR	93	1.43	1.05
KZ9DPF	IR	93	1.54	1.13
KZ10DPF	IR	93	1.65	1.21

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
LS-400	TI	98	8.30	7.05
LS-600	TI	98	7.35	6.50
M1B	IR	93	1.72	1.03
M1H	IR	93	.56	.34

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
M4L3052	MOT	69	4.20	3.65	2.80
M4L3053	MOT	69	3.60	3.10	2.40
M4L3054	MOT	69	3.45	3.00	2.30

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
MAC1-2	MOT	68	2.40	1.60
MAC1-4	MOT	68	3.30	2.20
MAC1-6	MOT	68	5.25	3.50
MAC2-2	MOT	68	2.55	1.75
MAC2-4	MOT	68	3.45	2.35
MAC2-6	MOT	65	5.40	3.65
MAC3-2	MOT	68	2.50	1.70
MAC3-4	MOT	68	3.40	2.30
MAC3-6	MOT	68	5.35	3.60
MAC4-2	MOT	68	2.05	1.35
MAC4-4	MOT	68	2.70	1.80
MAC4-6	MOT	68	3.70	2.50
MAC5-2	MOT	68	2.20	1.50
MAC5-4	MOT	68	2.85	1.95
MAC5-6	MOT	68	3.85	2.65
MAC6-2	MOT	68	2.30	1.60
MAC6-4	MOT	68	2.95	2.05
MAC6-6	MOT	68	4.00	2.75
MCR406-1	MOT	68	.90	.60
MCR406-2	MOT	68	1.05	.70
MCR406-3	MOT	68	1.12	.75
MCR406-4	MOT	68	1.27	.85
MCR407-1	MOT	68	.82	.55
MCR407-2	MOT	68	.96	.65
MCR407-3	MOT	68	1.05	.70
MCR407-4	MOT	68	1.20	.80
MCR649-1	MOT	69	3.10	2.05
MCR649-2	MOT	69	3.45	2.30
MCR649-3	MOT	69	3.90	2.60
MCR649-4	MOT	69	5.25	3.50
MCR649-5	MOT	69	9.90	6.60
MCR649-6	MOT	69	11.50	7.70
MCR649-7	MOT	69	13.70	9.15
MCR649AP-1	MOT	69	3.40	2.25
MCR649AP-2	MOT	69	3.90	2.60
MCR649AP-3	MOT	69	5.00	3.35
MCR649AP-4	MOT	69	5.70	3.80
MCR649AP-5	MOT	69	11.20	7.50
MCR649AP-6	MOT	69	13.00	8.65
MCR649AP-7	MOT	69	15.40	10.30
MCR649P-1	MOT	69	3.10	2.05
MCR649P-2	MOT	69	3.45	2.30
MCR649P-3	MOT	69	3.90	2.60
MCR649P-4	MOT	69	5.25	3.50
MCR649P-5	MOT	69	9.90	6.60
MCR649P-6	MOT	69	11.50	7.70
MCR649P-7	MOT	69	13.70	9.15
MCR846-1	MOT	68	5.15	3.45
MCR846-3	MOT	68	7.35	4.90

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
MCR1336-5	MOT	69	20.60	18.30	13.75
MCR1336-6	MOT	69	28.85	25.60	19.25
MCR1336-7	MOT	69	33.75	29.90	22.50
MCR1336-8	MOT	69	44.55	39.50	29.70
MCR1336-9	MOT	69	52.85	46.90	35.25
MCR1336-10	MOT	69	66.75	59.20	44.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
MCR1718-5	MOT	69	25.50	17.00
MCR1718-6	MOT	69	30.00	20.00
MCR1718-7	MOT	69	37.50	25.00
MCR1718-8	MOT	69	45.00	30.00
MCR1906-1	MOT	68	1.57	1.05
MCR1906-2	MOT	68	1.65	1.10
MCR1906-3	MOT	68	1.87	1.25
MCR1906-4	MOT	68	1.98	1.35
MCR1907-1	MOT	69	9.00	6.00
MCR1907-2	MOT	69	9.75	6.50
MCR1907-3	MOT	69	11.25	7.50
MCR1907-4	MOT	69	16.20	10.80
MCR1907-5	MOT	69	24.45	16.30
MCR1907-6	MOT	69	29.25	19.50

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
MCR2130-4	MOT	69	48.75	43.20	32.50
MCR2130-5	MOT	69	54.00	47.90	36.00
MCR2130-6	MOT	69	60.00	53.20	40.00
MCR2130-7	MOT	69	67.50	59.85	45.00

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
MCR2604-1	MOT	68	1.55	1.15
MCR2604-2	MOT	68	1.70	1.20
MCR2604-3	MOT	68	1.85	1.35
MCR2604-4	MOT	68	2.05	1.45
MCR2604-5	MOT	68	2.50	1.70
MCR2604-6	MOT	68	2.90	1.95
MCR2604-7	MOT	68	5.10	3.45
MCR2604-8	MOT	68	6.85	4.60
MCR2605-1	MOT	68	1.55	1.15
MCR2605-2	MOT	68	1.70	1.20
MCR2605-3	MOT	68	1.85	1.35
MCR2605-4	MOT	68	2.05	1.45
MCR2605-5	MOT	68	2.50	1.70
MCR2605-6	MOT	68	2.90	1.95
MCR2605-7	MOT	68	5.10	3.45
MCR2605-8	MOT	68	6.85	4.60
MCR2818-1	MOT	69	3.00	2.00
MCR2818-3	MOT	69	3.75	2.50
MCR2818-5	MOT	69	5.55	3.70
MCR2818-7	MOT	69	8.85	5.90
MCR2835-1	MOT	69	3.75	2.50
MCR2835-2	MOT	69	4.50	3.00
MCR2835-3	MOT	69	4.85	3.25
MCR2835-4	MOT	69	5.85	3.90
MCR2835-5	MOT	69	7.20	4.80
MCR2835-6	MOT	69	8.25	5.50
MCR2835-7	MOT	69	10.65	7.10
MCR2835-8	MOT	69	12.35	8.25
MCR2918-1	MOT	69	3.40	2.25
MCR2918-3	MOT	69	4.10	2.75
MCR2918-5	MOT	69	5.90	3.95
MCR2918-7	MOT	69	9.20	6.15
MCR2935-1	MOT	69	4.10	2.75
MCR2935-2	MOT	69	4.85	3.25
MCR2935-3	MOT	69	5.25	3.50
MCR2935-4	MOT	69	6.20	4.15
MCR2935-5	MOT	69	7.55	5.05
MCR2935-6	MOT	69	8.60	5.75
MCR2935-7	MOT	69	11.00	7.35
MCR2935-8	MOT	69	12.75	8.50
MD708	MOT	77	4.35	2.90
MD708A	MOT	77	6.75	4.50
MD708AF	MOT	77	15.75	10.50
MD708B	MOT	77	4.80	3.20
MD708BF	MOT	77	12.30	8.20
MD708F	MOT	77	8.85	5.90
MD918	MOT	77	8.25	5.50
MD918A	MOT	77	15.75	10.50
MD918AF	MOT	77	24.75	16.50
MD918B	MOT	77	13.20	8.80
MD918BF	MOT	77	20.25	13.50
MD918F	MOT	77	12.75	8.50
MD982	MOT	77	27.60	18.40
MD982F	MOT	77	49.70	33.15
MD984	MOT	77	20.65	13.75
MD985	MOT	...	9.00	6.00
MD985F	MOT	...	13.50	9.00
MD986	MOT	...	18.90	12.60
MD986F	MOT	...	30.15	20.10
MD990	MOT	77	34.75	23.15
MD1120	MOT	77	19.10	12.75
MD1121	MOT	77	24.80	16.55
MD1123	MOT	77	27.60	18.40
MD1123F	MOT	77	49.70	33.15
MD1124	MOT	77	36.00	24.00
MD1124F	MOT	77	64.80	43.20
MD1125	MOT	77	53.60	35.75
MD1125F	MOT	77	83.15	55.45
MD2218	MOT	77	6.75	4.50
MD2218F	MOT	77	11.25	7.50
MD2219	MOT	77	7.95	5.30
MD2219A	MOT	77	13.20	8.80
MD2369	MOT	77	9.00	6.00
MD2369A	MOT	77	16.50	11.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MD2369AF	MOT	77	25.50	17.00
MD2369B	MOT	77	13.95	9.30
MD2369BF	MOT	77	21.00	14.00
MD2369F	MOT	77	13.50	9.00
MD2905	MOT	77	7.95	5.30
MD2905F	MOT	77	12.45	8.30
MD3133	MOT	77	7.35	4.90
MD3133F	MOT	77	11.10	7.40
MD3134	MOT	77	7.80	5.20
MD3134F	MOT	77	11.70	7.80
MD3250	MOT	77	9.75	6.50
MD3251	MOT	77	11.60	7.75
MD3251A	MOT	77	23.25	15.50
MD3251F	MOT	77	19.10	12.75
MD3251AF	MOT	77	30.75	20.50
MD3467	MOT	77	11.25	7.50
MD3467F	MOT	77	18.75	12.50
MD3725	MOT	77	10.10	6.75
MD3725F	MOT	77	18.35	12.25
MD3762	MOT	77	12.00	8.00
MD3762F	MOT	77	20.25	13.50
MD4957	MOT	77	26.25	17.50
MD5000	MOT	77	11.25	7.50
MD5000A	MOT	77	23.25	15.50
MD5000B	MOT	77	15.75	10.50
MD6001	MOT	78	10.80	7.20
MD6002	MOT	78	13.50	9.00
MD6002F	MOT	78	18.00	12.00
MD6100	MOT	78	14.85	9.90
MD8001	MOT	77	2.10	1.40
MD8002	MOT	77	2.25	1.50
MD8003	MOT	77	2.50	1.65

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MDA920-1	MOT	67	1.42	1.26	.95
MDA920-2	MOT	67	1.69	1.50	1.13
MDA920-3	MOT	67	1.95	1.73	1.30
MDA920-4	MOT	67	2.30	2.05	1.55
MDA920-5	MOT	67	2.40	2.10	1.60
MDA920-6	MOT	67	2.45	2.20	1.65
MDA920-7	MOT	67	3.20	2.85	2.15
MDA920A-1	MOT	67	1.42	1.26	.95
MDA920A-2	MOT	67	1.69	1.50	1.13
MDA920A-3	MOT	67	1.95	1.73	1.30
MDA920A-4	MOT	67	2.30	2.05	1.55
MDA920A-5	MOT	67	2.40	2.10	1.60
MDA920A-6	MOT	67	2.45	2.20	1.65
MDA920A-7	MOT	67	3.20	2.85	2.15
MDA930-3	MOT	67	.97	.86	.65
MDA930-4	MOT	67	1.14	1.01	.76
MDA930-6	MOT	67	1.27	1.13	.85
MDA930-7	MOT	67	1.65	1.46	1.10
MDA930A-1	MOT	67	.82	.73	.55
MDA930A-2	MOT	67	.90	.80	.60
MDA930A-3	MOT	67	.97	.86	.65
MDA930A-4	MOT	67	1.14	1.01	.76
MDA930A-5	MOT	67	1.21	1.08	.81
MDA930A-6	MOT	67	1.27	1.13	.85
MDA930A-7	MOT	67	1.65	1.46	1.10
MDA940-1	MOT	...	.82	.73	.55
MDA940-2	MOT	...	.90	.80	.60
MDA940-3	MOT	...	.97	.86	.65
MDA940-5	MOT	...	1.21	1.08	.81
MDA940A-1	MOT	67	.82	.73	.55
MDA940A-2	MOT	67	.90	.80	.60
MDA940A-3	MOT	67	.97	.86	.65
MDA940A-4	MOT	67	1.14	1.01	.76
MDA940A-5	MOT	67	1.21	1.08	.81
MDA940A-6	MOT	67	1.27	1.13	.85
MDA940A-7	MOT	67	1.65	1.46	1.10
MDA942-1	MOT	69	2.50	2.20	1.85
MDA942-2	MOT	67	2.80	2.50	2.10
MDA942-3	MOT	67	3.25	2.95	2.45
MDA942-4	MOT	67	3.70	3.35	2.80
MDA942-5	MOT	67	4.20	3.80	3.15
MDA942-6	MOT	67	4.65	4.20	3.50
MDA942A-1	MOT	67	2.60	2.35	1.95
MDA942A-2	MOT	67	2.90	2.65	2.20
MDA942A-3	MOT	67	3.40	3.05	2.55
MDA942A-4	MOT	67	3.85	3.50	2.90
MDA942A-5	MOT	67	4.30	3.90	3.25
MDA942A-6	MOT	67	4.80	4.30	3.60
MDA950-4	MOT	67	1.14	1.01	.76
MDA950-7	MOT	67	1.65	1.46	1.10
MDA950A-1	MOT	67	.82	.73	.55
MDA950A-2	MOT	67	.90	.80	.60
MDA950A-3	MOT	67	.97	.86	.65
MDA950A-4	MOT	67	1.14	1.01	.76
MDA950A-5	MOT	67	1.21	1.08	.81
MDA950A-6	MOT	67	1.27	1.13	.85
MDA950A-7	MOT	67	1.65	1.46	1.10
MDA952-1	MOT	67	3.25	2.95	2.45
MDA952-2	MOT	67	3.50	3.20	2.65
MDA952-3	MOT	67	4.45	4.00	3.35
MDA952-4	MOT	67	4.90	4.45	3.70
MDA952-5	MOT	67	6.00	5.40	4.50
MDA952-6	MOT	67	7.30	6.60	5.50
MDA960-1	MOT	67	2.90	2.55	1.95
MDA960-2	MOT	67	3.35	2.95	2.25
MDA960-3	MOT	67	3.75	3.30	2.50
MDA962-1	MOT	67	3.65	3.30	2.75
MDA962-2	MOT	67	3.95	3.55	2.95
MDA962-3	MOT	67	4.85	4.40	3.65
MDA962-4	MOT	67	5.30	4.80	4.00
MDA962-5	MOT	67	6.40	5.75	4.80
MDA970-1	MOT	67	3.20	2.90	2.15
MDA970-2	MOT	67	3.65	3.30	2.45
MDA970-3	MOT	67	4.10	3.70	2.75
MDA972-1	MOT	67	9.65	8.70	7.25
MDA972-2	MOT	67	10.25	9.25	7.70
MDA972-3	MOT	67	11.45	10.30	8.60
MDA972-4	MOT	67	12.55	11.35	9.45
MDA972-5	MOT	67	13.75	12.40	10.35
MDA980-1	MOT	67	3.20	2.90	2.40
MDA980-2	MOT	67	3.45	3.10	2.60
MDA980-3	MOT	67	4.05	3.65	3.05

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MDA980-4	MOT	67	4.50	4.10	3.40
MDA980-5	MOT	67	5.05	4.55	3.80
MDA980-6	MOT	67	6.90	6.25	5.20
MDA990-1	MOT	67	4.00	3.60	3.00
MDA990-2	MOT	67	4.25	3.85	3.20
MDA990-3	MOT	67	4.80	4.30	3.60
MDA990-4	MOT	67	5.30	4.80	4.00
MDA990-5	MOT	67	5.80	5.20	4.35
MDA990-6	MOT	67	7.85	7.10	5.90
MDA1330C	MOT	...	18.60	16.80	13.00
MDA1330D	MOT	...	18.60	16.80	....
MDA1330H	MOT	...	17.50	15.60	....
MDA1330U	MOT	...	18.60	16.80	....
MDA1331C	MOT	...	35.90	32.40	....
MDA1331D	MOT	...	35.90	32.40	....
MDA1331H	MOT	...	33.25	30.00	....
MDA1331U	MOT	...	35.90	32.40	....
MDA1332H	MOT	...	37.25	33.60	....
MDA1333H	MOT	...	66.50	60.00	....
MDA1491-1	MOT	67	2.11	1.92	1.60
MDA1491-2	MOT	67	2.39	2.16	1.80
MDA1491-3	MOT	67	2.66	2.40	2.00
MDA1491-4	MOT	67	2.82	2.64	2.20
MDA1491-5	MOT	67	3.12	2.82	2.35
MDA1491-6	MOT	67	4.12	3.72	3.10
MDA1505-1	MOT	67	5.65	5.10	4.25
MDA1505-2	MOT	67	6.05	5.45	4.55
MDA1505-3	MOT	67	7.32	6.60	5.50
MDA1505-4	MOT	67	7.91	7.15	5.95
MDA1505-5	MOT	67	9.30	8.40	7.00
MDA1505-6	MOT	67	10.45	9.42	7.85
MDA1591-1	MOT	67	2.66	2.40	2.00
MDA1591-2	MOT	67	2.82	2.64	2.20
MDA1591-3	MOT	67	3.62	3.18	2.65
MDA1591-4	MOT	67	3.92	3.54	2.95
MDA1591-5	MOT	67	4.52	4.08	3.40
MDA1591-6	MOT	67	5.65	5.10	4.25

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MFE2000	MOT	...	2.25	1.50	1.00
MFE2001	MOT	...	2.10	1.40	.95
MFE2004	MOT	75	3.00	2.00	1.40
MFE2005	MOT	74	3.60	2.40	1.45
MFE2006	MOT	74	4.75	3.20	2.50
MFE2007	MOT	74	4.20	2.80	2.25
MFE2008	MOT	74	5.25	3.50	2.90
MFE2009	MOT	74	6.75	4.50	3.80
MFE2010	MOT	74	5.25	3.50	2.90
MFE2011	MOT	74	7.50	5.00	4.20
MFE2012	MOT	74	9.75	6.50	5.50
MFE2093	MOT	74	2.10	1.40	1.20
MFE2094	MOT	74	2.10	1.40	1.20
MFE2095	MOT	74	2.10	1.40	1.20
MFE2097	MOT	74	7.35	4.90	3.00
MFE2098	MOT	74	7.35	4.90	3.00
MFE2133	MOT	74	6.35	4.25	3.00
MFE3001	MOT	74	2.55	1.70	1.53
MFE3002	MOT	74	4.50	3.00	2.70
MFE3003	MOT	74	4.50	3.00	2.70
MFE3004	MOT	...	2.70	1.80	1.62
MFE3005	MOT	...	6.75	4.50	3.60
MFE3006	MOT	...	1.50	1.00	.90
MFE3007	MOT	...	1.65	1.10	.99
MFE4007	MOT	74	4.50	3.00	2.60
MFE4008	MOT	74	3.52	2.35	2.00
MFE4009	MOT	74	3.22	2.15	1.85
MFE4010	MOT	74	3.00	2.00	1.70
MFE4011	MOT	74	3.22	2.15	1.85
MFE4012	MOT	74	3.52	2.35	2.00

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MJ400	MOT	75	1.65	1.10
MJ413	MOT	75	6.50	4.82
MJ420	MOT	75	1.80	1.20
MJ421	MOT	75	1.85	1.25
MJ423	MOT	75	8.00	5.93
MJ431	MOT	75	37.50	27.78
MJ440	MOT	75	1.55	1.05
MJ450	MOT	75	9.50	6.35
MJ480	MOT	75	1.93	1.29
MJ481	MOT	75	2.45	1.64
MJ490	MOT	75	2.10	1.40
MJ491	MOT	75	2.80	1.88
MJ802	MOT	75	13.65	9.10
MJ2249	MOT	75	2.02	1.35
MJ2250	MOT	75	2.15	1.45
MJ2251	MOT	75	1.87	1.25
MJ2252	MOT	75	2.02	1.35
MJ2253	MOT	75	2.65	1.76
MJ2254	MOT	75	2.90	1.95
MJ2267	MOT	75	4.95	3.30
MJ2268	MOT	75	5.45	3.65
MJ2801	MOT	75	2.85	1.90
MJ2840	MOT	75	4.50	3.00
MJ2841	MOT	75	6.35	4.25
MJ2901	MOT	75	3.75	2.50
MJ2940	MOT	...	10.20	6.80
MJ2941	MOT	75	10.85	7.25
MJ3010	MOT	...	9.75	6.50
MJ3011	MOT	...	11.85	7.90
MJ3029	MOT	75	6.00	4.44
MJ3030	MOT	75	9.00	6.67
MJ3101	MOT	75	1.95	1.30
MJ3201	MOT	75	1.72	1.15
MJ3202	MOT	75	1.87	1.25
MJ3701	MOT	75	2.00	1.35
MJ4101	MOT	...	1.57	1.09
MJ4502	MOT	75	20.70	13.80
MJE205	MOT	75	1.92	1.25
MJE340	MOT	75	1.06	.71
MJE370	MOT	75	1.65	1.10
MJE371	MOT	75	1.96	1.31
MJE520	MOT	75	1.33	.89

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 MD2369AF MOT designates Motorola MD2369AF

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MJE521	MOT	75	1.68	1.12
MK-10	MOT	...	Each	.25
MK-15	MOT	...	Each	.25
MK-20	MOT	...	Each	.30
MK-25	MOT	...	Each	.25
MM380	MOT	73	1.26	.84
MM709	MOT	70	1.35	.90
MM1139	MOT	73	1.35	.90
MM1500	MOT	72	42.00	28.00
			1000-4999 Ea.	24.00
MM1501	MOT	72	27.00	18.00
			1000-4999 Ea.	15.80
MM1549	MOT	72	7.50	6.00
MM1550	MOT	72	22.80	18.20
MM1551	MOT	72	57.50	46.00
MM1557	MOT	72	6.40	4.28
MM1558	MOT	72	21.30	14.20
MM1559	MOT	72	40.40	26.90
MM1601	MOT	72	7.10	4.75
MM1602	MOT	72	14.30	11.10
MM1603	MOT	72	24.60	19.40
MM1605	MOT	70	13.50	9.10
			1000-4999 Ea.	8.10
MM1606	MOT	70	11.25	7.50
			1000-4999 Ea.	6.75
MM1607	MOT	70	8.25	5.55
			1000-4999 Ea.	5.00
MM1748	MOT	70	.53	.35
MM1803	MOT	72	11.70	7.80
			1000-4999 Ea.	7.00
MM1812	MOT	72	3.75	2.50
MM1941	MOT	72	1.95	1.30
MM2258	MOT	72	3.90	2.60
MM2259	MOT	72	4.20	2.80
MM2260	MOT	72	4.50	3.00
MM2483	MOT	72	3.15	2.10
MM2484	MOT	72	3.50	2.35
MM3000	MOT	71	1.25	.83
MM3001	MOT	71	1.40	.93
MM3002	MOT	71	1.65	1.10
MM3003	MOT	71	1.90	1.25
MM3724	MOT	71	5.25	3.50
MM3725	MOT	71	5.60	3.75
MM3726	MOT	71	6.75	4.50
MM4000	MOT	71	1.24	.83
MM4001	MOT	71	1.39	.93
MM4002	MOT	71	1.65	1.10
MM4003	MOT	71	1.85	1.25
MM4048	MOT	72	4.10	2.75
MM4545	MOT	71	9.00	6.00
MM4546	MOT	71	10.50	7.00
MM4547	MOT	71	15.00	11.00
MM5000	MOT	73	4.40	2.95
MM5001	MOT	73	3.15	2.10
MM5002	MOT	73	2.25	1.50
MM5043	MOT	73	9.75	6.50
MM5044	MOT	73	6.00	4.00
MM8000	MOT	72	3.30	2.20
			1000-4999 Ea.	1.80
MM8001	MOT	72	3.75	2.55
			1000-4999 Ea.	2.09
MM8002	MOT	72	4.60	3.10
			1000-4999 Ea.	2.54
MMF1	MOT	74	23.25	15.50
			1000-4999 Ea.	13.95
MMF2	MOT	74	23.25	15.50
			1000-4999 Ea.	13.95
MMF3	MOT	74	15.75	10.50
			1000-4999 Ea.	9.45
MMF4	MOT	74	15.75	10.50
			1000-4999 Ea.	9.45
MMF5	MOT	74	12.75	8.50
			1000-4999 Ea.	7.65
MMF6	MOT	74	12.75	8.50
			1000-4999 Ea.	7.65
MMT918	MOT	72	3.30	2.20
MMT930	MOT	72	3.60	2.40
MMT2222	MOT	70	2.85	1.90
MMT2369	MOT	70	1.95	1.30
MMT2484	MOT	72	5.90	3.59
MMT2857	MOT	72	5.45	3.65
MMT2907	MOT	72	3.50	2.35
MMT3546	MOT	70	6.15	4.10
MMT3798	MOT	72	4.40	2.95
MMT3799	MOT	72	5.55	3.70
MMT3903	MOT	70	2.40	1.60
MMT3904	MOT	70	3.00	2.00
MMT3905	MOT	70	2.40	1.60

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
MMT3906	MOT	70	3.00	2.00
MMT3906A	MOT	70	10.35	6.90
MP110	MOT	76	1.67	1.12
MP110B	MOT	76	6.00	4.00
MP500	MOT	76	5.70	3.80
MP500AML	MOT	76	7.10	4.75
MP501AML	MOT	...	11.55	7.70
MP502	MOT	76	12.00	8.00
MP503	MOT	...	20.25	13.50
MP504	MOT	76	6.60	4.40
MP540AML	MOT	76	8.15	5.45
MP505	MOT	76	10.20	6.80
MP505AML	MOT	76	12.75	8.50
MP506	MOT	76	13.85	9.25
MP506AML	MOT	76	16.85	11.25
MP507	MOT	...	22.50	15.00
MP525	MOT	76	1.00	.75
MP600	MOT	76	1.85	1.25
MP601	MOT	76	2.25	1.50
MP602	MOT	76	3.00	2.00
MP603	MOT	76	3.65	2.45
MP800	MOT	76	51.00	46.00
MP801	MOT	76	42.00	37.75
MP900	MOT	76	110.00	100.00
MP901	MOT	76	121.00	110.00
MP902	MOT	76	132.00	120.00
MP1612	MOT	76	3.55	2.65
MP1612A	MOT	76	3.90	2.90
MP1612B	MOT	76	4.20	3.10
MP1613	MOT	76	1.35	1.00
MP2000A	MOT	76	1.75	1.15
MP2060	MOT	76	1.05	.75
MP2061	MOT	76	1.15	.85
MP2062	MOT	76	1.35	1.00
MP2063	MOT	76	1.65	1.25
MP2100A	MOT	76	2.15	1.45
MP2200A	MOT	76	2.75	1.85
MP2300A	MOT	76	3.30	2.20
MP2400A	MOT	76	3.90	2.60
MP3730	MOT	76	1.58	1.05
MP3731	MOT	76	2.10	1.40

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
MPF102	MOT	...	.90	.60	.45
MPF108	MOT	...	1.05	.75	.55
MPF109	MOT	74	1.00	.70	.50
MPF161	MOT	74	.75	.50	.37

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS404	MOT	...	.37	.25	.19	....
MPS404A	MOT	...	.45	.30	.23	....
MPS706	MOT	71	.45	.30	.22	.21
MPS706A	MOT	71	.63	.42	.32	.29
MPS834	MOT	71	.52	.35	.26	.24
MPS835	MOT	71	.60	.40	.30	.28
MPS918	MOT	...	.83	.55	.41	....
MPS2369	MOT	71	.53	.35	.26	.24
MPS2711	MOT	73	.34	.23	.19	....
MPS2712	MOT	73	.32	.21	.18	....
MPS2713	MOT	71	.41	.27	.23	....
MPS2714	MOT	71	.43	.29	.24	....
MPS2715	MOT	...	.57	.38	.28	.27
MPS2716	MOT	73	.60	.40	.30	.28
MPS2923	MOT	73	.32	.21	.18	....
MPS2924	MOT	73	.34	.23	.19	....
MPS2925	MOT	73	.41	.27	.23	....
MPS2926	MOT	73	.29	.19	.17	....
MPS3392	MOT	73	.32	.21	.18	....
MPS3393	MOT	73	.32	.21	.18	....
MPS3394	MOT	73	.27	.18	.15	....
MPS3395	MOT	73	.45	.30	.27	....
MPS3398	MOT	73	.57	.38	.28	.27
MPS3563	MOT	73	.44	.29	.26	....
MPS3638	MOT	71	.45	.30	.20	....
MPS3638A	MOT	71	.59	.39	.35	....
MPS3639	MOT	71	.41	.27	.25	....
MPS3640	MOT	71	.44	.29	.26	....
MPS3646	MOT	71	.52	.34	.31	....
MPS3693	MOT	73	.44	.29	.26	....
MPS3694	MOT	73	.44	.29	.26	....
MPS3702	MOT	73	.45	.30	.22	.21
MPS3703	MOT	73	.39	.26	.20	.18
MPS3704	MOT	73	.61	.41	.31	.29
MPS3705	MOT	73	.57	.38	.28	.27
MPS3706	MOT	73	.52	.35	.26	.24
MPS3707	MOT	73	.60	.37	.28	....
MPS3708	MOT	73	.45	.30	.23	....
MPS3709	MOT	73	.45	.30	.22	.21
MPS3710	MOT	73	.49	.33	.25	.23
MPS3711	MOT	73	.54	.36	.27	.25
MPS3721	MOT	73	.34	.23	.17	....
MPS6507	MOT	73	.75	.50	.38	.35
MPS6511	MOT	73	.68	.45	.34	.32
MPS6512	MOT	73	.54	.36	.27	.25
MPS6513	MOT	73	.57	.38	.28	.27
MPS6514	MOT	73	.60	.40	.30	.28
MPS6515	MOT	73	.64	.43	.32	.30
MPS6516	MOT	73	.60	.40	.30	.28
MPS6517	MOT	73	.63	.42	.31	.29
MPS6518	MOT	73	.67	.45	.34	.31
MPS6519	MOT	73	.75	.50	.37	.35
MPS6520	MOT	73	.82	.55	.41	.38
MPS6521	MOT	73	.90	.60	.45	.42
MPS6522	MOT	73	.90	.60	.45	.42
MPS6523	MOT	73	.97	.65	.49	.45

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS6530	MOT	73	.64	.43	.32	.30
MPS6531	MOT	73	.75	.50	.37	.35
MPS6532	MOT	73	.54	.36	.27	.25
MPS6533	MOT	73	.71	.47	.35	....
MPS6534	MOT	73	.81	.54	.40	.38
MPS6535	MOT	73	.60	.40	.30	.27
MPS6539	MOT	...	.90	.60	.45	.42
MPS6540	MOT	73	.75	.50	.38	.35
MPS6542	MOT	73	1.20	.80	.60	.56
MPS6543	MOT	73	1.32	.88	.66	.62
MPS6544	MOT	73	.54	.36	.31	.27
MPS6545	MOT	73	.84	.56	.46	.37
MPS6546	MOT	73	1.24	.83	.62	.58
MPS6547	MOT	73	1.35	.90	.67	.63
MPS6548	MOT	...	.90	.60	.45	.42
MPS6560	MOT	73	.78	.52	.39	.36
MPS6561	MOT	73	.69	.46	.35	.32
MPS6562	MOT	...	.84	.56	.42	.39
MPS6563	MOT	...	.74	.48	.36	.34
MPS6565	MOT	73	.52	.35	.26	.24
MPS6566	MOT	73	.57	.38	.28	.27
MPS6567	MOT	73	1.00	.67	.50	.47
MPS6568	MOT	73	1.50	1.00	.75	.70
MPS6569	MOT	73	1.11	.74	.55	.52
MPS6570	MOT	73	.96	.64	.48	.45
MPS6571	MOT	73	.60	.40	.30	.28
MPSA05	MOT	73	.53	.35	.26	.25
MPSA06	MOT	73	.60	.40	.30	.28
MPSA09	MOT	73	.54	.36	.27	.25
MPSA10	MOT	73	.29	.19	.14	.10
MPSA12	MOT	73	.67	.45	.34	.32
MPSA13	MOT	73	.47	.32	.24	.22
MPSA14	MOT	73	.54	.36	.27	.25
MPSA55	MOT	73	.59	.39	.29	.27
MPSA56	MOT	73	.66	.44	.33	.31
MPSA65	MOT	73	.57	.38	.29	.27
MPSA66	MOT	73	.63	.42	.32	.29
MPSK300	MOT	...	49.50	49.50	....	....
MPSL01	MOT	73	.59	.39	.35	.31
MPSL51	MOT	73	.61	.42	.38	.34
MPSU01	MOT	78	1.15	.77	.58	....
MPSU02	MOT	78	.99	.66	.49	....
MPSU03	MOT	78	1.41	.94	.70	....
MPSU04	MOT	78	1.62	1.08	.81	....
MPSU05	MOT	...	1.16	.77	.58	....
MPSU06	MOT	...	1.34	.89	.67	....
MPSU51	MOT	78	1.33	.89	.67	....
MPSU52	MOT	78	1.15	.77	.58	....
MPSU55	MOT	...	1.34	.89	.67	....
MPSU56	MOT	...	1.50	1.00	.75	....

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
MPT20	MOT	68	.67	.45	.38
MPT28	MOT	68	.67	.45	.38
MPT32	MOT	68	.67	.45	.38
MPT36	MOT	...	.68	.45	.39

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100 Ass't	EACH 100-999
MPZ5-16B	MOT	...	44.30	38.30	33.30
MPZ5-32B	MOT	...	26.45	22.90	19.90
MPZ5-32C	MOT	...	44.30	38.30	33.30
MPZ5-180A	MOT	...	26.45	22.90	19.90
MPZ5-180B	MOT	...	44.30	38.30	33.30
MPZ5-180C	MOT	...	61.85	53.45	46.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
MQ3467	MOT	78	44.25	29.50
MQ3725	MOT	78	40.10	26.75
MQ3752	MOT	78	47.60	31.75
MQ3799	MOT	78	42.75	28.50
MQ3799A	MOT	78	79.50	53.00

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
MR322	MOT	...	.67	.45	.40
MR322R	MOT	...	.67	.45	.40
MR323	MOT	...	.76	.51	.46
MR323R	MOT	...	.76	.51	.46
MR324	MOT	...	1.11	.74	.67
MR324R	MOT	...	1.11	.74	.67
MR325	MOT	...	1.27	.85	.76
MR326	MOT	...	1.48	.99	.89
MR326R	MOT	...	1.48	.99	.89
MR327	MOT	65	2.40	1.60	1.45
MR328	MOT	65	3.35	2.25	2.00
MR330	MOT	65	6.75	4.50	4.05
MR331	MOT	65	9.75	6.50	5.85
MR810	MOT	...	.67	.45	....
MR811	MOT	...	.75	.50	....
MR812	MOT	...	.97	.65	....
MR816	MOT	...	2.40	1.60	....
MR830	MOT	...	2.40	1.60	....
MR831	MOT	...	2.75	1.85	....
MR832	MOT	...	3.35	2.25	....
MR834	MOT	..	5.60	3.75	....
MR836	MOT	...	9.35	6.25	....
MR840	MOT	...	1.27	.85	....
MR841	MOT	...	1.42	.95	....
MR842	MOT	...	1.80	1.20	....
MR844	MOT	...	2.55	1.70	....
MR846	MOT	..	5.60	3.75	....
MR880	MOT	...	2.10	1.40	....
MR881	MOT	..	2.45	1.65	....
MR882	MOT	...	3.30	2.20	....
MR884	MOT	...	6.90	4.60	....
MR886	MOT	...	8.70	5.80	....

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
MR890	MOT	...	3.75	2.50	....
MR891	MOT	...	4.20	2.80	....
MR892	MOT	...	5.15	3.45	....
MR894	MOT	...	10.35	6.90	....
MR896	MOT	...	14.95	9.95	....
MR990	MOT	65	1.42	.95	....
MR990A	MOT	65	.75	.50	....
MR991	MOT	65	2.10	1.40	....
MR991A	MOT	65	.82	.55	....
MR992	MOT	65	4.95	3.30	....
MR992A	MOT	65	.90	.60	....
MR993	MOT	65	6.60	4.40	....
MR993A	MOT	65	.97	.65	....
MR994	MOT	65	7.85	5.25	....
MR994A	MOT	65	1.05	.70	....
MR995A	MOT	65	1.20	.80	....
MR996A	MOT	65	1.35	.90	....
MR1033A	MOT	65	.93	.62	.59
MR1033B	MOT	65	.93	.62	.59
MR1035A	MOT	65	1.32	.88	.84
MR1035B	MOT	65	1.32	.88	.84
MR1120	MOT	65	1.03	.69	....
MR1121	MOT	65	1.15	.77	....
MR1122	MOT	65	1.32	.88	....
MR1123	MOT	65	1.48	.99	....
MR1124	MOT	65	1.65	1.10	....
MR1125	MOT	65	2.02	1.35	....
MR1126	MOT	65	2.45	1.65	....
MR1128	MOT	65	5.60	3.75	....
MR1130	MOT	65	7.85	5.25	....

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
MR1200FL	MOT	66	3.20	2.90	2.40
MR1200FLR	MOT	66	3.20	2.90	2.40
MR1201FL	MOT	66	4.10	3.70	3.10
MR1201FLR	MOT	...	4.10	3.70	3.10
MR1202FL	MOT	66	5.60	5.05	4.20
MR1203FL	MOT	66	5.60	5.05	4.20
MR1203FLR	MOT	66	5.60	5.05	4.20
MR1205FL	MOT	66	6.40	5.75	4.80
MR1207FL	MOT	66	7.30	6.60	5.50
MR1207FLR	MOT	...	7.30	6.60	5.50
MR1208FL	MOT	66	8.65	7.80	6.50
MR1209FL	MOT	66	10.30	9.30	7.75
MR1210SB	MOT	66	4.80	4.30	3.60
MR1210SBR	MOT	...	4.80	4.30	3.60
MR1210SL	MOT	66	4.40	3.95	3.30
MR1210SLR	MOT	...	4.40	3.95	3.30
MR1211SB	MOT	66	5.65	5.10	4.25
MR1211SL	MOT	66	5.25	4.75	3.95
MR1211SLR	MOT	...	5.25	4.75	3.95
MR1212SB	MOT	66	7.00	6.30	5.25
MR1212SL	MOT	66	6.60	5.95	4.95
MR1213SB	MOT	66	7.00	6.30	5.25
MR1213SL	MOT	66	6.60	5.95	4.95
MR1213SLR	MOT	...	6.60	5.95	4.95
MR1214SB	MOT	66	8.15	7.40	6.15
MR1214SL	MOT	66	7.80	7.00	5.85
MR1215SB	MOT	66	815	7.40	6.15
MR1215SBR	MOT	...	8.15	7.40	6.15
MR1215SL	MOT	66	7.80	7.00	5.85
MR1216SB	MOT	66	10.35	9.35	7.80
MR1216SL	MOT	66	9.95	9.00	7.50
MR1217SB	MOT	66	10.35	9.35	7.80
MR1217SBR	MOT	...	10.35	9.35	7.80
MR1217SL	MOT	66	9.95	9.00	7.50
MR1218SB	MOT	66	11.30	10.20	8.50
MR1218SL	MOT	66	10.90	9.85	8.20
MR1219SB	MOT	66	13.55	12.25	10.20
MR1219SL	MOT	66	13.15	11.90	9.90
MR1220FB	MOT	66	11.30	10.20	8.50
MR1220FL	MOT	66	9.95	9.00	7.50
MR1220SB	MOT	66	11.30	10.20	8.50
MR1220SBR	MOT	...	11.30	10.20	8.50
MR1220SL	MOT	66	11.30	10.20	8.50
MR1221FL	MOT	66	10.65	9.60	8.00
MR1221SB	MOT	66	11.95	10.80	9.00
MR1221SBR	MOT	...	11.95	10.80	9.00
MR1221SL	MOT	66	11.95	10.80	9.00
MR1222FB	MOT	66	12.65	11.40	9.50
MR1222FL	MOT	66	12.25	11.05	9.20
MR1222SB	MOT	66	12.65	11.40	9.50
MR1222SL	MOT	66	12.65	11.40	9.50
MR1223SB	MOT	66	12.65	11.40	9.50
MR1225FB	MOT	66	15.30	13.80	11.50
MR1225FL	MOT	66	14.90	13.45	11.20
MR1225SB	MOT	66	15.30	13.80	11.50
MR1225SL	MOT	66	15.30	13.80	11.50
MR1227FB	MOT	66	17.95	16.20	13.50
MR1227SB	MOT	66	17.95	16.20	13.50
MR1227SL	MOT	66	17.95	16.20	13.50
MR1228FB	MOT	66	19.95	18.00	15.00
MR1228FL	MOT	66	19.55	17.65	14.70
MR1228SB	MOT	66	19.95	18.00	15.00
MR1228SL	MOT	66	19.95	18.00	15.00
MR1229FB	MOT	66	23.95	21.60	18.00
MR1229FL	MOT	66	23.55	21.25	17.70
MR1229SB	MOT	66	23.95	21.60	18.00
MR1229SL	MOT	66	23.95	21.60	18.00
MR1230FB	MOT	66	15.30	13.80	11.50
MR1230FL	MOT	66	14.65	13.20	11.00
MR1230SB	MOT	66	15.30	13.80	11.50
MR1230SL	MOT	66	15.30	13.80	11.50
MR1231FB	MOT	66	16.30	14.70	12.25
MR1231SB	MOT	66	16.30	14.70	12.25
MR1231SL	MOT	66	16.30	14.70	12.25
MR1231SLR	MOT	..	16.30	14.70	12.25
MR1232FB	MOT	66	17.30	15.60	13.00
MR1232FL	MOT	66	16.30	14.70	12.25

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MR1232SB	MOT	66	17.30	15.60	13.00
MR1232SL	MOT	66	17.30	15.60	13.00
MR1233FB	MOT	66	17.30	15.60	13.00
MR1233SB	MOT	66	17.30	15.60	13.00
MR1233SL	MOT	66	17.30	15.60	13.00
MR1235FL	MOT	66	18.00	16.25	13.55
MR1235SB	MOT	66	19.60	17.70	14.75
MR1235SL	MOT	66	19.60	17.70	14.75
MR1237FB	MOT	66	24.25	21.90	18.25
MR1237SB	MOT	66	24.25	21.90	18.25
MR1237SL	MOT	66	24.25	21.90	18.25
MR1241FB	MOT	66	21.95	19.80	16.50
MR1241FL	MOT	...	19.95	18.00	15.00
MR1241SB	MOT	66	21.95	19.80	16.50
MR1241SL	MOT	66	21.95	19.80	16.50
MR1242FB	MOT	...	22.85	20.65	17.20
MR1242FL	MOT	...	21.55	19.45	16.20
MR1242SB	MOT	66	22.85	20.65	17.20
MR1242SL	MOT	66	22.85	20.65	17.20
MR1243FL	MOT	...	21.55	19.45	16.20
MR1243SB	MOT	66	22.85	20.65	17.20
MR1243SL	MOT	66	22.85	20.65	17.20
MR1247FL	MOT	...	30.05	27.10	22.60
MR1247FLR	MOT	...	30.05	27.10	22.60
MR1247SB	MOT	66	31.40	28.30	23.60
MR1247SL	MOT	66	31.40	28.30	23.60
MR1247SLR	MOT	...	31.40	28.30	23.60
MR1260FL	MOT	66	28.60	25.80	21.50
MR1261FL	MOT	66	36.55	33.00	27.50
MR1261FLR	MOT	...	36.55	33.00	27.50
MR1262FL	MOT	66	55.20	49.80	41.50
MR1263FL	MOT	66	55.20	49.80	41.50
MR1265FL	MOT	66	61.20	55.20	46.00
MR1267FL	MOT	66	67.85	61.20	51.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99
MR1290	MOT	66	60.00	54.00
MR1291	MOT	66	66.50	60.00
MR1292	MOT	66	76.50	69.00
MR1293	MOT	66	76.50	69.00
MR1295	MOT	66	87.50	79.00
MR1297	MOT	66	98.50	88.75
MR1298	MOT	66	152.95	138.00
MR1299	MOT	66	199.50	180.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MR1337-1	MOT	65	3.35	2.25
MR1337-2	MOT	65	4.95	3.30
MR1337-3	MOT	65	6.75	4.50
MR1366	MOT	...	18.75	12.50
MR1376	MOT	...	25.10	16.75
MR1386	MOT	...	27.75	18.50
MR1396	MOT	...	37.50	25.00

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MR1810SB	MOT	66	5.45	4.90	4.10
MR1810SL	MOT	66	5.05	4.55	3.80
MR1811SB	MOT	66	6.30	5.70	4.75
MR1811SL	MOT	66	5.90	5.35	4.45
MR1812SB	MOT	66	7.65	6.90	5.75
MR1812SL	MOT	66	7.25	6.55	5.45
MR1813SB	MOT	66	7.65	6.90	5.75
MR1813SL	MOT	66	7.25	6.55	5.45
MR1814SB	MOT	66	8.70	7.85	6.55
MR1814SL	MOT	66	8.30	7.50	6.25
MR1815SB	MOT	66	8.70	7.85	6.55
MR1815SL	MOT	66	8.30	7.50	6.25
MR1816SB	MOT	66	11.05	9.95	8.30
MR1816SL	MOT	66	10.65	9.60	8.00
MR1817SB	MOT	66	11.05	9.95	8.30
MR1817SL	MOT	66	10.65	9.60	8.00
MR1818SB	MOT	66	11.95	10.80	9.00
MR1818SL	MOT	66	11.55	10.45	8.70
MR1819SB	MOT	66	14.25	12.85	10.70
MR1819SL	MOT	66	13.85	12.50	10.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MR2064	MOT	65	.36	.24
MR2065	MOT	65	.40	.27
MR2066	MOT	65	.48	.32
MR2067	MOT	65	.54	.36
MR2068	MOT	65	.67	.45

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MR2080HA	MOT	66	33.90	30.60	25.50
MR2081HA	MOT	66	42.55	38.40	32.00
MR2082HA	MOT	66	51.20	46.20	38.50
MR2083HA	MOT	66	59.85	54.00	45.00
MR2084HA	MOT	66	71.15	64.20	53.50
MR2100HA	MOT	66	59.85	54.00	45.00
MR2101HA	MOT	66	66.50	60.00	50.00
MR2102HA	MOT	66	76.45	69.00	57.50
MR2103HA	MOT	66	87.80	79.20	66.00
MR2104HA	MOT	66	98.40	88.80	74.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MR2266	MOT	65	1.08	.72
MR2272	MOT	65	.57	.38
MR2273	MOT	65	.48	.32

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MRA130	MOT	...	19.30	17.40	14.50
MRA130B	MOT	...	45.20	40.80	34.00
MRA131	MOT	...	21.95	19.80	16.50
MRA131B	MOT	...	50.55	45.60	38.00
MRA132	MOT	...	27.25	24.60	20.50
MRA132B	MOT	...	61.20	55.20	46.00
MRA133	MOT	...	31.25	28.20	23.50

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-999
MRA133B	MOT	...	67.85	61.20	51.00
MRA134	MOT	...	36.55	33.00	27.50
MRA134B	MOT	...	77.15	69.60	58.00
MRA160	MOT	...	35.25	31.80	26.50
MRA160B	MOT	...	77.15	69.60	58.00
MRA161	MOT	...	37.90	34.20	28.50
MRA161B	MOT	...	82.45	74.40	62.00
MRA162	MOT	...	44.55	40.20	33.50
MRA162B	MOT	...	95.75	86.40	72.00
MRA163	MOT	...	48.55	43.80	36.50
MRA163B	MOT	...	102.40	92.40	77.00
MRA164	MOT	...	56.50	51.00	42.50
MRA164B	MOT	...	117.05	105.60	88.00
MRA330	MOT	...	20.60	18.60	15.50
MRA330B	MOT	...	47.90	43.20	36.00
MRA331	MOT	...	22.95	20.70	17.25
MRA331B	MOT	...	52.55	47.40	39.50
MRA332	MOT	...	28.25	25.50	21.25
MRA332B	MOT	...	62.50	56.40	47.00
MRA333	MOT	...	32.60	29.40	24.50
MRA333B	MOT	...	69.15	62.40	52.00
MRA334	MOT	...	37.55	33.90	28.25
MRA334B	MOT	...	78.45	70.80	59.00
MRA360	MOT	...	36.55	33.00	27.50
MRA360B	MOT	...	79.80	72.00	60.00
MRA361	MOT	...	39.25	35.40	29.50
MRA361B	MOT	...	85.10	76.80	64.00
MRA362	MOT	...	45.90	41.40	34.50
MRA362B	MOT	...	98.40	88.80	74.00
MRA363	MOT	...	49.85	45.00	37.50
MRA363B	MOT	...	105.05	94.80	79.00
MRA364	MOT	...	57.85	52.20	43.50
MRA364B	MOT	...	119.70	108.00	90.00
MRD100	MOT	...	1.50	1.50	1.00
MRD150	MOT	...	1.20	1.20	.80
MRD200	MOT	...	11.30	11.30	7.50
MRD210	MOT	...	10.10	8.95	6.75
MRD250	MOT	...	9.40	8.30	6.25
MRD300	MOT	...	10.50	10.50	7.00
MRD310	MOT	...	9.40	8.30	6.25
MRD450	MOT	...	2.25	2.25	1.50
MRD600	MOT	...	8.00	7.00	6.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MRK-200	MOT	...	94.50	94.50
MS-10	MOT	...	Each	2.00
MSD6100	MOT	...	1.12	.75
			1000-4999 Ea.	.56
			5000-9999 Ea.	.52
MU4891	MOT	69	.90	.60
			1000-4999 Ea.	.51
MU4892	MOT	69	1.23	.82
			1000-4999 Ea.	.70
MU4893	MOT	69	.96	.64
			1000-4999 Ea.	.54
MU4894	MOT	69	1.05	.70
			1000-4999 Ea.	.59
MV830	MOT	79	1.35	.90
MV832	MOT	79	1.35	.90
MV833	MOT	79	1.35	.90
MV834	MOT	79	1.35	.90
MV835	MOT	79	1.35	.90
MV836	MOT	79	1.35	.90
MV837	MOT	79	1.35	.90
MV838	MOT	79	1.35	.90
MV839	MOT	79	1.35	.90
MV840	MOT	79	1.35	.90
MV1401	MOT	...	8.95	5.95
MV1403	MOT	79	8.95	5.95
MV1405	MOT	...	8.95	5.95
MV1620	MOT	79	1.42	.95
MV1622	MOT	79	1.42	.95
NV1624	MOT	79	1.42	.95
MV1626	MOT	79	1.42	.95
MV1628	MOT	79	1.42	.95
MV1630	MOT	79	1.42	.95
MV1632	MOT	79	1.42	.95
MV1634	MOT	79	1.42	.95
MV1636	MOT	79	1.42	.95
MV1638	MOT	79	1.42	.95
MV1640	MOT	79	1.42	.95
MV1642	MOT	79	1.42	.95
MV1644	MOT	79	1.42	.95
MV1646	MOT	79	1.42	.95
MV1648	MOT	...	1.42	.95
MV1650	MOT	79	1.42	.95
MV1652	MOT	79	3.60	2.40
MV1654	MOT	79	3.60	2.40
MV1656	MOT	79	3.60	2.40
MV1658	MOT	79	3.60	2.40
MV1660	MOT	79	3.60	2.40
MV1662	MOT	79	3.60	2.40
MV1664	MOT	79	3.60	2.40
MV1666	MOT	79	3.60	2.40
MV1805C	MOT	79	42.00	28.00
MV1809C	MOT	79	42.00	28.00
MV1809C1	MOT	79	47.00	31.00
MV1816A	MOT	79	42.00	28.00
MV1816A1	MOT	...	47.00	31.00
MV1816B	MOT	79	42.00	28.00
MV1816B1	MOT	79	47.00	31.00
MV1817A	MOT	...	42.00	28.00
MV1817A1	MOT	...	47.00	31.00
MV1817B	MOT	79	42.00	28.00
MV1817B1	MOT	79	47.00	31.00
MV1858D	MOT	79	12.00	8.00
MV1860D	MOT	79	12.00	8.00
MV1862D	MOT	79	12.00	8.00
MV1863D	MOT	79	12.00	8.00
MV1864D	MOT	79	12.00	8.00
MV1865D	MOT	79	12.00	8.00
MV1866D	MOT	79	12.00	8.00
MV1868D	MOT	79	12.00	8.00
MV1870D	MOT	79	12.00	8.00
MV1876	MOT	79	10.50	7.00
MV2101	MOT	...	.90	.60

IMPORTANT ORDERING INFORMATION

When ordering, please specify department number shown below, followed by the manufacturer's type and name.

Example: 49 D 26 MR1232SB MOT designates Motorola MR1232SB

Dept. No.	Mfr.	Name
49 D 1	RCA	Radio Corp. of America
49 D 12	SYL	Sylvania
49 D 22	CO	Conant
49 D 24	IR	International Rectifier
49 D 26	MOT	Motorola
49 D 30	SPR	Sprague
49 D 31	ST	Sarkes Tarzian
49 D 32	TI	Texas Instruments
49 D 34	VA	Varo

Type No.	Mfr.	Page No.	EACH 1-99	100-999
MV2102	MOT	...	.90	.60
MV2103	MOT	...	.90	.60
MV2104	MOT	...	.90	.60
MV2105	MOT	...	.90	.60
MV2106	MOT	...	.90	.60
MV2107	MOT	...	.90	.60
MV2108	MOT	...	.90	.60
MV2109	MOT	...	.90	.60
MV2110	MOT	...	.90	.60
MV2111	MOT	...	.90	.60
MV2112	MOT	...	.90	.60
MV2113	MOT	...	.90	.60
MV2114	MOT	...	.90	.60
MV2115	MOT	...	.90	.60

Type No.	Mfr.	Page No.	EACH 1-10	11-99	100-999
MZ605	MOT	64	54.55	47.15	41.00
MZ610	MOT	64	27.80	24.05	20.90
MZ620	MOT	64	20.95	18.10	15.75
MZ640	MOT	64	18.55	16.05	13.95
MZ805	MOT	64	46.55	40.25	35.00
MZ810	MOT	64	22.35	19.30	16.80
MZ820	MOT	64	16.30	14.10	12.25
MZ840	MOT	64	13.95	12.05	10.50
MZ2360	MOT	...	.28	.19	....
MZ2361	MOT	...	.57	.38	....

Type No.	Mfr.	Page No.	EACH 1-99	100 Ass't	100-999
MZ4614	MOT	60	3.85	3.35	2.90
MZ4615	MOT	60	3.85	3.35	2.90
MZ4616	MOT	60	3.85	3.35	2.90
MZ4617	MOT	60	3.85	3.35	2.90
MZ4618	MOT	60	3.85	3.35	2.90
MZ4619	MOT	60	3.85	3.35	2.90
MZ4620	MOT	60	3.85	3.35	2.90
MZ4621	MOT	60	3.85	3.35	2.90
MZ4622	MOT	60	3.85	3.35	2.90
MZ4623	MOT	60	3.85	3.35	2.90
MZ4624	MOT	60	3.85	3.35	2.90
MZ4625	MOT	60	3.85	3.35	2.90
MZ4626	MOT	60	3.85	3.35	2.90
MZ4627	MOT	60	3.85	3.35	2.90

Type No.	Mfr.	Page No.	EACH 1-10	11-99	100-999
MZK100	MOT	...	79.00	79.00	79.00

Type No.	Mfr.	Page No.	EACH 1-99	100-999
Q1B	IR	101	.41	.33
Q4B	IR	101	1.56	.94

Type No.	Mfr.	Page No.	EACH 1-9	10-99	100-499
S-256	ST	...	2.38	1.71	1.52
S-490	ST	...	2.20	1.58	1.41

Type No.	Mfr.	Page No.	EACH 1-24	25-99	100-499
S-5130	ST	102	22.50	19.30	18.00
S-5343	ST	102	18.10	15.50	14.50
S-5991	ST	102	3.50	3.00	2.80
S-6121	ST	102	4.01	3.43	3.19
S-6121-1	ST	102	4.21	3.60	3.35
S-6121-2	ST	102	4.36	3.73	3.47
S-6211	ST	102	2.12	1.82	1.69
S-6211-1	ST	102	2.34	2.00	1.86
S-6211-2	ST	102	2.56	2.19	2.04
S-6230	ST	102	1.47	1.26	1.19
S-6230-1	ST	102	1.77	1.52	1.41
S-6230-2	ST	102	2.11	1.80	1.68
S-6240	ST	102	3.76	3.22	3.00
S-6240-1	ST	102	5.15	4.40	4.00
S-6240-2	ST	102	6.93	5.93	5.40

Type No.	Mfr.	Page No.	EACH 1-99	100-999
SD-91	IR	91	.53	.35
SD-91A	IR	91	.59	.39
SD-92	IR	91	.63	.42

SEE PAGE 7 FOR INTEGRATED CIRCUITS

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
SD-92A	IR	91	.68	.46
SD-93	IR	91	.73	.52
SD-93A	IR	91	.86	.57
SD-94	IR	91	.89	.60
SD-94A	IR	91	.96	.64
SD-95	IR	91	.99	.67
SD-95A	IR	91	1.06	.71

Type No.	Mfr.	Page No.	EACH 1-99
SK-3003	RCA	...	.99
SK-3004	RCA	...	1.14
SK-3005	RCA	...	1.17
SK-3006	RCA	...	1.41
SK-3007	RCA	...	1.26
SK-3008	RCA	..	1.23
SK-3009	RCA	...	2.34
SK-3010	RCA	...	1.26
SK-3011	RCA	...	1.62
SK-3012	RCA	...	4.38
SK-3013	RCA	...	4.68
SK-3014	RCA	...	3.15
SK-3015	RCA	...	6.30
SK-3016	RCA	...	.57
SK-3017A	RCA	...	.60
SK-3018	RCA	...	1.35
SK-3019	RCA	...	1.47
SK-3020	RCA	...	1.32
SK-3021	RCA	...	1.95
SK-3022	RCA	...	3.96
SK-3023	RCA	...	3.96
SK-3024	RCA	...	1.98
SK-3025	RCA	...	2.70
SK-3026	RCA	...	1.80
SK-3027	RCA	...	3.15
SK-3028	RCA	...	3.60
SK-3029	RCA	...	6.30
SK-3030	RCA	...	.42
SK-3031	RCA	...	.51
SK-3032	RCA	...	.61
SK-3033	RCA	...	.81
SK-3034	RCA	...	4.50
SK-3035	RCA	...	5.49
SK-3036	RCA	...	5.85
SK-3037	RCA	...	11.70
SK-3038	RCA	...	1.44
SK-3039	RCA	...	1.98
SK-3040	RCA	...	2.25
SK-3041	RCA	...	2.52

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99
ST-14C	IR	93	4.20	3.75

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
TD-100	SPR	89	2.25	1.50	1.20
TD-101	SPR	89	1.50	1.00	.80
TD-102	SPR	89	1.35	.90	.72
TD-400	SPR	89	3.00	2.00	1.60
TD-401	SPR	89	1.95	1.30	1.05
TD-402	SPR	89	1.80	1.20	.95
TD-600	SPR	89	2.70	1.80	1.45
TD-601	SPR	89	1.65	1.10	.88
TD-602	SPR	89	1.50	1.00	.80
TD-2905	SPR	89	2.55	1.70	1.35
TD-2219	SPR	89	2.25	1.50	1.20

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
TI-40A0	TI	98	1.70	1.18
TI-40A1	TI	98	1.85	1.28
TI-40A2	TI	98	2.05	1.52
TI-40A3	TI	98	3.65	2.45
TI-40A4	TI	98	5.50	3.55
TI-42	TI	...	.87	.58
TI-43	TI	...	1.02	.68
TI-51	TI	...	.39	.26
TI-52	TI	...	.42	.28
TI-53	TI	...	.45	.30
TI-54	TI	...	.50	.33
TI-55	TI	...	.57	.34
TI-56	TI	...	.65	.40
TI-57	TI	...	.73	.46
TI-59	TI	...	.90	.60
TI-145A0	TI	...	1.60	1.10
TI-145A2	TI	98	1.95	1.35
TI-145A4	TI	98	5.25	3.50

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-4999
TI-480	TI	...	1.55	1.20	1.02
TI-481	TI	...	1.90	1.45	1.23
TI-482	TI	...	2.10	1.55	....
TI-483	TI	...	2.30	1.75	....
TI-484	TI	...	2.80	2.15	....
TI-486	TI	...	4.90	3.25	....
TI-487	TI	98	5.60	3.75	....
TI-492	TI	...	1.55	1.20	1.02
TI-493	TI	...	1.90	1.45	1.23
TI-494	TI	...	2.50	1.90	1.61
TI-495	TI	...	3.00	2.30	1.96
TI-496	TI	...	1.75	1.35	1.15
TI-550	TI	...	8.60	6.50	....
TI-551	TI	...	9.60	7.50	....

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
TI-1121	TI	...	18.00	12.00
TI-1122	TI	...	16.30	10.85
TI-1124	TI	...	12.70	8.45
TI-1134	TI	...	13.05	8.70
TI-1141	TI	...	22.20	14.80
TI-1143	TI	...	19.95	13.30
TI-1144	TI	...	17.40	11.60
TI-1145	TI	...	14.85	9.90
TI-1151	TI	...	22.95	15.30
TI-1152	TI	...	21.15	14.10
TI-1154	TI	...	18.15	12.10
TI-1156	TI	...	13.50	9.00
TI-3027	TI	...	1.20	.80
TI-3028	TI	...	1.43	.95
TIC20	TI	...	2.58	1.72
TIC22	TI	...	3.03	2.02
TIC23	TI	...	3.35	2.25
TIC44	TI	...	.77	.51
TIC45	TI	...	.83	.55
TIC47	TI	...	1.09	.85
TID32	TI	...	2.30	1.09
TID33	TI	...	2.11	1.02
TID34	TI	...	2.03	.97
TID35	TI	...	1.94	.88
TID36	TI	...	1.45	.82
TID37	TI	...	1.45	.84
TID40	TI	...	2.32	1.74
TID41	TI	...	2.10	1.58
TID42	TI	...	2.20	1.65
TID44	TI	...	2.56	1.92
TIS22	TI	97	4.20	2.80
TIS23	TI	97	4.65	3.10
TIS24	TI	97	6.45	4.30
TIS26	TI	97	8.50	6.90
TIS27	TI	97	7.20	5.85
TIS37	TI	95	.38	.34
TIS38	TI	95	.35	.31
TIS43	TI	95	.76	.66
TIS60	TI	...	.53	.34
TIS61	TI	...	.57	.38

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000-24,999
TN53	SPR	89	.85	.57	....	....
TN59	SPR	89	.65	.45	....	....
TN60	SPR	89	.65	.45	....	....
TN61	SPR	89	.60	.40	....	....
TP3638	SPR	89	.42	.28	.22	.18
TP3638A	SPR	89	.45	.30	.24	.20
TQ59	SPR	89	.99	.68	....	....
TZ81	SPR	89	.42	.28	.22	.18
TZ82	SPR	89	.38	.25	.20	.16
TZ581	SPR	89	.51	.34	.27	.22
TZ582	SPR	89	.45	.30	.24	.20

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99	EACH 100-999
US16HFP	IR	93	.82	.52	.48
US24HFP	IR	93	.92	.59	.54
US48HFP	IR	93	1.14	.73	.66
US79HFP	IR	93	1.45	.94	.85
US126HFP	IR	93	1.78	1.14	1.05
US158HFP	IR	93	1.88	1.21	1.12
US237HFP	IR	93	2.32	1.49	1.35
US315HFP	IR	93	2.86	1.83	1.68
US473HFP	IR	93	4.14	2.65	2.44

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
VB10	VA	100	1.41	1.07
VB10X	VA	100	1.88	1.43
VB15	VA	100	1.51	1.15
VB15X	VA	100	2.01	1.53
VB20	VA	100	1.59	1.20
VB20X	VA	100	2.12	1.60
VB25	VA	100	1.72	1.30
VB25X	VA	100	2.30	1.73
VB30	VA	100	1.88	1.42
VB30X	VA	100	2.50	1.90
VB40	VA	100	2.05	1.56
VB40X	VA	100	2.74	2.08
VB50	VA	100	2.40	1.82
VB50X	VA	100	3.20	2.42
VB60	VA	100	2.62	1.99
VC20	VA	99	5.20	4.00
VC30	VA	99	5.52	4.25
VC40	VA	99	5.85	4.50
VC50	VA	99	6.18	4.75
VC60	VA	99	6.50	5.00
VC70	VA	99	6.82	5.25
VC80	VA	99	7.15	5.50
VE18	VA	99	1.00	.90
VE27	VA	99	1.20	1.10
VE28	VA	99	1.10	1.00
VE47	VA	99	1.30	1.20
VE48	VA	99	1.20	1.10
VE67	VA	99	1.59	1.45
VE68	VA	99	1.49	1.35
VF5-5	VA	99	1.60	1.36
VF5-7	VA	99	1.71	1.45
VF5-10	VA	99	1.96	1.66
VF5-12	VA	99	2.22	1.88
VF5-15	VA	99	2.30	1.95
VF5-20	VA	99	2.97	2.52
VF5-25	VA	99	3.72	3.15
VF5-30	VA	99	4.46	3.78
VF5-40	VA	99	5.95	5.04
VF10-5	VA	99	1.77	1.50
VF10-7	VA	99	1.89	1.60

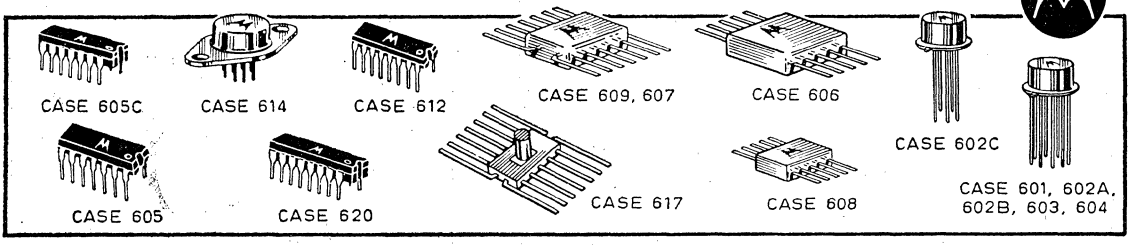
Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
VF10-10	VA	99	2.16	1.83
VF10-12	VA	99	2.44	2.07
VF10-15	VA	99	2.54	2.15
VF10-20	VA	99	3.27	2.77
VF10-25	VA	99	4.09	3.47
VF10-30	VA	99	4.91	4.16
VF10-40	VA	99	6.54	5.54
VF25-5	VA	99	1.95	1.65
VF25-7	VA	99	2.08	1.76
VF25-10	VA	99	2.38	2.02
VF25-12	VA	99	2.68	2.27
VF25-15	VA	99	2.80	2.37
VF25-20	VA	99	3.60	3.05
VF25-25	VA	99	4.51	3.82
VF25-30	VA	99	5.39	4.57
VF25-40	VA	99	7.20	6.10
VH148	VA	99	1.93	1.58
VH247	VA	99	2.25	1.85
VH248	VA	99	2.15	1.75
VH447	VA	99	2.59	2.13
VH448	VA	99	2.49	2.03
VH647	VA	99	2.98	2.45
VH648	VA	99	2.88	2.35

Type No.	Mfr.	Page No.	EACH 1-24	EACH 25-99	EACH 100-999
VR6	ST	102	.62	.53	.49
VR6A	ST	102	.67	.57	.53
VR7	ST	102	.62	.53	.49
VR7A	ST	102	.67	.57	.53
VR8.5	ST	102	.62	.53	.49
VR8.5A	ST	102	.67	.57	.53
VR10	ST	102	.62	.53	.49
VR10A	ST	102	.67	.57	.53
VR12	ST	102	.62	.53	.49
VR12A	ST	102	.67	.57	.53
VR14	ST	102	.62	.53	.49
VR14A	ST	102	.67	.57	.53
VR18	ST	102	.62	.53	.49
VR18A	ST	102	.67	.57	.53
VR20	ST	102	.62	.53	.49
VR20A	ST	102	.67	.57	.53
VR24	ST	102	.62	.53	.49
VR24A	ST	102	.67	.57	.53
VR28	ST	102	.62	.53	.49
VR28A	ST	102	.67	.57	.53
VR33	ST	102	.62	.53	.49
VR33A	ST	102	.67	.57	.53
VR39	ST	102	.62	.53	.49
VR39A	ST	102	.67	.57	.53
VR47	ST	102	.62	.53	.49
VR47A	ST	102	.67	.57	.53
VR56	ST	102	.62	.53	.49
VR56A	ST	102	.67	.57	.53
VR67	ST	102	.62	.53	.49
VR67A	ST	102	.67	.57	.53
VR80	ST	102	.62	.53	.49
VR80A	ST	102	.67	.57	.53
VR90	ST	102	.62	.53	.49
VR90A	ST	102	.67	.57	.53
VR100X	VA	100	6.30	6.30	5.05
VR100X/S/FVA		100	6.70	6.70	5.35
VR100X/T/FVA		100	6.55	6.55	5.25
VR105	ST	102	.82	.70	.65
VR105A	ST	102	.87	.73	.69
VR110	ST	102	.82	.70	.65
VR110A	ST	102	.87	.73	.69
VR120	ST	102	.82	.70	.65
VR120A	ST	102	.87	.73	.69
VR130	ST	102	.82	.70	.65
VR130A	ST	102	.87	.73	.69
VR150	ST	102	.82	.70	.65
VR150A	ST	102	.87	.73	.69
VR160	ST	102	.82	.70	.65
VR160A	ST	102	.87	.73	.69
VR200	ST	102	.82	.70	.65
VR200A	ST	102	.87	.73	.69
VR200X	VA	100	7.45	7.45	5.95
VR200X/S/FVA		100	7.85	7.85	6.25
VR200X/T/FVA		100	7.70	7.70	6.15
VR400X	VA	100	10.90	10.90	8.00
VR400X/S/FVA		100	11.30	11.30	8.30
VR400X/T/FVA		100	11.15	11.15	8.20

Type No.	Mfr.	Page No.	EACH 1-99	EACH 100-999
VS247	VA	100	1.20	1.10
VS248	VA	100	1.10	1.00
VS447	VA	100	1.30	1.20
VS448	VA	100	1.20	1.10
VT200	VA	100	5.35	3.95
VT200/S	VA	100	5.75	4.25
VT200/T	VA	100	5.60	4.15
VT400	VA	100	7.00	5.30
VT400/S	VA	100	7.40	5.60
VT400/T	VA	100	7.25	5.50
VT600	VA	100	9.85	7.10
VT600/S	VA	100	10.25	7.40
VT600/T	VA	100	10.10	7.30
W110	VA	99	.90	.81
W111	VA	99	.95	.85

Type No.	Mfr.	Page No.	EACH 1-9	EACH 10-99	EACH 100-999
Z1138	IR	...	.85	.74	.67

Motorola Integrated Circuits



Allied stocks a wide assortment of Motorola integrated circuits. Selection includes many multi-function types for minimum "can count"; plus "state-of-the-art" linear integrated circuits for a "competitive edge" to your research and development department's new equipment designs; and low-priced multi-function plastic dual in-line types. Cases refer to illustrations above.

HOW TO ORDER

When ordering, please specify Department Number 50 D 26, followed by the Manufacturer's Type Number and Name.
For Example: 50 D 26 MC301G-MOT
Designates Motorola Type MC301G

EXPLANATION OF COLUMN HEADS

t_{d1}—propagation delay time from falling edge of input pulse
t_{d2}—propagation delay time from rising edge of input pulse
t_{pd}—average propagation delay time—$(t_{d1}+t_{d2})/2$
t_{rr}—reverse recovery time
t_{off}—turn-off time
t_{on}—turn-on time
V_R—reverse voltage
V_F—forward voltage

MECL non-saturating integrated logic circuits offer high fan-in and fan-out capabilities with propagation delay typically 8.0 ns per logic decision. Current drain is constant regardless of logic state or operating frequency, thereby minimizing noise generation. Because of common mode rejection of power supply variations, system designs will operate with power supply variations of ±20%. MECL circuits in this series are compatible with higher speed MECL II circuits.

MECL INTEGRATED CIRCUITS—MILITARY TYPE

Circuit Function	Case	Prop. Delay t_{pd} @25°C ns (typ.)	Total Power Dissipation mW (typ)	(Temperature Range −55° C to + 125° C) Metal Can	EACH 1-24	EACH 25-99	EACH 100-999	Flat Pack	EACH 1-24	EACH 25-99	EACH 100-999
5-Input OR/NOR Gate	602B, 606	7.5	37	MC301G	11.55	9.25	7.70	MC301F	12.65	10.15	8.45
R-S Flip-Flop (with Buffered Outputs)	602B, 606	11	42	MC302G	13.70	11.00	9.15	MC302F	14.85	11.90	9.90
Half Adder	602B, 606	7.5	63	MC303G	15.60	12.50	10.40	MC303F	16.70	13.40	11.15
Bias Driver	602B, 606	.....	18	MC304G	7.25	5.80	4.85	MC304F	8.40	6.70	5.60
5-Input Gate Expander	602B, 606	4.5	.....	MC305G	7.25	5.80	4.85	MC305F	8.40	6.70	5.60
3-Input OR/NOR Gate	602B, 606	7.5	37	MC306G	10.20	8.15	6.80	MC306F	11.30	9.05	7.55
3-Input OR/NOR Gate	602B, 606	7.5	15	MC307G	10.20	8.15	6.80	MC307F	11.30	9.05	7.55
AC-Coupled J-K Flip-Flop (with Buffered Outputs)	602B, 606	8.5	87	MC308G	17.70	14.15	11.80	MC308F	18.80	15.05	12.55
Dual 2-Input NOR Gate	602B, 606	7.0	54	MC309G	12.60	10.10	8.40	MC309F	13.70	11.00	9.15
Dual 2-Input NOR Gate	602B, 606	7.0	54	MC310G	12.60	10.10	8.40	MC310F	13.70	11.00	9.15
Dual 2-Input NOR Gate	602B, 606	7.0	41	MC311G	12.60	10.10	8.40	MC311F	13.70	11.00	9.15
Dual 3-Input NOR Gate (with Buffered Outputs)	602B, 606	7.5	70	MC312AG	15.60	12.50	10.40	MC312AF	16.70	13.40	11.15
Dual 3-Input NOR Gate	604, 607	7.5	53	MC312G	15.60	12.50	10.40	MC312F	16.70	13.40	11.15
Quad 2-Input NOR Gate	607	7.0	125	.....	.....	.....	.....	MC313F	18.35	14.70	12.25
AC Coupled J-K Flip-Flop	602B, 606	12	118	MC314G	20.85	16.70	13.90	MC314F	21.95	17.60	14.65
Line Driver	602B, 606	14	270	MC315G	23.25	18.60	15.50	MC315F	24.35	19.50	16.25
Lamp Driver	602B, 606	.....	35	MC316G	10.20	8.15	6.80	MC316F	11.30	9.05	7.55
Level Translator—MECL to Sat. Logic	602B, 606	27.5	63	MC317G	10.20	8.15	6.80	MC317F	11.30	9.05	7.55
Level Translator—Sat. Logic to MECL	602B, 606	17	105	MC318G	10.20	8.15	6.80	MC318F	11.30	9.05	7.55

MECL INTEGRATED CIRCUITS—INDUSTRIAL TYPE

Circuit Function	Case	Prop. Delay t_{pd} @25°C ns (typ.)	Total Power Dissipation mW (typ)	(Temperature Range 0° to +75° C) Metal Can	EACH 1-24	EACH 25-99	EACH 100-999	Flat Pack	EACH 1-24	EACH 25-99	EACH 100-999
5-Input OR/NOR Gate	602B, 606	7.5	37	MC351G	4.55	4.00	3.65	MC351F	6.55	6.00	5.15
R-S Flip-Flop (with Buffered Outputs)	602B, 606	11	42	MC352AG	4.55	4.00	3.65	MC352AF	6.45	5.65	5.15
R-S Flip-Flop	602B, 606	11	40	MC352G	4.55	4.00	3.65	MC352F	6.55	6.00	5.15
Half Adder	602B, 606	7.5	63	MC353G	5.95	5.20	4.75	MC353F	7.95	7.20	6.25
Bias Driver	602B, 606	.....	18	MC354G	2.45	2.15	1.95	MC354F	4.45	4.15	3.45
Gate Expander	602B, 606	4.5	.....	MC355G	2.80	2.45	2.25	MC355F	4.80	4.45	3.75
3-Input OR/NOR Gate	602B, 606	7.5	37	MC356G	3.55	3.15	2.85	MC356F	5.55	5.15	4.35
3-Input OR/NOR Gate	602B, 606	7.5	15	MC357G	3.55	3.15	2.85	MC357F	5.53	5.15	4.35
AC Coupled J-K Flip-Flop (with Buffered Outputs)	602B, 606	8.5	87	MC358AG	9.50	8.35	7.60	MC358AF	11.50	10.35	9.10
AC Coupled J-K Flip-Flop	602B, 606	10	50	MC358G	9.50	8.35	7.60	MC358F	11.50	10.35	9.10
Dual 2-Input NOR Gate	602B, 606	7.0	54	MC359G	3.70	3.25	2.95	MC359F	5.70	5.25	4.45
Dual 2-Input NOR Gate	602B, 606	7.0	54	MC360G	3.70	3.25	2.95	MC360F	5.70	5.25	4.45
Dual 2-Input NOR Gate	602B, 606	7.0	41	MC361G	3.70	3.25	2.95	MC361F	5.70	5.25	4.45
Dual 3-Input NOR Gate (with Buffered Output)	602B, 606	7.5	70	MC362AG	5.00	4.40	4.00	MC362AF	6.85	6.05	5.50
Dual 3-Input NOR Gate	604, 607	7.5	54	MC362G	5.00	4.40	4.00	MC362F	6.85	6.05	5.50
Quad 2-Input NOR Gate	607	7.0	125	.....	.....	.....	.....	MC363F	7.35	6.50	5.90
AC-Coupled J-K Flip-Flop	602B, 606	12	118	MC364G	10.75	9.45	8.60	MC364F	12.20	10.70	9.75
Line Driver	602B, 606	14	270	MC365G	9.20	8.10	7.35	MC365F	11.05	9.75	8.85
Lamp Driver	602B, 606	.....	135	MC366G	6.25	5.50	5.00	MC366F	8.10	7.15	6.50
Level Translator—MECL to Sat. Logic	602B, 606	27.5	63	MC367G	5.60	4.95	4.50	MC367F	7.50	6.60	6.00
Level Translator—Sat. Logic to MECL	602B, 606	17	105	MC368G	5.60	4.95	4.50	MC368F	7.50	6.60	6.00
Dual 4-Input Clock Driver (Hi-Speed Gate)	607	3.0	250	.....	.....	.....	.....	MC369F	7.25	6.40	5.80
Dual 2-Input Clock Driver (Hi-Speed Gate)	602B	3.0	250	MC369G	5.45	4.80	4.35	.....	.....	.....	.....

Motorola Integrated Circuits

MECL II SERIES INTEGRATED CIRCUITS

Second phase of compatible MECL logic designs. Offers full compatibility with the same systems as MECL series—but 40% faster operation (typical propagation delay—4 nanoseconds). Noise immunity of 175 mV over entire temperature range. Current drain is constant, regardless of logic state or operating frequency, minimizing noise generation. Operate with power supply variations of ±20%. Available in both military and industrial temperature ranges: ceramic package (case 605C) and 14-lead TO-86 flat package (case 607). Packages illustrated on page 39; see following page for ordering information. *Case 620. †MECL. ‡DTL.

Circuit Function	Total Diss. (typ) mW	Prop. Delay (typ) nsec	DC Output Load Factor	Range, 0° to +75° C			Range, −55° to +125° C			
				Case 605 Type No.	EACH 1-999	EACH 1000-4999	Case 607 Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Single 6-Input Gate (3 OR/3 NOR-Pulldowns)	115	4.0	25	MC1001P	1.50	1.10	MC1201F	4.10	3.30	2.75
Single 6-Input Gate (3 OR-Pulldowns)	80	4.0	25	MC1002P	1.50	1.10	MC1202F	4.10	3.30	2.75
Single 6-Input Gate (No Pulldowns)	40	4.0	25	MC1003P	1.50	1.10	MC1203F	4.10	3.30	2.75
Dual 4-Input Gate (2 OR/2 NOR-Pulldowns)	95	4.0	25	MC1004P	1.55	1.15	MC1204F	4.25	3.40	2.85
Dual 4-Input Gate (2 OR-Pulldowns)	65	4.0	25	MC1005P	1.55	1.15	MC1205F	4.25	3.40	2.85
Dual 4-Input (No Pulldowns)	45	4.0	25	MC1006P	1.55	1.15	MC1206F	4.25	3.40	2.85
Triple 3-Input Gate (3 NOR-Pulldowns)	110	4.0	25	MC1007P	1.60	1.20	MC1207F	4.40	3.55	2.95
Triple 3-Input Gate)1 NOR-Pulldown)	75	4.0	25	MC1008P	1.60	1.20	MC1208F	4.40	3.55	2.95
Triple 3-Input Gate (No Pulldowns)	60	4.0	25	MC1009P	1.60	1.20	MC1209F	4.40	3.55	2.95
Quad 2-Input Gate (4 NOR-Pulldowns)	115	5.0	25	MC1010P	1.70	1.25	MC1210F	4.55	3.65	3.05
Quad 2-Input Gate (2 NOR-Pulldowns)	95	5.0	25	MC1011P	1.70	1.25	MC1211F	4.55	3.65	3.05
Quad 2-Input Gate (No Pulldowns)	65	5.0	25	MC1012P	1.70	1.25	MC1212F	4.55	3.65	3.05
85 MHz AC Coupled J-K Flip-Flop	125	6.0	25	MC1013P	2.90	2.15	MC1213F	7.50	6.00	5.00
Dual R-S Flip-Flop (Positive Clock)	140	6.0	25	MC1014P	3.15	2.35	MC1214F	8.60	6.90	5.75
Dual R-S Flip-Flop (Negative Clock)	140	6.0	25	MC1015P	3.15	2.35	MC1215F	8.60	6.90	5.75
Dual R-S Flip-Flop (Single Rail)	140	6.0	25	MC1016P	3.15	2.35	MC1216F	8.60	6.90	5.75
Saturated Logic to MECL Level Translator	105	15	25†	MC1017P	3.30	2.45	MC1217F	8.90	7.15	5.95
MECL to Saturated Logic Level Translator	70	20	7‡	MC1018P	3.30	2.45	MC1218F	8.90	7.15	5.95
Full Adder	110	4.0	25	MC1019P	4.25	3.15	MC1219F	11.40	9.10	7.60
Quad Line Receiver	115	4.0	25	MC1020P	1.50	1.10	MC1220F	4.10	3.30	2.75
Full Subtractor	110	4.0	25	MC1021P	4.25	3.15	MC1221F	11.40	9.10	7.60
Type "D" Flip-Flop	110	8.0	25	MC1022P	4.50	3.35	MC1222F	9.35	7.50	6.25
Dual 4-Input OR/NOR Clock Driver	250	2.0	25	MC1023P	6.50	4.80	.....	.....	.....	.....
Dual 2-Input Expandable Gate	95	4.0	25	MC1024P	1.60	1.20	MC1224F	4.40	3.55	2.95
Dual 4 and 5-Input Expander	.....	.....	.....	MC1025P	1.55	1.15	MC1225F	4.25	3.40	2.85
Dual 3-4 Input Transmission Line and Clock Driver	140	2.0	25	MC1026P	6.50	4.80	MC1226F	14.25	11.40	9.50
120 MHz AC Coupled J-K Flip-Flop	250	4.0	25	MC1027P	6.50	4.80	.....	.....	.....	.....
Dual 4-Channel Data Selector	170	5.0	25	MC1028P	11.25	8.35	.....	.....	.....	.....
Data Distributor	160	4.0	25	MC1029P	3.15	2.35	MC1229F	8.25	6.60	5.50
Quad Exclusive OR Gate	130	5.0	25	MC1030P	4.80	3.55	MC1230F	11.60	9.30	7.75
Quad Exclusive NOR Gate	130	5.0	25	MC1031P	4.80	3.55	MC1231F	11.60	9.30	7.75
Dual R-S Flip-Flop (Single Rail Input, Negative Clock)	140	6.0	25	MC1033P	3.15	2.35	MC1233F	8.60	6.90	5.75
Type "D" Flip-Flop	185	4.0	25	MC1034P	10.35	7.65	.....	.....	.....	.....
Dual Schmitt Trigger/Triple Differential Amplifier	140	5.0	25	MC1035P	1.80	1.35	MC1235F	4.50	3.60	3.00
16-Bit Coincident Memory	250	17	5.0	MC1036P	13.50	10.00	.....	.....	.....	.....
16-Bit Coincident Memory (No Pulldowns)	250	17	5.0	MC1037P	13.50	10.00	.....	.....	.....	.....
8-Channel Data Selector	150	7.0	25	MC1038P	11.20	8.30	MC1238F	22.50	18.00	15.00
MECL to Saturated Logic Quad Translator	200	10	7‡	MC1039P*	5.15	3.80	.....	.....	.....	.....

MECL III (MC1600 SERIES) INTEGRATED CIRCUITS

Non-saturating logic circuits for very high speeds. Gate circuits capable of sub-nanosecond speeds with local loading, and driving terminated lines with 1.5 nsec rise times and 1.1 nsec propagation delays. Flip-flop toggle frequencies greater than 300 MHz. Unused inputs may be left open. DC output loading factor, 90 (each output). Temperature range, 0° to +75° C.

Circuit Function	Total Diss. mW	Prop. Delay nsec	High Impedance Type No.	EACH 1-24	EACH 25-99	EACH 100-999	Low Impedance Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Dual 4-Input OR/NOR Gate	110	1.1	MC1660S	15.00	12.00	10.00	MC1661S	15.00	12.00	10.00
Quad 2-Input NOR Gate	220	1.1	MC1662S	16.50	13.20	11.00	MC1663S	16.50	13.20	11.00
Quad 2-Input OR Gate	220	1.1	MC1664S	16.50	13.20	11.00	MC1665S	16.50	13.20	11.00
Dual 2-Phase R-S Flip-Flop	215	1.8	MC1666S	30.00	24.00	20.00	MC1667S	30.00	24.00	20.00
Dual 2-Phase Type D Flip-Flop	215	1.8	MC1668S	37.50	30.00	25.00	MC1669S	37.50	30.00	25.00
Single Phase Type D Flip-Flop	190	1.8	MC1670S	27.00	21.60	18.00	MC1671S	27.00	21.60	18.00

MHTL (MC660 SERIES) INTEGRATED CIRCUITS

Temperature range, −30° to +75° C. Noise immunity, 5.0 V minimum for error-free operation in high noise environments. Output loading factor, 10 (each output) except ‡MDTL, 8; MTTL III, 5.5; MRTL, 5. *$f_{Tog.}$ †83 DTL, 104 RTL.

Circuit Function	Diss. mW (Hi/Lo Input)	Prop. Delay (typ) nsec	Ceramic Package Case 605C Type No.	Ceramic Package EACH 1-999	Ceramic Package EACH 1000-4999	Plastic Package Case 605 Type No.	Plastic Package EACH 1-999	Plastic Package EACH 1000-4999
Expandable Dual 4-Input Gate (active pullup)	88/26	110	MC660L	3.35	2.50	MC660P	2.10	1.70
Expandable Dual 4-Input Gate (passive pullup)	88/26	125	MC661L	3.35	2.50	MC661P	2.05	1.65
Expandable Dual 4-Input Line Driver	180/26	140	MC662L	3.90	2.90	MC662P	2.35	1.90
Dual J-K Flip-Flop	200	*	MC663L	7.20	6.10	MC663P	5.20	4.20
Master-Slave R-S Flip-Flop	160	*	MC664L	4.80	4.05	MC664P	3.30	2.65
Triple Level Translator	†	40	MC665L‡	4.90	3.95	MC665P‡	2.85	2.30
Triple Level Translator	105	75	MC666L	4.90	3.95	MC666P	3.15	2.55
Dual Monostable Multivibrator	240	140	MC667L	6.50	5.50	MC667P	4.85	3.90
Quad 2-Input Gate (passive pullup)	176/52	125	MC668L	3.70	2.75	MC668P	2.05	1.65
Dual 4-Input Expander	.....	.....	MC669L	3.15	2.35	MC669P	1.80	1.45
Triple 3-Input Gate (passive pullup)	132/39	125	MC670L	3.50	2.60	MC670P	2.05	1.65
Triple 3-Input Gate (active pullup)	132/39	110	MC671L	3.50	2.60	MC671P	2.10	1.70
Quad 2-Input Gate (active pullup)	176/52	110	MC672L	3.70	2.75	MC672P	2.10	1.70
Dual 2-Input AND-OR-INVERT Gate	160/50	110	MC673L	3.50	2.60	MC673P	2.35	1.90
Dual 2-Input AND-OR-INVERT Gate	160/50	125	MC674L	3.50	2.60	MC674P	2.30	1.85

When Ordering, Specify Dept. No., Mfr's Type No. and Name

Motorola Integrated Circuits

See Page 39 for Package Configurations and Explanations of Column Headings

HOW TO ORDER

Specify Dept. No. 50 D 26, Mfr's Type No. and Name. Example: 50 D 26 MC5400F-MOT Designates Motorola MC5400F

MTTL (MC5400 SERIES) INTEGRATED CIRCUITS

Designed for general-purpose digital applications. Medium operating speed (15-30 MHz clock rate), good external noise immunity, high fan-out. Capable of driving capacitive loads up to 600 pF. Temperature range, −55° to +125°C.

Circuit Function	Diss. (typ. pkg.) mW	Prop. Delay (typ) nsec	Output Load, Each Output	Flat Package Case 609 Type No.	Flat Package EACH 1-24	25-99	100-999	Dual In-Line Ceramic Package Case 605C Type No.	Dual In-Line Ceramic Package EACH 1-24	25-99	100-999
Quad 2-Input NAND Gate	40	13	10	MC5400F	6.50	5.20	4.35	MC5400L	6.50	5.20	4.35
Quad 2-Input NAND Gate (Open Collector Output)	40	35	10	MC5401F	6.50	5.20	4.35	MC5401L	6.50	5.20	4.35
Quad 2-Input NOR Gate	48	13	10	MC5402F	7.20	5.75	4.80	MC5402L	7.20	5.75	4.80
Hex Inverter	60	13	10	.....	.....	.....	.....	MC5404L	7.20	5.75	4.80
Triple 3-Input NAND Gate	30	13	10	MC5410F	6.50	5.20	4.35	MC5410L	6.50	5.20	4.35
Dual 4-Input NAND Gate	20	13	10	MC5420F	6.50	5.20	4.35	MC5420L	6.50	5.20	4.35
8-Input NAND Gate	10	13	10	MC5430F	6.50	5.20	4.35	MC5430L	6.50	5.20	4.35
Dual 4-Input NAND Buffer	50	13	30	MC5440F	7.20	2.75	4.80	MC5440L	7.20	5.75	4.80
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	28	13	10	MC5450F	7.20	5.75	4.80	MC5450L	7.20	5.75	4.80
Dual 2-Wide 2-Input AND-OR-INVERT Gate	28	13	10	MC5451F	6.50	5.20	4.35	MC5451L	6.50	5.20	4.35
Expandable 4-Wide 2-Input AND-OR-INVERT Gate	22	13	10	MC5453F	7.20	5.75	4.80	MC5453L	7.20	5.75	4.80
4-Wide 2-Input AND-OR-INVERT Gate	22	13	10	MC5454F	6.50	5.20	4.35	MC5454L	6.50	5.20	4.35
Dual 4-Input Expander for AND-OR-INVERT Gates	8.0	5.0	.....	MC5460F	5.85	4.70	3.90	MC5460L	5.85	4.70	3.90
J-K Flip-Flop	40	30	10	MC5472F	9.15	7.30	6.10	MC5472L	9.15	7.30	6.10
Dual J-K Flip-Flop	80	30	10	MC5473F	13.35	10.70	8.90	MC5473L	13.35	10.70	8.90
Dual Type D Flip-Flop	84	16	10	MC5479F	13.05	10.45	8.70	MC5479L	13.05	10.45	8.70

MTTL (MC7400 SERIES) DUAL IN-LINE INTEGRATED CIRCUITS

Temperature range, 0° to +70°C. Also available with Flat Package (MC7400F); see Integrated Circuit Directory (page 7). *Case 612.

Circuit Function	Diss. (typ. pkg.) mW	Prop. Delay (typ) nsec	Output Load, Each Output	Dual In-Line Ceramic Package Case 605C Type No.	Dual In-Line Ceramic Package EACH 1-24	25-99	100-999	Dual In-Line Plastic Package Case 605 Type No.	Dual In-Line Plastic Package EACH 1-99	100-999	1000-4999
Quad 2-Input NAND Gate	40	13	10	MC7400L	3.15	2.50	2.10	MC7400P	1.45	1.25	1.12
Quad 2-Input NAND Gate (Open Collector Output)	40	35	10	MC7401L	3.15	2.50	2.10	MC7401P	1.45	1.25	1.12
Quad 2-Input NOR Gate	48	13	10	MC7402L	3.50	2.80	2.35	MC7402P	1.70	1.45	1.30
Hex Inverter	60	13	10	MC7404L	4.05	3.25	2.70	MC7404P	1.80	1.55	1.40
Triple 3-Input NAND Gate	30	13	10	MC7410L	3.15	2.50	2.10	MC7410P	1.45	1.25	1.12
Dual 4-Input NAND Gate	20	13	10	MC7420L	3.15	2.50	2.10	MC7420P	1.45	1.25	1.12
8-Input NAND Gate	10	13	10	MC7430L	3.15	2.50	2.10	MC7430P	1.45	1.25	1.12
Dual 4-Input NAND Buffer	50	13	30	MC7440L	3.50	2.80	2.35	MC7440P	1.70	1.45	1.30
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	28	13	10	MC7450L	3.50	2.80	2.35	MC7450P	1.45	1.25	1.12
Dual 2-Wide 2-Input AND-OR-INVERT Gate	28	13	10	MC7451L	3.15	2.50	2.10	MC7451P	1.45	1.25	1.12
Expandable 4-Wide 2-Input AND-OR-INVERT Gate	22	13	10	MC7453L	3.50	2.80	2.35	MC7453P	1.45	1.25	1.12
4-Wide 2-Input AND-OR-INVERT Gate	22	13	10	MC7454L	3.15	2.50	2.10	MC7454P	1.45	1.25	1.12
Dual 4-Input Expander for AND-OR-INVERT Gates	8.0	5.0	.....	MC7460L	2.45	2.00	1.65	MC7460P	1.10	.94	.85
J-K Flip-Flop	40	30	10	MC7472L	5.10	4.10	3.40	MC7472P	2.00	1.70	1.55
Dual J-K Flip-Flop	80	30	10	MC7473L	7.50	6.00	5.00	MC7473P	3.40	2.85	2.60
Quad Latch	100	30	10	.....	.....	.....	.....	MC7475P*	5.15	4.35	3.95
Dual J-K Flip-Flop	80	30	10	.....	.....	.....	.....	MC7476P*	3.50	2.95	2.70
Dual Type D Flip-Flop	84	16	10	MC7479L	7.20	5.75	4.80	MC7479P	2.90	2.45	2.25

MTTL (MC4000 SERIES) COMPLEX FUNCTIONS

Transistor-transistor logic functions for digital uses in medium to high speed range. Typical clock frequencies of 30-40 MHz; propagation delay time to 5.0-10 nsec per level of gating. *I_{OL}, open collector. †Write mode. ‡Read mode. V_{CC}=5.0 V; T_A=25°C.

MC4000F SERIES (CASE 607, FLAT PACKAGE)

Circuit Function	Output Loading, Ea. Output	Prop. Delay ns (typ)	Dissip. mW (typ/pkg)	0 to −75° C Type No.	EACH 1-24	25-99	100-999
16-Bit Scratch Pad Memory Cell	40*	25†, 15‡	250	MC4004F	26.55	21.25	17.20
16-Bit Scratch Pad Memory Cell	20*	25†, 15‡	250	MC4005F	18.95	15.20	12.65
Binary to One-of-Eight Line Decoder	11	14	100	MC4006F	19.20	15.35	12.80
8-Bit Parity Tree	11	15-30	150	.....	.....	.....	.....

MC4000L SERIES (CASE 605C, DUAL IN-LINE CERAMIC)

Circuit Function	Output Loading, Ea. Output	Prop. Delay ns (typ)	Dissip. mW (typ/pkg)	0 to −75° C Type No.	EACH 1-24	25-99	100-999
16-Bit Scratch Pad Memory Cell	40*	25†, 15‡	250	MC4004L	17.70	14.15	11.80
16-Bit Scratch Pad Memory Cell	20*	25†, 15‡	250	MC4005L	13.55	10.85	9.05
Binary to One-of-Eight Line Decoder	11	14	100	MC4006L	11.25	9.00	7.50
8-Bit Parity Tree	11	15-30	150	MC4008L	11.65	9.15	7.75

See Pages 39-48 for Additional Motorola Integrated Circuits

Motorola Integrated Circuits

MTTL I DUAL IN-LINE INTEGRATED CIRCUITS (T^2L)

Quality saturating logic circuits for general-purpose digital use. High noise immunity, high fan-out, capacitance drive up to 600 pF. High speed—operate at 20 MHz. Low power dissipation—15 mW per gate. Gate propagation delay time is typically 10 nanoseconds. Flip-flop clock frequency, 20 MHz maximum. Noise immunity is +900 mV at 25° C and worst-case fan-out. Available in two temperature ranges, in dual-in-line ceramic package. *First figure indicates t_{on}; second figure, t_{off}. †At 1000 pF load.

HOW TO ORDER

Specify Dept No. 50 D 26, Mfr's Type No. and Name. Ex.: 50 D 26 MC400L-MOT Designates Motorola Type MC400L.

See Page 39 for Package Configurations and Explanation of Column Headings

See Integrated Circuit Directory for Prices on MTTL I Flat Pack Integrated Circuits (Suffix F)

MC400 SERIES (0° to +75°C)

Circuit Function	Prop. Delay nsec (typ)	Total Power Diss. mW (typ)	Output Loading Factor=12				Output Loading Factor=6			
			Case 605C Type No.	EACH 1-24	EACH 25-99	EACH 100-999	Case 605C Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Dual 4-Input NAND Gate	10	30	MC400L	4.05	3.25	2.70	MC450L	3.20	2.60	2.15
Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate	12	30	MC401L	4.40	3.55	2.95	MC451L	3.60	2.90	2.40
8-Input NAND Gate	12	15	MC402L	4.05	3.25	2.70	MC452L	3.20	2.60	2.15
2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement	11	35	MC403L	4.05	3.25	2.70	MC453L	3.20	2.60	2.15
Expandable 3-Wide 3-Input AND-OR-INVERT Gate	12	25	MC404L	4.40	3.55	2.95	MC454L	3.60	2.90	2.40
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	12	20	MC405L	4.40	3.55	2.95	MC455L	3.60	2.90	2.40
Expandable 8-Input NAND Gate	18	15	MC406L	4.40	3.55	2.95	MC456L	3.60	2.90	2.40
Line Driver	25†	60	MC407L	4.40	3.55	2.95	MC457L	3.60	2.90	2.40
Quad 2-Input NAND Gate	10	60	MC408L	4.05	3.25	2.70	MC458L	3.20	2.60	2.15
4-Wide 3-2-2-3-Input Expander for AND-OR-INVERT Gates	.....	.....	MC409L	2.75	2.20	1.85	MC459L	2.75	2.20	1.85
Dual 4-Input Expander for AND-OR-INVERT Gates	.....	.....	MC410L	2.75	2.20	1.85	MC460L	2.75	2.20	1.85
Dual 4-Input Expander for NAND Gates	.....	.....	MC411L	2.75	2.20	1.85	MC461L	2.75	2.20	1.85
Triple 3-Input NAND Gate	10	45	MC412L	4.05	3.25	2.70	MC462L	3.20	2.60	2.15
R-S Flip-Flop	15/20*	30	MC413L	4.40	3.55	2.95	MC463L	3.60	2.90	2.40
Gated R-S Flip-Flop	7.5/20*	30	MC414L	4.40	3.55	2.95	MC464L	3.60	2.90	2.40
AND J-K Flip-Flop	25/13*	40	MC415L	6.45	5.15	4.30	MC465L	5.15	4.15	3.45
OR J-K Flip-Flop	25/13*	50	MC416L	6.45	5.15	4.30	MC466L	5.15	4.15	3.45
AND Input J-K Flip-Flop	20	95	MC417L	6.45	5.15	4.30	MC467L	5.15	4.15	3.45
Type D Flip-Flop	20	95	MC418L	6.45	5.15	4.30	MC468L	5.15	4.15	3.45
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	12	40	MC420L	4.95	3.95	3.30	MC470L	3.90	3.10	2.60
AC Coupled R-S Flip-Flop	18	30	MC421L	5.30	4.25	3.55	MC471L	4.25	3.40	2.85
Dual Type D Flip-Flop	16	84	.....	.....	.....	.....	MC472L	7.35	5.90	4.90
Hex Inverter	10	90	MC425L	4.40	3.55	2.95	MC475L	3.60	2.90	2.40

MC500 SERIES (—55° to +125°C)

Circuit Function	Prop. Delay nsec (typ)	Total Power Diss. mW (typ)	Output Loading Factor=15				Output Loading Factor=7			
			Case 605C Type No.	EACH 1-24	EACH 25-99	EACH 100-999	Case 605C Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Dual 4-Input NAND Gate	10	30	MC500L	6.45	5.15	4.30	MC550L	5.40	4.30	3.60
Expandable 4-Wide 2-2-2-3-Input AND-OR-INVERT Gate	12	30	MC501L	6.45	5.15	4.30	MC551L	5.40	4.30	3.60
8-Input NAND Gate	15	15	MC502L	6.45	5.15	4.30	MC552L	5.40	4.30	3.60
2-Wide 3-Input AND-OR-INVERT Gate with Gated Complement	11	35	MC503L	6.45	5.15	4.30	MC553L	5.40	5.30	3.60
Expandable 3-Wide 3-Input AND-OR-INVERT Gate	12	25	MC504L	6.45	5.15	4.30	MC554L	5.40	4.30	3.60
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	12	20	MC505L	6.45	5.15	4.30	MC555L	5.40	4.30	3.60
Expandable 8-Input NAND Gate	18	15	MC506L	6.45	5.15	4.30	MC556L	5.40	4.30	3.60
Line Driver	25†	60	MC507L	7.40	5.95	4.95	MC557L	6.20	5.00	4.15
Quad 2-Input NAND Gate	10	60	MC508L	6.45	5.15	4.30	MC558L	5.40	4.30	3.60
4-Wide 3-2-2-3-Input Expander for AND-OR-INVERT Gates	.....	.....	MC509L	4.55	3.65	3.05	MC559L	4.55	3.65	3.05
Dual 4-Input Expander for AND-OR-INVERT Gates	.....	.....	MC510L	4.55	3.65	3.05	MC560L	4.55	3.65	3.05
Dual 4-Input Expander for NAND Gates	.....	.....	MC511L	4.55	3.65	3.05	MC561L	4.55	3.65	3.05
Triple 3-Input NAND Gate	10	45	MC512L	6.45	5.15	4.30	MC562L	5.40	4.30	3.60
R-S Flip-Flop	15/20*	30	MC513L	7.40	5.95	4.95	MC563L	6.20	5.00	4.15
Gated R-S Flip-Flop	7.5/20*	30	MC514L	7.40	5.95	4.95	MC564L	6.20	5.00	4.15
AND J-K Flip-Flop	25/13*	40	MC515L	8.75	7.00	5.85	MC565L	7.35	5.90	4.90
OR J-K Flip-Flop	25/13*	50	MC516L	8.75	7.00	5.85	MC566L	7.35	5.90	4.90
AND Input J-K Flip-Flop	20	95	MC517L	8.75	7.00	5.85	MC567L	7.35	5.90	4.90
Type D Flip-Flop	20	95	MC518L	8.75	7.00	5.85	MC568L	7.35	5.90	4.90
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	12	40	MC520L	6.45	5.15	4.30	MC570L	5.40	4.30	3.60
AC Coupled R-S Flip-Flop	18	30	MC521L	7.70	6.20	5.15	MC571L	6.50	2.20	4.35
Dual Type D Flip-Flop	16	84	MC522L	13.40	10.75	8.95	MC572L	11.15	8.95	7.45
Hex Inverter	10	90	MC525L	7.00	5.95	4.95	MC575L	6.20	5.00	4.15

See Pages 39 thru 48 for Additional Motorola Integrated Circuits

Motorola Integrated Circuits

MTTL II SERIES INTEGRATED CIRCUITS

High-speed, high-noise-immunity family of saturating integrated logic circuits. Circuits are characterized by a multiple emitter input translator and two-stage active "pull-up". Maximum logic capability in minimum space, and greatly improved switching during turnoff. Gate propagation delay time is typically 6.0 nanoseconds. Flip-flop clock frequency, 30 MHz maximum. Clamp diodes on each input limit undershoot. Ordering Information on preceding page; case illustrations on page 39. *Indicates f in MHz.

MC2000 SERIES (0° to +75°C)

Circuit Function	Output Loading Factor	Prop. Delay nsec (typ)	Total Power Diss. mW(typ)	Flat Package Case 609 Type No.	Flat Package EACH 1-24	Flat Package EACH 25-99	Flat Package EACH 100-999	Dual In-Line Ceramic Case 605C Type No.	Dual In-Line Ceramic EACH 1-24	Dual In-Line Ceramic EACH 25-99	Dual In-Line Ceramic EACH 100-999
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	9	7.0	27	MC2000F	4.70	3.80	3.15	MC2000L	5.40	4.30	3.60
Quad 2-Input NAND Gate	9	6.0	88	MC2001F	4.70	3.80	3.15	MC2001L	4.85	3.90	3.25
4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates	9	.....	28	MC2002F	3.05	2.45	2.05	MC2002L	2.75	2.20	1.85
Dual 4-Input NAND Gate	9	6.0	44	MC2003F	4.70	3.80	3.15	MC2003L	4.85	3.90	3.25
Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	9	7.0	36	MC2004F	4.70	3.80	3.15	MC2004L	5.40	4.30	3.60
8-Input NAND Gate	9	8.0	22	MC2005F	4.70	3.80	3.15	MC2005L	4.85	3.90	3.25
Dual 4-Input Expander for AND-OR-INVERT Gates	9	.....	14	MC2006F	3.05	2.45	2.05	MC2006L	2.75	2.20	1.85
Triple 3-Input NAND Gate	9	6.0	66	MC2007F	4.70	3.80	3.15	MC2007L	4.85	3.90	3.25
AND J-K Flip-Flop	9	30 MHz*	40	MC2009F	7.10	5.70	4.75	MC2009L	7.80	6.25	5.20
OR J-K Flip-Flop	9	30 MHz*	50	MC2010F	7.10	5.70	4.75	MC2010L	7.80	6.25	5.20
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	9	7.0	58	MC2013F	4.70	3.80	3.15	MC2013L	5.85	4.70	3.90
AND J-K Flip-Flop	9	50 MHz*	50	MC2025F	8.15	6.55	5.45	MC2025L	7.80	6.25	5.20
OR J-K Flip-Flop	9	50 MHz*	60	MC2026F	8.15	6.55	5.45	MC2026L	7.80	6.25	5.20
OR J-K Flip-Flop	9	35 MHz*	60	MC2028F	8.15	6.55	5.45	MC2028L	7.80	6.25	5.20
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	5	7.0	27	MC2050F	3.95	3.20	2.65	MC2050L	4.20	3.35	2.80
Quad 2-Input NAND Gate	5	6.0	88	MC2051F	3.95	3.20	2.65	MC2051L	3.90	3.10	2.60
4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates	5	.....	28	MC2052F	3.05	2.45	2.05	MC2052L	2.75	2.20	1.85
Dual 4-Input NAND Gate	5	6.0	44	MC2053F	3.95	3.20	2.65	MC2053L	3.90	3.10	2.60
Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	5	7.0	36	MC2054F	3.95	3.20	2.65	MC2054L	4.20	3.35	2.80
8-Input NAND Gate	5	8.0	22	MC2055F	3.95	3.20	2.65	MC2055L	3.90	3.10	2.60
Dual 4-Input Expander for AND-OR-INVERT Gates	5	.....	14	MC2056F	3.05	2.45	2.05	MC2056L	2.75	2.20	1.85
Triple 3-Input NAND Gate	5	6.0	66	MC2057F	3.95	3.20	2.65	MC2057L	3.90	3.10	2.60
AND J-K Flip-Flop	5	30 MHz*	40	MC2059F	5.90	4.75	3.95	MC2059L	6.30	5.05	4.20
OR J-K Flip-Flop	5	30 MHz*	50	MC2060F	5.90	4.75	3.95	MC2060L	6.30	5.05	4.20
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	5	7.0	58	MC2063F	3.95	3.20	2.65	MC2063L	4.80	3.85	3.20
AND J-K Flip-Flop	5	50 MHz*	50	MC2075F	6.80	5.45	4.55	MC2075L	6.30	5.05	4.20
OR J-K Flip-Flop	5	50 MHz*	60	MC2076F	6.80	5.45	4.55	MC2076L	6.30	5.05	4.20
OR J-K Flip-Flop	5	35 MHz*	60	MC2078F	6.80	5.45	4.55	MC2078L	6.30	5.05	4.20

MC2100 SERIES (−55° to +125°C)

Expandable 2-Wide 4-Input AND-OR-INVERT Gate	11	7.0	27	MC2100F	7.20	5.75	4.80	MC2100L	7.20	5.75	4.80
Quad 2-Input NAND Gate	11	6.0	88	MC2101F	7.20	5.75	4.80	MC2101L	7.20	5.75	4.80
4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates	11	.....	28	MC2102F	4.55	3.65	3.05	MC2102L	4.55	3.65	3.05
Dual 4-Input NAND Gate	11	6.0	44	MC2103F	7.20	5.75	4.80	MC2103L	7.20	5.75	4.80
Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	11	7.0	36	MC2104F	7.20	5.75	4.80	MC2104 L	7.20	5.75	4.80
8-Input NAND Gate	11	8.0	22	MC2105F	7.20	5.75	4.80	MC2105L	7.20	5.75	4.80
Dual 4-Input Expander for AND-OR-INVERT Gates	11	.....	14	MC2106F	4.55	3.65	3.05	MC2106L	4.55	3.65	3.05
Triple 3-Input NAND Gate	11	6.0	66	MC2107F	7.20	5.75	4.80	MC2107L	7.20	5.75	4.80
AND J-K Flip-Flop	11	30 MHz*	40	MC2109F	10.70	8.60	7.15	MC2109L	10.70	8.60	7.15
OR J-K Flip-Flop	11	30 MHz*	50	MC2110F	10.70	8.60	7.15	MC2110L	10.70	8.60	7.15
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	11	7.0	58	MC2113F	7.20	5.75	4.80	MC2113L	7.20	5.75	4.80
AND J-K Flip-Flop	11	50 MHz*	50	MC2125F	12.30	9.85	8.20	MC2125L	12.30	9.85	8.20
OR J-K Flip-Flop	11	50 MHz*	60	MC2126F	12.30	9.85	8.20	MC2126L	12.30	9.85	8.20
OR J-K Flip-Flop	11	35 MHz*	60	MC2128F	12.30	9.85	8.20	MC2128L	12.30	9.85	8.20
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	6	7.0	27	MC2150F	5.90	4.75	3.95	MC2150L	5.90	4.75	3.95
Quad 2-Input NAND Gate	6	6.0	88	MC2151F	5.90	4.75	3.95	MC2151L	5.90	4.75	3.95
4-Wide 3-2-2-3 Input Expander for AND-OR-INVERT Gates	6	.....	28	MC2152F	4.55	3.65	3.05	MC2152L	4.55	3.65	3.05
Dual 4-Input NAND Gate	6	6.0	44	MC2153F	5.90	4.75	3.95	MC2153L	5.90	4.75	3.95
Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	6	7.0	36	MC2154F	5.90	4.75	3.95	MC2154L	5.90	4.75	3.95
8-Input NAND Gate	6	8.0	22	MC2155F	5.90	4.75	3.95	MC2155L	5.90	4.75	3.95
Dual 4-Input Expander for AND-OR-INVERT Gates	6	.....	14	MC2156F	4.55	3.65	3.05	MC2156L	4.55	3.65	3.05
Triple 3-Input NAND Gate	6	6.0	66	MC2157F	5.90	4.75	3.95	MC2157L	5.90	4.75	3.95
AND J-K Flip-Flop	6	30 MHz*	40	MC2159F	9.00	7.20	6.00	MC2159L	9.00	7.20	6.00
OR J-K Flip-Flop	6	30 MHz*	50	MC2160F	9.00	7.20	6.00	MC2160L	9.00	7.20	6.00
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	6	7.0	58	MC2163F	5.90	4.75	3.85	MC2163L	5.90	4.75	3.95
AND J-K Flip-Flop	6	50 MHz*	50	MC2175F	10.25	8.20	6.85	MC2175L	10.25	8.20	6.85
OR J-K Flip-Flop	6	50 MHz*	60	MC2176F	10.25	8.20	6.85	MC2176L	10.25	8.20	6.85
OR J-K Flip-Flop	6	35 MHz*	60	MC2178F	10.25	8.20	6.85	MC2178L	10.25	8.20	6.85

Motorola Integrated Circuits

MTTL III SERIES INTEGRATED CIRCUITS

Designed to be the "ultimate" saturated logic line. Feature speeds approaching limits of saturated logic and excellent load driving capability. Switching speeds are less temperature dependent than conventional types. Eliminates distorted voltage transfer characteristics and problems associated with "ringing." Input clamp diodes; high DC noise immunity. *Dual 3-Input, 3-Output. †Positive edge clock. ‡Negative edge clock. §Indicates f=30MHz; #f=40 MHz; ¶f=50 MHz. See page 39 for case illustrations.

Circuit Function	Prop. Delay ns (typ)	Total Power Diss. mW (typ)	0° to +75°C Type No. Fan-Out=10 Case 607	EACH 1-24	25-99	100-999	0° to +75°C Type No. Fan-Out=10 Case 605C	EACH 1-24	25-99	100-999
Quad 2-Input NAND Gate	6.0	88	MC3000F	5.40	4.30	3.60	MC3000L	4.35	3.50	2.90
Quad 2-Input AND Gate	9.0	112	MC3001F	5.40	4.30	3.60	MC3001L	4.35	3.50	2.90
Quad 2-Input NOR Gate	6.0	122	MC3002F	5.90	4.75	3.95	MC3002L	4.80	3.85	3.20
Quad 2-Input OR Gate	9.0	150	MC3003F	5.90	4.75	3.95	MC3003L	4.80	3.85	3.20
Triple 3-Input NAND Gate	6.0	66	MC3005F	5.40	4.30	3.60	MC3005L	4.35	3.50	2.90
Triple 3-Input AND Gate	9.0	84	MC3006F	5.40	4.30	3.60	MC3006L	4.35	3.50	2.90
Dual 4-Input NAND Gate	6.0	44	MC3010F	5.40	4.30	3.60	MC3010L	4.35	3.50	2.90
Single 8-Input NAND Gate	8.0	22	MC3015F	5.40	4.30	3.60	MC3015L	4.35	3.50	2.90
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	6.0	62.5	MC3020F	5.90	4.75	3.95	MC3020L	4.80	3.85	3.20
Dual 4-Input NAND Power Gate	6.0	70	MC3025F	5.90	4.75	3.95	MC3025L	4.80	3.85	3.20
Dual 4-Input AND Power Gate	9.0	90	MC3026F	5.90	4.75	3.95	MC3026L	4.80	3.85	3.20
AND Terminated Line Drivers*	9.0	56	MC3028F	5.90	4.75	3.95	MC3028L	4.80	3.85	3.20
NAND Terminated Line Drivers*	6.0	44	MC3029F	5.90	4.75	3.95	MC3029L	4.80	3.85	3.20
Dual 4-Input Expander, AND-OR-INVERT Gates	.....	15	MC3030F	4.20	3.40	2.80	MC3030L	3.50	2.80	2.35
AND J-K Flip-Flop†	#	80	MC3050F	7.45	5.95	4.95	MC3050L	6.95	5.60	4.65
AND Input JJ-KK Flip-Flop	#	75	MC3052F	7.45	5.95	4.95	MC3052L	6.95	5.60	4.65
Type "D" Dual Type D J-K Flip-Flop†	§	120	MC3060F	10.40	8.35	6.95	MC3060L	10.40	8.35	6.95
Common-Clock, Common-Reset Dual J-K Flip-Flop†	¶	100	MC3061F	10.40	8.35	6.95	MC3061L	10.40	8.35	6.95
Separate Clock No-Reset Dual J-K Flip-Flop‡	¶	100	MC3062F	10.40	8.35	6.95	MC3062L	10.40	8.35	6.95

Circuit Function (Gate, unless otherwise noted)	Prop. Delay ns (typ)	Total Power Diss. mW (typ)	0° to +75°C Type No. Fan-Out=10 Case 605	EACH 1-24	25-99	100-999	1000-4999
Quad 2-Input NAND	6.0	88	MC3000P	3.05	2.40	2.05	1.85
Quad 2-Input AND	9.0	112	MC3001P	3.05	2.40	2.05	1.85
Quad 2-Input NOR	6.0	122	MC3002P	3.40	2.65	2.25	2.05
Quad 2-Input OR	9.0	150	MC3003P	3.40	2.65	2.25	2.05
Triple 3-Input NAND	6.0	66	MC3005P	3.05	2.40	2.05	1.85
Triple 3-Input AND	9.0	84	MC3006P	3.05	2.40	2.05	1.85
Dual 4-Input NAND	6.0	44	MC3010P	3.05	2.40	2.05	1.85
Single 8-Input NAND	8.0	22	MC3015P	3.05	2.40	2.05	1.85
Expandable Dual 2-Wide 2-Input AND-OR-INVERT	6.0	62.5	MC3020P	3.40	2.65	2.25	2.05
Dual 4-Input NAND Power	6.0	70	MC3025P	3.40	2.65	2.25	2.05
Dual 4-Input AND Power	9.0	90	MC3026P	3.40	2.65	2.25	2.05

Circuit Function (Gate, unless otherwise noted)	Prop. Delay ns (typ)	Total Power Diss. mW (typ)	0° to −75°C Type No. Fan-Out=10 Case 605	EACH 1-24	25-99	100-999	1000-4999
AND Term. Line Drivers*	9.0	56	MC3028P	3.40	2.65	2.25	2.05
NAND Term. Line Drivers*	6.0	44	MC3029P	3.40	2.65	2.25	2.05
Dual 4-Input Expander, AND-OR-INVERT	.....	15	MC3030P	2.45	1.95	1.65	1.50
AND J-K Flip-Flop†	#	80	MC3050P	4.85	3.85	3.25	2.95
AND Input JJ-KK Flip-Flop	#	75	MC3052P	4.85	3.85	3.25	2.95
Type "D" Dual Type D J-K Flip-Flop†	§	120	MC3060P	7.75	6.10	5.15	4.70
Common-Clock, Common-Reset Dual J-K Flip-Flop†	¶	100	MC3061P	7.75	6.10	5.15	4.70
Separate Clock No-Reset Dual J-K Flip-Flop‡	¶	100	MC3062P	7.75	6.10	5.15	4.70

INDUSTRIAL AND MILITARY MEDIUM-POWER INTEGRATED CIRCUITS (*Input High/Input Low)

Circuit Function	Case	Fan-Out	Prop. Delay @ 25°C ns (typ)	Total Power Diss. mW (typ)	Industrial Type (0°C to +100°C) Type No.	EACH 1-24	25-99	100-999	Military Type (−55°C to +125°C) Type No.	EACH 1-999	1000-4999
Buffer	601	25	15	16/45*	MC900G	5.00	4.00	3.35	MC800G	1.42	1.05
Counter Adapter	601	5	22	55	MC901G	4.55	3.65	3.05	MC801G	1.67	1.24
Flip-Flop	601	4	14	22	MC902G	4.95	3.95	3.30	MC802G	1.42	1.05
3-Input NOR Gate	601	5	12	19/5*	MC903G	4.55	3.65	3.05	MC803G	1.42	1.05
Half-Adder	601	5	14	45	MC904G	5.60	4.50	3.75	MC804G	1.53	1.13
Half-Shift Register	601	4	22	53	MC905G	5.70	4.55	3.80	MC805G	1.67	1.24
Half-Shift Register (w/o inverter)	601	4	22	36	MC906G	5.70	4.55	3.80	MC806G	1.67	1.24
4-Input NOR Gate	601	5	12	19/5*	MC907G	4.55	3.65	3.05	MC807G	1.42	1.05
Dual 2-Input NOR Gate	601	5	12	38/10*	MC914G	4.70	3.80	3.15	MC814G	1.42	1.05
Dual 3-Input NOR Gate	603	5	12	38/10*	MC915G	4.70	3.80	3.15	MC815G	1.53	1.13
J-K Flip-Flop	601	3	35	54	MC916G	6.30	5.05	4.20	MC816G	2.12	1.57
J-K Flip-Flop	603	5	35	65	MC926G	6.30	5.05	4.20	MC826G	2.48	1.84
Quad Inverter	603	5	12	19/5*	MC927G	4.70	3.80	3.15	MC827G	1.42	1.05
5-Input NOR Gate	601	5	12	19/5*	MC929G	4.55	3.65	3.05	MC829G	1.42	1.05
J-K Flip-Flop	601	5	35	65	MC974G	6.30	5.05	4.20	MC874G	2.48	1.84
Dual Buffer	603	25	20	25/100*	MC999G	8.70	6.95	5.80	MC899G	1.73	1.28

INDUSTRIAL/COMMERCIAL MEDIUM-POWER MRTL TYPES (*Input High/Input Low)

Circuit	Case	Fan-Out	Propagation Delay ns (typ)	Total Power Diss. mW (typ)	Temp. +15° to +55°C Type No.	EACH 1-999	1000-4999	Circuit	Case	Fan-Out	Propagation Delay ns (typ)	Total Power Diss. mW (typ)	Temp. +15° to +55° Type No.	EACH 1-999	1000-4999
Buffer	601	80	15	23/65*	MC700G	1.24	.92	Dual 3-Input NOR	603	16	12	55/15*	MC715G	1.38	1.02
Counter Adapter	601	16	22	80	MC701G	1.50	1.11	.....	....	....	.....	.....	.....	....	....
Flip-Flop	601	13	14	32	MC702G	1.24	.92	J-K Flip-Flop	601	10	35	78	MC723G	1.89	1.40
3-Input NOR Gate	601	16	12	28/7.5*	MC703G	1.24	.92	J-K Flip-Flop	603	16	35	96	MC726G	2.21	1.64
Half Adder	601	16	14	65	MC704G	1.38	1.02	Quad Inverter	603	16	12	28/7.5*	MC727G	1.24	.92
Half-Shift Register	601	13	75	75	MC705G	1.50	1.11	5-Input NOR Gate	601	16	12	28/7.5*	MC729G	1.24	.92
Half-Shift Register (w/o inverter)	601	13	22	52	MC706G	1.50	1.11	J-K Flip-Flop	601	16	35	96	MC774G	2.21	1.64
4-Input NOR Gate	601	16	12	28/7.5*	MC707G	1.24	.92	.....	....	....	.....	.....	.....	....	....
Dual 2-Input NOR	601	16	12	55/15*	MC714G	1.24	.92	Dual Buffer	603	80	20	36/145*	MC799G	1.54	1.14

SEE PAGE 6 FOR INTEGRATED CIRCUIT TESTERS

Motorola Integrated Circuits

See Page 39 for Package Configuration and Explanations of Column Headings

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PLASTIC-PACKAGED MRTL INTEGRATED CIRCUITS (Case 605) (*Input High/Input Low)

Circuit Function	Fan-Out MC700 Series	Fan-Out MC800 Series	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	Temp. Range +15° to +55° C Type No.	EACH 1-999	EACH 1000-4999	Temp. Range 0° to +75° C Type No.	EACH 1-999	EACH 1800-4999
Dual 3-Input Gate	16	5	12	55/15*	MC715P	1.00	.75	MC815P	1.15	.86
J-K Flip-Flop	.....	3	35	91/79*	.....	.....	.....	MC816P	1.40	1.05
J-K Flip-Flop	10	.....	35	78	MC723P	1.30	.95	.....	.....	.....
Quad 2-Input NOR Gate	16	5	12	100/30*	MC724P	1.08	.81	MC824P	1.25	.93
Dual 4-Input Gate	16	5	12	55/15*	MC725P	1.08	.81	MC825P	1.25	.93
J-K Flip-Flop	.....	5	.....	120	MC726P	1.35	1.00	MC826P	1.55	1.15
Quad Exclusive OR Gate	16	5	12	87	MC771P	1.80	1.35	MC871P	2.10	1.55
Dual Half-Adder	16	5	20	120	MC775P	1.35	1.00	MC875P	1.55	1.15
J-K Flip-Flop, Expander, 2 Buffers	.....	.....	.....	166/169	MC779P	1.90	1.40	MC879P	2.15	1.60
Decade Up Counter	10	3	.....	250	MC780P	4.05	3.00	MC880P	4.60	3.40
Dual Half-Shift Register	13	4	22	140	MC783P	1.55	1.14	MC883P	1.80	1.34
Dual Half-Shift Register (w/inv.)	13	4	22	100	MC784P	1.46	1.08	MC884P	1.70	1.27
Quad 2-Input Expander	.....	.....	12	20/—*	MC785P	1.09	.81	MC885P	1.25	.93
Dual 4-Input Expander	.....	.....	12	.....	MC786P	1.25	.95	MC886P	1.50	1.12
J-K Flip-Flop, Inverter, 2 Buffers	.....	.....	.....	163-177*	MC787P	1.90	1.40	MC887P	2.15	1.60
Dual Buffer	80	25	24	145/36*	MC788P	1.35	1.00	MC888P	1.55	1.15
Hex Inverter	16	5	12	130/15*	MC789P	1.08	.81	MC889P	1.25	.93
Dual J-K Flip-Flop	10	3	35	145	MC790P	2.00	1.50	MC890P	2.30	1.72
Dual J-K Flip-Flop	16	5	40	190/160*	MC791P	2.35	1.75	MC891P	2.70	2.00
Triple 3-Input Gate	16	5	12	87/22*	MC792P	1.20	.90	MC892P	1.25	.93
Dual Full Adder	13	4	60	84	MC796P	5.05	3.75	MC896P	5.65	4.20
Dual Full Subtractor	13	4	60	84	MC797P	5.05	3.75	MC897P	5.65	4.20
Dual Buffer	80	25	15	46/130*	MC799P	1.08	.81	MC899P	1.25	.93
Dual 4-Channel Data Selector	16	5	25	100	MC9701P	2.45	1.80	MC9801P	2.75	2.05
4-Bit Parallel Full Adder	6	2	125	265	MC9704P	5.05	3.75	MC9804P	5.75	4.25
Hex Expander	.....	.....	12	3/—*	MC9719P	1.09	.81	MC9819P	1.25	.93

PLASTIC-PACKAGED MW MRTL INTEGRATED CIRCUITS (Case 605, *except 612)

Quad 2-Input Gate	4	4	27	12	MC717P	1.08	.81	MC817P	1.25	.93
Dual 3-Input Gate	4	4	27	6	MC718P	1.00	.75	MC818P	1.15	.86
Dual 4-Input Gate	4	4	27	6	MC719P	1.08	.81	MC819P	1.25	.93
J-K Flip-Flop	4	4	.....	30	MC722P	1.35	1.00	MC822P	1.55	1.15
Dual Type D Flip-Flop	3	3	60	37	MC778P	2.35	1.75	MC864P	3.00	2.20
Triple 3-Input Gate	4	4	27	8.5	MC793P	1.09	.81	MC893P	1.25	.93
Dual Buffer	30	30	57	30	MC798P	1.21	.98	MC898P	1.40	1.05
Dual Exclusive OR/NOR Gate	3, 4	3, 4	35, 65	25	MC764P	2.55	1.90	MC867P	4.60	3.40
Quad Latch	9	9	50	110	MC767P	4.05	3.00	MC870P*	4.05	3.00
BCD to Decimal Decoder	7	7	36	100	MC770P*	3.55	2.65	MC876P	2.30	1.72
Dual J-K Flip-Flop	2	2	50	41/29	MC776P	2.00	1.50	MC878P	2.70	2.00
Hex Inverter	4	4	27	7.0/3.0	MC9718P	1.09	.81	MC9818P	1.25	.93
Hex Expander	.....	.....	12	30/—	MC9720P	1.09	.81	MC9820P	1.25	.93
Quad 2-Input Expander	.....	.....	27	20/—	MC9721P	1.09	.81	MC9821P	1.25	.93
Dual J-K Flip-Flop	4	4	75	24	MC9722P	2.35	1.75	MC9822P	2.70	2.00

MW MRTL TYPE INTEGRATED CIRCUITS

Circuit Function	Case	Fan-Out	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	+15° C to +55° C Type No.	EACH 1-999	EACH 1000-4999	Circuit Function	Case	Fan-Out	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	+15° C to +55° C Type No.	EACH 1-999	EACH 1000-4999
Adder	601	4	60	15	MC708G	1.50	1.11	J-K Flip-Flop	601	2	50	22	MC720G	1.89	1.40
Buffer	601	30	57	15	MC709G	1.24	.92	Expander	601	.....	27	.....	MC721G	1.24	.92
Dual 2-Input NOR	601	4	27	6.0	MC710G	1.24	.92	J-K Flip-Flop	603	4	70	24/20	MC722G	2.21	1.64
4-Input OR Gate	601	4	60	6.0	MC711G	1.24	.92	5-Input NOR Gate	603	4	27	6.0	MC728G	1.24	.92
Half-Adder	601	4	66	12	MC712G	1.50	1.11	Dual Buffer	601	30	57	14/46	MC781G	1.54	1.14
Type D Flip-Flop	601	3	75	17	MC713G	1.89	1.40	J-K Flip Flop	601	2	80	23/21	MC782G	2.21	1.64
Dual 3-Input NOR	603	4	27	6.0	MC718G	1.38	1.02	.....	.....	.....	.....	.....	.....	.....	.....

COMMERCIAL LOW-POWER MRTL TYPES (*Input High/Input Low)

Circuit Function	Case	Fan-Out	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	−55° C to +125° C Type No. MC-	EACH 1-24	EACH 25-99	EACH 100-999	Circuit Function	Case	Fan-Out	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	0° C to +75° C Type No. MC-	EACH 1-999	EACH 1000-4999
Adder	601	4	60	10	908G	5.60	4.50	3.75	Half Adder	601	4	60	19/12.5*	808G	1.67	1.24
Buffer	601	30	57	10(½-cyc)	909G	5.00	4.00	3.35	2-Input Buffer	601	30	57	7/23*	809G	1.42	1.05
Dual 2-Input NOR	601	4	27	4.0	910G	4.70	3.80	3.15	Dual 2-Input NOR	601	4	27	10/2.5*	810G	1.42	1.05
4-Input OR Gate	601	4	60	4.0	911G	4.55	3.65	3.05	4-Input OR Gate	601	4	60	8/5.5*	811G	1.42	1.05
Half Adder	601	4	66	8.0	912G	5.60	4.50	3.75	Half Adder	601	4	66	15/5/10.5*	812G	1.67	1.24
Type D Flip-Flop	601	3	75	12	913G	6.00	4.80	4.00	Type D Flip-Flop	601	3	75	24/17.5*	813G	2.12	1.57
Dual 3-Input NOR	603	4	27	4.0	918G	4.70	3.80	3.15	Dual 3-Input NOR	603	4	27	12/2.5*	818G	1.53	1.13
J-K Flip-Flop	601	2	50	15	920G	6.30	5.05	4.20	J-K Flip-Flop	601	2	50	20/14.5*	820G	2.12	1.57
Expander	601	.....	27	.....	921G	4.25	3.40	2.85	Expander	601	.....	27	3/—*	821G	1.42	1.05
J-K Flip-Flop	603	4	20	24/20	922G	6.30	5.05	4.20	J-K Flip-Flop	603	4	70	24/20*	822G	2.48	1.84
5-Input NOR Gate	601	4	27	4.0	928G	4.55	3.65	3.05	5-Input NOR Gate	601	4	27	7.5/1.0*	828G	1.42	1.05
Dual Buffer	601	30	57	11/32	981G	8.70	6.95	5.80	Dual Buffer	601	30	57	14/46*	881G	1.73	1.28
J-K Flip-Flop	601	2	80	15/13	982G	6.30	5.05	4.20	J-K Flip-Flop	601	2	80	23/21*	882G	2.48	1.84

Motorola MDTL Integrated Circuits

SEE PAGE 39 FOR PACKAGE CONFIGURATION AND EXPLANATIONS OF COLUMN HEADINGS

V_{CC}=5.0 VDC, T_A=25° C. (*Counting Frequency, 30 MHz max. †2K Pullup Resistor. ‡MC930/MC830 Fan-Out).

Circuit Function	Case	Fan-Out	Propagation Delay ns(typ)	Total Power Diss. mW(typ)	−55° to +125° C Type No.	EACH 1-24	EACH 25-99	EACH 100-999	0° to +75° C Type No.	EACH 1-24	EACH 25-99	EACH 100-999	0° to +75° C Plastic Case 605	EACH 1-999	EACH 1000-4999
Expandable Dual 4-Input NAND Gate	607	8	30	22	MC930F	6.50	5.20	4.35	MC830F	3.60	2.90	2.40	MC830P	1.55	1.15
Expandable Dual 3-2 Input NAND Gate	603	8	30	22	MC930G	6.50	5.20	4.35	MC830G	3.60	2.90	2.40	.....	.....	.....
Clocked Flip-Flop	607	7	40	55	MC931F	9.00	7.20	6.00	MC831F	5.25	4.20	3.50	MC831P	3.00	2.25
Clocked Flip-Flop	603	7	40	55	MC931G	9.00	7.20	6.00	MC831G	5.25	4.20	3.50	.....	.....	.....
Expandable Dual 4-Input Buffer	607	25	35	85	MC932F	7.10	5.70	4.75	MC832F	4.05	3.25	2.70	MC832P	1.65	1.25
Expandable Dual 3-2 Input Buffer	603	25	35	85	MC932G	7.10	5.70	4.65	MC832G	4.05	3.25	2.70	.....	.....	.....
Dual 4-Input Expander	607	.....	.....	.....	MC933F	5.45	4.40	3.65	MC833F	4.70	3.80	3.15	MC833P	1.35	1.00
Dual 4-3 Input Expander	603	.....	.....	.....	MC933G	5.45	4.40	3.65	MC833G	4.50	3.60	3.00	.....	.....	.....
Hex Inverter	607	8	30	66	MC934F	7.80	6.25	5.20	MC834F	4.35	3.50	2.90	MC834P	2.00	1.50
Hex Inverter (without output resistors)	607	8	30	42	MC935F	7.80	6.25	5.20	MC835F	4.35	3.50	2.90	MC835P	2.00	1.50
Hex Inverter	607	8	30	66	MC936F	7.80	6.25	5.20	MC836F	4.35	3.50	2.90	MC836P	2.00	1.50
Hex Inverter	607	7	25	90	MC937F	7.80	6.25	5.20	MC837F	4.35	3.50	2.90	MC837P	2.00	1.50
Decade Counter	607	8	*	150	MC938F	27.00	21.60	18.00	MC838F	15.00	12.00	10.00	MC838P	7.55	6.70
Divide-by-Sixteen Counter	607	8	*	150	MC939F	27.00	21.60	18.00	MC839F	15.00	12.00	10.00	MC839P	7.55	6.70
Hex Inverter (without input diodes)	607	8	30	66	MC940F	7.80	6.25	5.20	MC840F	4.35	3.50	2.90	MC840P	2.00	1.50
Hex Inverter (wo output resistors & input diodes)	607	8	30	42	MC941F	7.80	6.25	5.20	MC841F	4.35	3.50	2.90	MC841P	2.00	1.50
Type D Flip-Flop plus 2-Wide 2-Input AND-OR-INVERT Gate	607	11	40	110	MC942F	9.90	7.90	6.60	.....	.....	.....	.....	.....	.....	.....
	607	9	40	110	.....	.....	.....	.....	MC842F	5.85	4.70	3.90	MC842P	3.60	2.70
4-Input AND Driver with NOR Strobe	603	250 mA	80	50	MC943G	22.50	18.00	15.00	MC843G	13.35	10.70	8.90	.....	.....	.....
Expandable Dual 4-Input Power Gate	607	27	30	65	MC944F	7.10	5.70	4.75	MC844F	4.05	3.25	2.70	MC844P	1.65	1.25
Expandable Dual 3-2 Input Power Gate	603	27	30	65	MC944G	9.10	5.70	4.75	MC844G	4.05	3.25	2.70	.....	.....	.....
Clocked Flip-Flop	607	10/12‡	40	60	MC945F	9.00	7.20	6.00	MC845F	5.25	4.20	3.50	MC845P	3.00	2.25
	603	10/12‡	40	60	MC945G	9.00	7.20	6.00	MC845G	5.25	4.20	3.50	.....	.....	.....
Quad 2-Input NAND Gate	607	8	30	44	MC946F	6.50	5.20	4.35	MC846F	3.60	2.90	2.40	MC846P	1.65	1.25
Quad Inverter	603	8	30	44	MC946G	6.50	5.20	4.35	MC846G	3.60	2.90	2.40	.....	.....	.....
Quad 2-Input Gate Expander	607	.....	.....	.....	MC947F	5.45	4.40	3.65	MC847F	4.70	3.80	3.15	MC847P	1.35	1.00
Clocked Flip-Flop	607	9/11‡	40	70	MC948F	9.00	7.20	6.00	MC848F	5.25	4.20	3.50	MC848P	3.00	2.25
Clocked Flip-Flop	603	9/11‡	40	70	MC948G	9.00	7.20	6.00	MC848G	5.25	4.20	3.50	.....	.....	.....
Quad 2-Input NAND Gate†	607	7	25	66	MC949F	6.50	5.20	4.35	MC849F	3.60	2.90	2.40	MC849P	1.65	1.25
Quad Inverter†	603	7	25	60	MC949G	6.50	5.20	4.35	MC849G	3.60	2.90	2.40	.....	.....	.....
Pulse Triggered Binary	607	8/10‡	15	50	MC950F	12.40	10.00	8.30	MC850F	9.90	7.90	6.60	MC850P	4.50	3.35
	603	8/10‡	15	50	MC950G	12.40	10.00	8.30	MC850G	9.90	7.90	6.60	.....	.....	.....
Monostable Vibrator	607	10	40	30	MC951F	20.25	16.20	13.50	MC851F	11.60	9.30	7.75	MC851P	4.50	3.35
	603	10	40	30	MC951G	18.50	14.80	12.35	MC851G	11.40	9.10	7.60	.....	.....	.....
Dual J-K Common Clock	607	9/11‡	40	140	MC955F	14.40	11.50	9.60	MC855F	8.40	6.70	5.60	MC855P	4.75	3.60
Flip-Flop Separate Clock	607	9/11‡	40	140	MC956F	14.40	11.50	9.60	MC856F	8.40	6.70	5.60	.....	.....	.....
Quad 2-Input Buffer	607	25	35	170	MC957F	11.40	9.10	7.60	MC857F	6.45	5.15	4.30	MC857P	2.70	2.00
Quad 2-Input NAND Power Gate	607	27	30	130	MC958F	11.40	9.10	7.60	MC858F	6.45	5.15	4.30	MC858P	2.70	2.00
Expandable Dual 4-Input NAND Gate†	607	7	25	33	MC961F	6.50	5.20	4.35	MC861F	3.60	2.90	2.40	MC861P	1.65	1.25
Expandable Dual 3-2 Input NAND Gate†	603	7	25	33	MC961G	6.50	5.20	4.35	MC861G	3.60	2.90	2.40	.....	.....	.....
Triple 3-Input NAND Gate	607	8	30	33	MC962F	6.50	5.20	4.35	MC862F	3.60	2.90	2.40	MC862P	1.65	1.25
Dual 2-Input NAND Gate plus Inverter	603	8	30	30	MC962G	6.50	5.20	4.35	MC862G	3.60	2.90	2.40	.....	.....	.....
Triple 3-Input NAND Gate†	607	7	25	50	MC963F	6.50	5.20	4.35	MC863F	3.60	2.90	2.40	MC863P	1.65	1.25
Dual 2-Input NAND Gate plus Inverter†	603	7	25	45	MC963G	6.50	5.20	4.35	MC863G	3.60	2.90	2.40	.....	.....	.....
Dual 6-Input NAND Gate	607	8	30	22	MC1900F	6.50	5.20	4.35	MC1800F	3.60	2.90	2.40	MC1800P	1.55	1.15
Dual 5-Input NAND Gate†	607	7	25	33	MC1901F	6.50	5.20	4.35	MC1801F	3.60	2.90	2.40	MC1801P	1.55	1.15
Expandable 8-Input NAND Gate	607	8	30	11	MC1902F	6.50	5.20	4.35	MC1802F	3.60	2.90	2.40	MC1802P	1.55	1.15
Expandable 8-Input NAND Gate†	607	7	25	16.5	MC1903F	6.50	5.20	4.35	MC1803F	3.60	2.90	2.40	MC1803P	1.55	1.15
10-Input NAND Gate	607	8	30	11	MC1904F	6.50	5.20	4.35	MC1804F	3.60	2.90	2.40	MC1804P	1.55	1.15
10-Input NAND Gate†	607	7	25	16.5	MC1905F	6.50	5.20	4.35	MC1805F	3.60	2.90	2.40	MC1805P	1.55	1.15
Quad 2-Input AND Gate	607	8	35	72	MC1906F	7.55	6.05	5.05	MC1806F	4.20	3.35	2.80	MC1806P	1.90	1.44
Quad 2-Input AND Gate†	607	7	30	85	MC1907F	7.55	6.05	5.05	MC1807F	4.20	3.35	2.80	MC1807P	1.90	1.44
Quad 2-Input OR Gate	607	8	35	97	MC1908F	7.55	6.05	5.05	MC1808F	4.20	3.35	2.80	MC1808P	1.90	1.44
Quad 2-Input OR Gate†	607	7	30	115	MC1909F	7.55	6.05	5.05	MC1809F	4.20	3.35	2.80	MC1809P	1.90	1.44
Quad 2-Input NOR Gate	607	8	30	60	MC1910F	7.55	6.05	5.05	MC1810F	4.20	3.35	2.80	MC1810P	1.90	1.44
Quad 2-Input NOR Gate†	607	7	25	72	MC1911F	7.55	6.05	5.05	MC1811F	4.20	3.35	2.80	MC1811P	1.90	1.44
Quad 2-Input Exclusive OR Gate	607	8	40	120	MC1912F	11.40	9.10	7.60	MC1812F	6.45	5.15	4.30	MC1812P	2.70	2.00
Quad Latch	612	7	35	220	.....	.....	.....	.....	.....	.....	.....	.....	MC1813P	7.95	7.05
Quad Latch	607	7	35	220	MC1914F	27.00	21.60	18.00	MC1814F	15.00	12.00	10.00	MC1814P	7.55	6.70

Motorola Linear Integrated Circuits

See Page 39 for Package Configurations and Explanations of Column Headings

HOW TO ORDER

Specify Dept. No., 50 D 26, Mfr's Type No. and Name. Example: 50 D 26 MC1430F-MOT Designates Motorola Type MC1430F.

OPERATIONAL AMPLIFIERS

Operating Temperature Range: MC1500 Series and MC1700 Series −55° to +125° C; MC1400 Series and MC1700C Series 0° to +75° C. MC1430 and MC1530 operating characteristics are dependent on external feedback components. MC1431 and MC1531 use Darlington input configuration which greatly increases input impedance. MC1520 differential output monolithic operational amplifier designed for use in general purpose or wide band differential amplifier applications, especially those requiring differential outputs. MC1433 and MC1533 voltage-gain and input offset voltage are adjustable while operating characteristics are dependent on external feedback components. MC1435, 7 and MC1535, 7 offer two complete operational amplifiers on a single chip resulting in excellent matching characteristics, plus space-saving size. Ideal for chopper stabilized applications where extremely high gain is required with excellent stability. MC1439 and MC1539 feature output short-circuit protection and input over-voltage protection. MCH1439 and MCH1539 internally compensated hybrid operational amplifiers with Slew Rate 4.2 V/μs typical. MC1709C and MC1709 operational amplifiers are identical circuits specified over different temperature ranges. MC1712C and MC1712 devices are designed for use as wideband DC operational amplifiers. Characteristics are a function of the external feedback components. *Dual. †Hybrid.

Type No.	Case	Open Loop Volt. Gain (A_{VOL}) V/V	Output Voltage Swing (V_{out}, V_p)	CMRR dB	EACH 1-24	EACH 25-99	EACH 100-999
MC1430F	606	5,000	±5.0	−75	6.75	5.60	4.50
MC1430G	602B				5.25	4.35	3.50
MC1431F	606	3,500	±5.0	−65	6.75	5.60	4.50
MC1431G	602B				5.25	4.35	3.50
MC1433F	606	60,000	±12	−100	8.85	7.35	5.90
MC1433G	602B				3.90	2.65	1.95
MC1433L	605C				8.25	6.85	5.50
MC1435F*	606	7,000	±3.6	−90	8.25	6.85	5.50
MC1435G*	602B				6.75	5.60	4.50
MC1435L*	605C				6.75	5.60	4.50
MC1437L*	605C	45,000	±14	−100	6.50	4.40	3.25
MC1439G	601	100,000	±14	−110	3.60	2.45	1.80
MCH1439G†	619	100,000	±13	−110	18.00	15.00	12.00
MC1520F	606	1,500	±4.0	−90	12.00	10.00	8.00
MC1520G	602A	1,500	±4.0	−90	9.75	8.10	6.50
MC1530F	606	5,000	±5.0	−75	15.00	12.50	10.00
MC1530G	606	5,000	±5.0	−75	12.75	10.60	8.50
MC1531F	606	3,500	±5.0	−65	15.00	12.50	10.00
MC1531G	602B	3,500	±5.0	−65	12.75	10.60	8.50
MC1533F	606	60,000	±12	−100	15.00	12.50	10.00
MC1533G	602B	60,000	±12	−100	12.75	10.60	8.50
MC1533L	605C	60,000	±12	−100	12.75	10.60	8.50
MC1535F*	607	7,000	±3.6	−90	15.00	12.50	10.00
MC1535G*	602B	7,000	±3.6	−90	12.75	10.60	8.50
MC1537L*	605C	45,000	±14	−100	18.00	15.00	12.00
MC1539G	601	120,000	±14	−110	11.25	9.35	7.50
MCH1539G†	619	120,000	±13	−110	22.50	18.75	15.00
MC1709F	606	45,000	±14	−90	15.00	12.50	10.00
MC1709G	601				12.75	10.60	8.50
MC1709L	605C				12.75	10.65	8.50
MC1709CF	606	45,000	±14	−90	8.85	7.35	5.90
MC1709CG	601				3.90	2.65	1.95
MC1709CL	605C				5.90	4.00	2.95
MC1712F	606	3,600	±5.3	−100	13.50	11.25	9.00
MC1712G	601				11.25	9.35	7.50
MC1712L	605C				11.25	9.35	7.50
MC1712CF	606	3,600	±5.3	−100	4.80	4.00	3.20
MC1712CG	601				3.90	2.65	1.95
MC1712CL	605C				4.40	3.70	2.95

HIGH-FREQUENCY AMPLIFIERS

Operating Temperature Range: −55° to +125° C. MC1110 matched transistor pair exhibits excellent AGC characteristics for a wide variety of communications applications. Features Noise Figure of 4.0 dB at 100 MHz. MC1509 and MC1510 are monolithic wideband video amplifiers designed for use as a high-frequency amplifier with operating characteristics that provide a flat frequency response from DC to 40 MHz. Features High Gain Characteristics, Av=93; Low Output Distortion, THD, ±1.5%. MC1545 dual-input high frequency amplifier features Differential Inputs and Differential Output; Channel-Select Time of 20 ns typical. Differential Input Signal +5.0 VDC. MC1550 is a versatile, common-emitter, common-base cascade circuit for use in communications applications. Features Constant Input Impedance over entire AGC Range; High Power Gain of 30 dB at 60 MHz, 0.5 MHz BW; NF= 5 dB at 60 MHz; High Voltage-Gain—Bandwidth Product—2 GHz. MC1552 is intended for use as a wideband linear amplifier or as a fast-rise pulse amplifier. A three-stage direct-coupled, common-emitter cascade circuit incorporates series-series feedback. Features High Gain of 34 dB, ±1 dB; Low Distortion—0.2% at 200kHz; Low Temperature Drift of ±0.002 dB/°C. MC1553 similar to MC1552 except high gain (52 dB, ±1 dB) and narrower bandwidth. Noise Figure=5.0 dB at 30 MHz. *Useful transducer power gain.

Type No.	Case	Bandwidth MHz	Description	EACH 1-24	EACH 25-99	EACH 100-999
MC1110G	602C	300*	High stability through low internal feedback for RF applications.	37.50	31.25	25.00
MC1509F	608	40	Ideal for wideband video applications.	13.95	11.60	9.30
MC1510F	608	40		13.95	11.60	9.30
MC1510G	601	40		12.00	10.00	8.00
MC1545F	607	75	Useful as a gated wideband amplifier, video switch, sense amplifier, multiplexer, modulator, FSK circuit, limiter, AGC circuit or pulse amplifier.	9.75	8.10	6.50
MC1545G	602A			8.25	6.85	5.50
MC1545L	605C			8.25	6.85	5.50
MC1550F	606	200*	Constant input impedance over entire AGC range. RF-IF amplifier for communications equipment.	7.25	6.05	4.85
MC1550G	602B			1.50	1.00	.75
MC1552G	602B	40	Three stage direct coupled common emitter cascade circuit with series feedback achieving extremely stable gain.	9.00	7.50	6.00
MC1553G	602B	35	Same as MC1552G except higher gain.	9.00	7.50	6.00

POWER AMPLIFIERS

Operating Temperature Range: −55° to +125° C. Power Output = 1.0 watt.

Type No.	Case	Voltage Gain (Av, V/V)	Total Harmonic Distortion	Description	EACH 1-24	EACH 25-99	EACH 100-999
MC1524G	602B	38	0.6%	Complementary output, low standby current drain.	70.00	55.00	40.00
MC1554G	602B	10, 18, 36	0.4%	Capable of single or split supply operation.	14.25	11.85	9.50

DIFFERENTIAL AMPLIFIERS

Operating Temperature Range: −55° to +125° C except MC1429G, 0° to +75° C.

Type No.	Case	Differential Voltage Gain (A_{dd}, dB)	Output Voltage Swing (V_{out}, V_{p-p})	Description	EACH 1-24	EACH 25-99	EACH 100-999
MC1429G	602B	38	6.0	Darlington inputs (high impedance).	3.90	2.65	1.95
MC1519G	602B	73	14	NPN inputs, PNP outputs, 1 MHz BW.	50.00	40.00	30.00
MC1525G	602B	43	8.0	Conventional differential inputs, high gain, built-in temperature compensated current source.	12.00	10.00	8.00
MC1526G	602B	36	8.0	Same as MC1525G except Darlington inputs.	60.00	48.00	36.00
MC1529G	602B	38	6.0	Same as MC1429G—specified over full temperature range.	11.25	9.35	7.50

Motorola Integrated Circuits

See Page 39 for Package Configuration and Explanations of Column Headings

HOW TO ORDER

Specify Dept. No., 50 D 26, Mfr's Type No. and Name. Example: 50 D 26 MC1514L-MOT Designates Motorola MC1514L

SENSE AMPLIFIERS—Cases: Suffix F, 606; G, 602A; L, 605C.

*—55° C to +125° C. †Differential Mode/Common Mode.

Description	Input Threshold (V_{th}, mVDC)	Voltage Gain (A_V, V/V)	Response Time (t_R, ns)	−55° to +125° C Type No.	EACH 1-24	EACH 25-99	EACH 100-999	0° to +75° C Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Dual differential comparator for level detection, low level sensing, and memory applications.	21.5/18.5*	1700 A_{VOL}	40	MC1514L	19.50	16.25	13.00	MC1414L	9.75	8.10	6.50
Designed to detect dipolar differential signals derived by a core memory with cycle times as short as 0.5 μs.	17	85	20	MC1540F	24.00	20.00	16.00	MC1440F	13.50	11.25	9.00
				MC1540G	22.50	18.75	15.00	MC1440G	3.00	2.00	1.50
				MC1540L	22.50	18.75	15.00	MC1440L	12.00	10.00	8.00
Dual-channel gated sense amplifier with separate wideband differential input amplifiers.	17	85	30/15†	MC1541F	27.00	22.50	18.00	MC1441F	19.50	16.25	13.00
				MC1541L	27.00	22.50	18.00	MC1441L	19.50	16.25	13.00
MECL dual core-memory sense amplifier; adjustable threshold with excellent threshold stability.	20	..	10/3.0†	MC1543L	27.00	22.50	18.00	.....	.....	.....	.....
Differential comparator providing high accuracy and fast response time	0	1700 A_{VOL}	40	MC1710F	13.50	11.25	9.00	MC1710F	6.60	5.50	4.40
				MC1710G	11.25	9.35	7.50	MC1710CG	3.90	2.65	1.95
				MC1710L	11.25	9.35	7.50	MC1710CL	6.00	5.00	4.00
Dual differential comparator providing high accuracy and fast response time.	0	1500 A_{VOL}	40	MC1711F	20.25	16.85	13.50	MC1711CF	10.35	8.60	6.90
				MC1711G	18.00	15.00	12.00	MC1711CG	3.90	2.65	1.95
				MC1711L	18.00	15.00	12.00	MC1711CL	9.75	8.10	6.50

STEREO AMPLIFIER AND STEREO PREAMPLIFIER—Case 605C

Description	Temperature Range	Open Loop Voltage Gain A_{VOL}	Input Offset V mV	Output Swing V V rms	Channel Separation dB	Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Low noise stereo amplifier	0° to +75° C	10,000	3.0	5.5	70	MC1302L	5.25	4.35	3.50
Two amplifiers on single monolithic chip	0° to +75° C	10,000	1.5	5.5	70	MC1303L	5.25	4.35	3.50

STEREO DEMODULATORS—Case 605

Description	Temperature Range	Power Supply Voltage Range	THD %	Pd mW	Type No.	EACH 1-24	EACH 25-99	EACH 100-999
FM multiplex stereo demodulator derives left and right channel audio information from the detected composite signal	0° to +75° C	8.0-14 VDC	0.5	0.5	MC1304P	7.20	6.00	4.80

CHROMA DEMODULATORS—Case 605

Monolithic dual chroma demodulators designed for color TV, requiring only the chroma signal and two phases of reference to provide low impedance signals to drive the R-Y, G-Y, B-Y output stages directly. Temperature Range: 0° to +70° C.

Description	Reference V Range (V_{p-p})	Undistorted Output (V_{p-p})	Chroma Signal (V_{p-p})	B+ VDC	Output Current	Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Designed for color TV to demodulate the Chroma Signal	2.0-10	4.0	3.5	+20	30 mA	MC1325P	3.75	3.10	2.50

VOLTAGE REGULATORS—Cases: Suffix G, 602A; R, 614

Unique and versatile series of voltage regulators with excellent load regulation, excellent transient response and thermal stability, and high ripple rejection. Temperature Range: MC1500 Series —55° to +125° C; MC1400 Series, 0° to +75° C. *Case 605C.

Max. Input V	Lead Current Range G Pkg.	Lead Current Range R Pkg.	Power Dissipation G Pkg.	Power Dissipation R Pkg.	Output Impedance (megohms, typ)	Input Voltage	Type No.	EACH 1-24	EACH 25-99	EACH 100-999	Type No.	EACH 1-24	EACH 25-99	EACH 100-999
20	250 mADC	600 mADC	1.8 W	10 W	15-25	35 VDC	MC1560G	22.50	18.75	15.00	MC1460G	5.25	4.35	3.50
							MC1560R	30.00	25.00	20.00	MC1460R	6.75	5.60	4.50
35	250 mADC	600 mADC	1.8 W	17.5 W	20-35	35 VDC	MC1561G	30.00	25.00	20.00	MC1461G	6.75	5.60	4.50
							MC1561R	37.50	31.25	25.00	MC1461R	8.25	6.85	5.50
40			750 mW		.....	30 VDC	.....	.....	.....	.....	MC1466L*	12.75	10.60	8.50
25			6.0 mW/°C		.....	35 VDC	MC1566L*	36.75	30.60	24.50	.....	.....	.....	.....

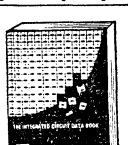
MULITPLIERS—Case 605C

Description	Linearity Error	Input Range	Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Applications include multiply, divide, square root, mean square, phase detector, frequency doubler, balanced modulator/demodulator, electronic gain control. Temperature Range: −55° C to +125° C.	X Input=1% max. Y Input=2% max.	±10 volts	MC1595L	27.00	22.50	18.00
Limited temperature version of above, with relaxed specifications for less critical uses. Temperature Range: 0° C to 70° C.	X Input=2% max. Y Input=4% max.	±10 volts	MC1495L	22.50	18.75	15.00

MOS—Case 605C. (Temperature Range, 0° to +75° C)

Description	Type No.	EACH 1-99	EACH 100-999	EACH 1000-4999
Low cost MOS IC is designed specifically for electronic organ applications. Operating frequency, DC to greater than 1.0 MHz. Noise immunity, 1.0 V or greater. Function: Quad Type T Flip-Flop.	MC1124L	6.30	5.40	4.50

MOTOROLA IC DATA 960-PAGE HANDBOOK



Comprehensive data book covering all Motorola digital IC families—MECL, MHTL, MTTL, MDTL, MRTL, mW-MRTL and MOS—linear IC 960 pages. 10x7".

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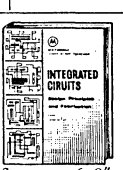

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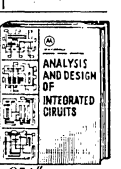

Detailed comparisons of different logic types, along with thorough quantitative analyses and design techniques. Emphasis placed on logic systems and circuit configurations. 545 pages. 7⅛x9⅞".

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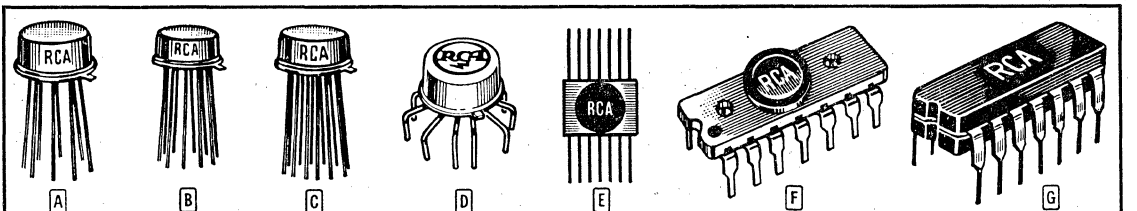
Linear Integrated Circuits

RCA



A TO-5 Type 8-Lead | B TO-5 Type 10-Lead | C TO-5 Type 12-Lead | D TO-5, 10 Formed Leads | E 14-Lead Flat-Pack | F TO-116 Ceramic Dual In-Line | G 14-Lead Plastic Dual In-Line

Broad capability integrated circuits offering linear and digital lines for a wide range of industrial, military and commercial applications and a variety of packages geared to today's most popular pin configurations. Feature single-chip, monolithic silicon, epitaxial passivated construction. Packages and cases referred to in Table below and on opposite page are illustrated above. See important "How to Order" information at right.

HOW TO ORDER

When ordering, specify Department No. 50 D 1, followed by Manufacturer's Type No. and Name
For Example: 50 D 1 CA3008-RCA
designates Radio Corp. of America type CA3008

OPERATIONAL AMPLIFIERS

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	Input Signal Voltage	Device Dissipation	Input Offset Voltage	Input Bias Current	Gain dB @ 1 kHz	Com. Mode Rejection Ratio	−3 dB Bandwidth	EACH 1-99	EACH 100-999	EACH 1000 Up
CA3008	Narrow-Band and Bandpass, Feedback, Video and DC Amplifier, Servo Driver, Scaling Adder, Oscillator, Balanced Modulator, Driver, Comparator, Multivibrator, Operational Functions	E	−55°C to	−4,	30 mW	1.08 mV	5.3 μA	60	94 dB	300	6.44	4.68	3.90
CA3008A		E	+125°C	+1 V	40 mW	0.9 mV	2.5 μA	60	@ 1 kHz	kHz	9.74	7.08	4.90
CA3010		C	−55°C to	−4,	30 mW	1.08 mV	5.3 μA	60	94 dB	300	2.61	1.90	1.58
CA3010A		C	+125°C	+1 V	40 mW	0.9 mV	2.5 μA	60	@ 1 kHz	kHz	4.78	3.48	2.90
CA3015		C	−55°C to	−8,	175 mW	1.37 mV	9.6 mA	70	103 dB	320	3.96	2.88	2.40
CA3015A		C	+125°C	+1 V		1 mV	4.7 μA	70	@ 1 kHz	kHz	6.44	4.68	3.90
CA3016		E	−55°C to	−8,	175 mW	1.37 mV	9.6 μA	70	103 dB	320	8.91	6.48	5.40
CA3016A		E	+125°C	+1 V		1 mV	4.7 μA	70	@ 1 kHz	kHz	11.39	8.28	6.90
CA3029		G	0°C to	−4,	30 mW	1.08 mV	5.3 μA	60	94 dB	300	1.62	1.18	.98
CA3029A		G	+70°C	+1 V	40 mW	0.9 mV	2.5 μA	60	@ 1 kHz	kHz	3.14	2.28	1.90
CA3030		G	0°C to	−8,	175 mW	1.37 mV	9.6 μA	70	103 dB	320	2.61	1.90	1.58
CA3030A		G	+70°C	+1 V		1 mA	4.7 μA	70	@ 1 kHz	kHz	4.79	3.48	2.90
CA3031/ 702A		A	−55°C to	−8,	85 mW	2 mV	3 μA	70	85 dB @ 1 kHz	700 kHz	4.95	3.60	3.00
CA3032/ 702C		A	0°C to	−8,	90 mW	5 mV	5 μA	70	80 dB @ 1 kHz	700 kHz	3.30	2.40	2.00
CA3033		F		−10,	120 mW	2.6 mV	83 nA	90	100 dB @ 1 kHz	230 kHz	4.79	3.48	2.90
CA3033A		F	−55°C to	−13,	250 mW	2.9 mV	103 nA	96	108 dB @ 1 kHz	360 kHz	8.09	5.88	4.90
CA3037		F	+125°C	−4,	30 mW	1.08 mV	5.3 μA	60	94 dB	300 kHz	3.14	2.28	1.90
CA3037A		F		+1 V	40 mW	0.9 mV	2.5 μA	60	@ 1 kHz	300 kHz	4.79	3.48	2.90
CA3038		F		−8,	175 mW	1.37 mV	9.6 μA	70	103 dB	320 kHz	4.79	3.48	2.90
CA3038A		F		+1 V	175 mW	1 mV	4.7 μA	70	@ 1 kHz	320 kHz	6.44	4.68	3.90
CA3047		G	0°C to	−10 V, +10 V	120 mW	2.6 mV	83 μA	90	100 dB @ 1 kHz	230 kHz	2.61	1.90	1.58
CA3047A		G	+70°C	−13 V, +10 V	250 mW	2.9 mV	103 μA	90	108 dB @ 1 kHz	360 kHz	4.79	3.48	2.90

RF AMPLIFIERS

CA3004	Push-Pull In and Out; Wide and Narrow Band, Modulator, AGC; Detector; Mixer; Limiter; Casc. Amp	C	−55°C to +125°C	−3.5, +3.5 V	26 mW	1.7 mV	21 μA	12 dB @ 100 MHz	98 dB @ 1 kHz	100 MHz	3.71	2.70	2.25
CA3005		C			26 mW	2.6 mV	19 μA	16 dB @ 100 MHz	101 dB @ 1 kHz	100 MHz	2.48	1.80	1.50
CA3006		C			26 mW	0.8 mV	19 μA	16 dB @ 100 MHz	101 dB @ 1 kHz	100 MHz	5.80	4.20	3.50

VIDEO AND WIDEBAND AMPLIFIERS

CA3001	DC, IF Video Amp; Schmidt Trigger; Mixer; Phase Inverter; AM/FM IF Amp; Gain-Controlled Linear Amp; Limiter; Low-Power Wideband Amp; Diff. Input Amp; Gen Purpose Amp; Dual Phase Detector; Compensated Reference Voltage Supply	C	−55°C to +125°C	−2.5 V, +2.5 V	78 mW	1.5 mV	16 μA	19 @ 1.75 MHz	88 dB @ 1 kHz	16 MHz	5.55	4.00	3.35
CA3021		C		−3 V, +3 V max.	4 mW	Quies. Output Voltage 2.2 V	AGC Source Current 0.8 mA	56 @ 0.5 MHz	NF 4.2 dB	2.4 MHz	3.14	2.28	1.90
CA3022		C			12.5 mW	1.9 V	0.8 mA	57 @ 2.5 MHz	4.4 dB	7.5 MHz	2.64	1.92	1.60
CA3023		C			35 mW	1.3 V	0.8 mA	53 @ 5 MHz	6.5 dB	16 MHz	2.56	1.86	1.55
CA3034VI		D		12 V P to P	Phase Detector, AFC Applications. Max. Ratings: Diss. 300 mW. Supply V, 15 V. Input V, 12 V p-p. Typ. Values: Total Drain, 9 mA. Input Impedance, 2000 ohms.						2.89	2.10	1.75
CA3035		B		1 V P to P	Wideband Amplifier (3) Array. Diss., 300 mW. Supply V, 15 V. Input V, 1 V p-p. Amp 1—44 dB gain. Amp 2—46 dB gain. Amp 3—42 dB gain.				6 dB	500 kHz	2.48	1.80	1.50
CA3035VI		D							2.5 MHz	2.5 MHz	2.48	1.80	1.50
CA3040		C	−55°C to +125°C	−3 V, +3 V	450 mW	Output Voltage 2.7 V	15 μA	Diff push-pull voltage gain 37 dB single-ended voltage gain 31 dB		55 MHz	4.87	3.54	2.95

SEE PAGE 6 FOR INTEGRATED CIRCUIT TESTERS

RCA Linear Integrated Circuits

AF AMPLIFIER

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	Input Signal Voltage	Device Dissipation	Input Offset Voltage	Input Bias Current	Gain dB	Com. Mode Rejection Ratio	−3 dB Bandwidth	EACH 1-99	EACH 100-999	EACH 1000-Up
CA3007	Direct-Coupled Driver for Class B AF Output Stage	C	−55°C to +125°C	−2.5, +2.5 V	30 mW	0.57 mV unbal.	11 μA	22 @ 1 kHz	77 dB @ 1 kHz	20 kHz	5.35	3.90	3.25

MULTI-PURPOSE WIDEBAND POWER AMPLIFIER

CA3020 CA3020A	Preamp, Phase Inverter, Driver, Power Output Stage	C	−55°C to +125°C	−3, +3 V	CA3020: S/N ratio, 70 dB. Max. power output. 550 mW. CA3020A: S/N ratio, 66 dB. Max. Power output, 1 W. Transducer power Gain, 58 dB					6 MHz	2.56 3.26	1.86 2.37	1.55 1.98

DC AMPLIFIER (Operating Temperature Range: −55° C to +125° C) (Case B)

CA3000	Mixer, Modulator, RC Coupled Feedback Amp; Crystal Oscillator; Sense Amp; Comparator; Schmitt Trigger	−2, +2 V	30 mW	1.4 mV	23 μA	37 @ 1 kHz	98 dB @ 1 kHz	650 kHz	3.80	2.76	2.30

IF AMPLIFIER (Operating Temperature Range: −55° C to +125° C) (Case B)

CA3002	Product Detector, AM Detector, IF and Video Amplifier	−3.5, +3.5 V	55 mW	2.2 mV unbal.	20 μA	24 @ 1.75 MHz	.....	11 MHz	3.71	2.70	2.25

DIFFERENTIAL/CASCODE AMPLIFIERS (Operating Temperature Range, −55° C to +125° C) (Case A)

CA3028A	RF and IF Amp; DC, Audio and Sense Amp; Converter in Comm. FM; Oscillator; Mixer; Limiter	6 V P-P	260 mW max.	.....	16.6 μA	17 @ 100 MHz	NF= −6.7 dB	120	1.47	1.07	.89
CA3028B		6 V P-P	220 mW max.	5 mV max.	16.6 μA	17 @ 100 MHz	NF= −6.7 dB	.....	2.06	1.50	1.25
CA3053		6 V P-P	150 mW max.	.....	.....	32 @ 10.7 MHz	.....	.....	.81	.59	.49

DUAL DIFFERENTIAL AMPLIFIERS (Operating Temperature Range, −55° C to +125° C.) (3050, Case F; 3051, Case G)

CA3050	Matched Dual Amp, Dual Sense Amp, Dual Schmitt Triggers, Mixers, Detectors	.....	150 mW max.	5 mV max.	200 nA	.....	65 dB @ 1 kHz	43 MHz	3.71	2.70	2.25
CA3051		.....	150 mW max.	5 mV max.	200 nA	.....	65 dB @ 1 kHz	43 MHz	2.72	1.98	1.65

FM IF AMPLIFIERS

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	Input Signal Voltage	Device Dissipation	DC Supply Voltage	Voltage Gain	Noise Figure	Input Limiting V (Knee)	EACH 1-99	EACH 100-999	EACH 1000-Up
CA3011	High-Gain Wideband IF Amplifier for FM Broadcast and TV Sound	B	−55°C to +125°C	−3, +3 V	120 mW	7.5V	67 dB @ 4.5 MHz	8.7 dB	300 μV	1.47	1.07	.89
CA3012				−3, +3 V	120 mW 190 mW	7.5 V 10 V	67 dB @ 4.5 MHz	8.7 dB	300 μV	1.82	1.32	1.10

FM IF AMPLIFIERS—DISCRIMINATORS—AF AMPLIFIERS

CA3013	IF Amplifier; AM and Noise Limiter: FM Detector; Audio Preamplifier	B	−55°C to +125°C	−3, +3 V	120 mW	7.5 V	67 dB @ 4.5 MHz	8.7 dB	300 μV	2.15	1.56	1.30
CA3014		B		−3, +3 V	120 mW 90 mW	7.5 V 10 V	67 dB @ 4.5 MHz	8.7 dB	300 μV	2.48	1.80	1.50

WIDEBAND AMPLIFIER—FM DETECTOR—AF PREAMPLIFIER/DRIVERS

CA3041	TV/FM IF Circuits	G	0°C to +85°C	Drives audio output tube (e. g. 6AQ5) directly; Drives NPN audio power output transistor (e. g. RCA 40424) directly, or high-gain power pentode (e. g. 12FX5 or 6EH5) directly	150 μV	2.06	1.50	1.25
CA3042		G			150 μV	2.06	1.50	1.25

SPECIAL FUNCTION SUB-SYSTEMS

CA3043	High-Gain IF Amp; Limiter; FM Detector; AM Preamp/Driver Dual Phase Detector with Output Amplifier	C	−55°C to +125°C	Can operate to 20 MHz in IF sections; Voltage Gain, 80 dB at 10.7 MHz; AM Rejection, 58 dB at 10.7 MHz Input Power Drain, 140 mW; Input Power, P_T=830 mW.	50 μV @ 10.7 MHz	2.81	2.04	1.70
CA3044		B			.....	2.31	1.68	1.40
CA3044-VI		D			.....	2.31	1.68	1.40

RCA TECHNICAL MANUALS

LINEAR INTEGRATED CIRCUIT FUNDAMENTALS

Invaluable aid for technicians and design engineers. Provides a detailed understanding of principles and design of linear integrated circuits. Has design equations and performance criteria derived for basic circuit configurations. Includes schematic diagrams, operating characteristics and performance date for many silicon integrated circuits. Has 352 pages. Overall size, 8¼x5¾". Shpg. wt., 1 lb.
23 D 7331 E.....2.00

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Has information on servicing transistors in home equipment—radio's, TV's, etc. Has sections on theory, amplifier principles, much more. 194 pp. 5½x8½".
23 D 7678 E. Wt., 7½ oz.....3.50

See Page 49 for Illustrations and Ordering Information

LINEAR INTEGRATED CIRCUIT ARRAYS

TRANSISTOR ARRAYS

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	Device Diss.	EACH TRANSISTOR V_{CEO}	EACH TRANSISTOR I_C	I_{CBO} T_A=25° C	Typ. h_{fe}	Typ. f_T	EACH 1-99	EACH 100-999	EACH 1000-Up
CA3018	Final IF Amplifier and 2nd Detector; Cascode and Video Amps; 100-MHz Cascode and 15-kHz Tuned RF Amps	C	−55° to +125° C	300 mW max.	15 V max.	50 mA max.	0.1 μA max.	110 @ 1 kHz	500 MHz	1.62	1.18	.98
CA3018A		C					0.04 μA max.			2.22	1.62	1.35
CA3026	6 Transistors Connected as 2 Differential Amps with Constant Current Sinks	C	−55° to +125° C	300 mW max.	15 V max.	.....	0.1 μA max.	110 @ 1 kHz	550 MHz	2.06	1.50	1.25
CA3045	Signal Processing Systems from DC to VHF	F		300 mW max.	15 V max.	.....	0.04 μA max.	110 @ 1 kHz	550 MHz	2.47	1.80	1.50
CA3046	Applications Requiring Limited Temp. Range	G	0° to +85° C	300 mW max.	15 V max.	.....	0.04 μA max.	110 @ 1 kHz	550 MHz	1.61	1.17	.98
CA3049	VHF Amp, VHF Mixer, IF Amp, Detectors, Multi-Function Combinations	C	−55° to +125° C	300 mW max.	15 V max.	50 mA max.	100 mA max.	.....	1.3 GHz	3.22	2.34	1.95

DUAL DARLINGTON ARRAY

CA3036	2 Independent Low-Noise Wideband Amplifier Channels	B	−55° to +125° C	300 mW max.	15 V max.	50 mA max.	0.5 μA max. 82 @ 1 mA	110 A 1 kHz	200 MHz	1.47	1.07	.89

DIODE ARRAYS

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	Device Diss.	EACH DIODE V_F	EACH DIODE $V_{(BR)R}$	Voltage Limits	DC Reverse I_R Typ.	EACH 1-99	EACH 100-999	EACH 1000-Up
CA3019	Diode Gate for Chopper-Modulator Use, Modulator, Mixer, Balanced Modulator, Analog Switch	B	−55° to +125° C	120 mW max.	0.73 V	4 V	−3 to +12	10 μA	1.62	1.18	.98
CA3039	Six Matched Diodes, Ultra-Fast Switching, Low Capacitance	C	−55° to +125° C	450 mW max.	0.73 V	5 V	.....	.....	1.61	1.17	.98

ULTRA-HIGH GAIN WIDEBAND AMPLIFIER ARRAYS

Type No.	Circuit Applications	Pkg. Fig.	Oper. Temp. Range	CHARACTERISTICS Maximum Limits	CHARACTERISTICS Typical Values	EACH 1-99	EACH 100-999	EACH 1000-Up
CA3035	3 Independent General-Purpose Amplifiers	B	−55° to +125° C	Input Signal Volt., 1 V p-p Device Dissipation, 300 mW Supply Voltage, 15 V	Cascade Voltage Gain @ 40 kHz, 129 dB Noise Figure (Amplifier 1), 6 dB Sensitivity, 100 μV	2.48	1.80	1.50
CA3035VI		D				2.48	1.80	1.50
CA3048	Multi-Channel or Cascade Oper., Low-Level Preamp, Equalizers, Mixers	G	−25° to +85° C	Typical Noise Fig. at 1 kHz, 2 dB High Voltage Gain, 53 dB min. AC Input Voltage, 0.5 V rms		4.04	2.94	2.45

DIGITAL INTEGRATED CIRCUITS

CD4000 FAMILY OF COS/MOS INTEGRATED CIRCUITS

- Ultra-Low Power Dissipation
- 4-Volts Noise Immunity
- Temp. Range, —55° to —125°C
- Single 10-Volt Power Supply
- Fan-Outs Up to 50
- 10-Volt Logic Swing

Complementary-symmetry family of integrated circuits providing facilities for both memory and logic circuits plus provision for large-scale integration. Ideal for use with both military and commercial digital equipment. COS/MOS technology utilizes pairs of "N" and "P" MOS transistors in complementary configurations as logic elements. Provides the capability for considerably higher circuit density per chip area and involves fewer processing and masking operations than conventional bipolar IC's. Offers the digital system engineer the design possibilities for a complete, compatbile system encompassing both logic and memory circuits. functions. Features ultra-low quiescent power dissipation; 3 to 4 volts noise immunity; —55° to +125° operating temperature range; fan-outs up to 50; 10-volt logic swings. Circuit operation is relatively independent of individual MOS transistor characteristics. Wide selection of Gates, Flip-Flops, MSI (Medium-Scale Integration), and general-purpose circuits are available.

SEE PAGE 49 FOR PACKAGE ILLUSTRATIONS COS/MOS AND ORDERING INFORMATION

GATES

Type No.	Description	Pkg. Fig.	EACH 1-99	EACH 100-999	EACH 1000-Up
CD4000	Dual 3-Input	E	8.25	6.20	5.00
CD4000D	NOR Gate plus Inverter	F	6.60	4.80	4.00
CD4001	Quad 2-Input	E	9.50	6.90	5.75
CD4001D	NOR Gate	F	7.85	5.70	4.75
CD4002	Dual 4-Input	E	9.10	6.60	5.50
CD4002D	NOR Gate	F	7.45	5.40	4.50

FLIP-FLOPS

CD4003	Dual	E	13.05	10.80	9.00
CD4003D	D-Type	F	11.60	9.60	8.00

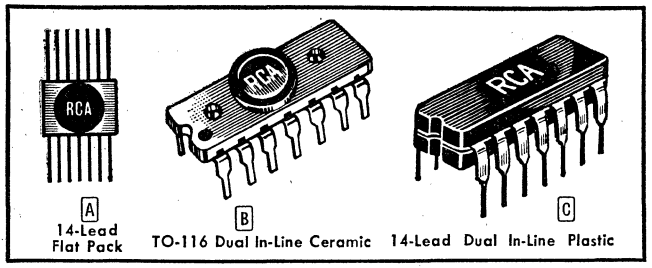
MSI (Medium-Scale Integration)

Type No.	Description	Pkg. Fig.	EACH 1-99	EACH 100-999	EACH 1000-Up
CD4004	7-Stage Ripple	E	15.95	13.20	11.00
CD4004T	Counter/Freq. Divider	TO-5	14.50	12.00	10.00
CD4005	16-Bit NDRO	E	15.95	13.20	11.00
CD4005D	Memory	F	14.50	12.00	10.00
CD4006	18-Bit Shift	E	26.50	21.90	18.25
CD4006D	Register	F	25.00	20.70	17.25

GENERAL-PURPOSE

CD4007	Dual Compl. Pair plus	E	6.60	4.80	4.00
CD4007D	Inverter	F	4.95	3.60	3.00

RCA Digital Integrated Circuits



HOW TO ORDER

When ordering, specify Dept. No. 50 D 1, followed by Mfr's Type No. and Name.
Example: 50 D 1 CD2150-RCA
Designates RCA Type CD2150

RCA's growing line of digital integrated circuits now includes the following types: **Ultra-High-Speed ECCSL Gates**—CD2150 Series in 14-lead ceramic flat packages. **High-Speed ECCSL Gates**—CD2100 Series in 14-lead ceramic flat package. **Low-Power DTL Gates**—CD2200 Series in 14-lead ceramic flat package; CD2200D Series in 14-lead dual-in-line ceramic package. **Medium Power DTL Gates**—see facing page.

ULTRA-HIGH-SPEED ECCSL GATES

CD2150 Series. Emitter-Coupled, Current-Steered Logic gates featuring exceptionally high-speed capability. Non-saturated operation: 3.6 ns tpd, 1+10 pF; 7.5 ns tpd, 6+60 pF. System noise immunity is 40% of logic swing. Integral reference voltage supply; constant power supply current. Complementary OR/NOR outputs with Phantom "OR" capability. Stable, monolithic silicon epitaxial construction with special aluminum-to-aluminum ultrasonic bonding for top performance. Designed to drive 100-ohm terminated transmission lines. Operating temperature range, +10 to +60° C. In table below, typical characteristics given at V_{EE} =—5 volts.

HIGH-SPEED ECCSL GATES

CD2100 Series. Emitter-Coupled, Current-Steered Logic gates with high-speed capability. Non-saturated operation: 6 ns tpd, 1+10 pF; 24 ns tpd, 6+60 pF. System noise immunity is 40% of logic swing. Full military temperature range of —55° to +125° C for reliable performance under a wide variety of operating conditions. Type CD2100 has complementary OR/NOR outputs. Integral reference voltage supply; constant power supply current. Monolithic silicon epitaxial construction with aluminum-to-aluminum ultrasonic bonding for excellent operating stability. In table below; typical characteristics are given at V_{EE} =—5.2 volts.

LOW-POWER DTL FAMILY

CD2200 and CD2200D Series. Features low power dissipation of 2.3 mW per gate and 7.0 mW flip-flop. High breakdown-voltage input "diodes". Active pullup resistor outputs provide low impedance for driving high capacitance loads. Have stable monolithic silicon epitaxial construction; aluminum-to-aluminum ultrasonic bonding. Types CD2200, CD2201, and CD2202 have terminal configurations that are compatible with types 930, 946 and 932 integrated circuits. Full military operating temperature range of —55° to +125° C for operation even in critical systems. In table below, typical characteristics are given at V_{CC} =4 volts.

ULTRA-HIGH-SPEED ECCSL GATES (OR/NOR Positive Logic) (Fig. A)

*Output connected to —1.6 V through 100-ohm resistor. †Current drain per chip.

Type No.	Gate Description	Applications	Operating Conditions: Supply Oper. Temp. Range °C	Operating Conditions: Max. Supply Voltage Range V	Operating Conditions: Max. Fan-out per Gate (each output)	Typ. Characteristics—TA=25° C: Logic Levels "O" V	Logic Levels "1" V	DC Input Curr. mA	Noise Immunity V	Device Dissipation mW	Propagation Delay (Avg.): Speed ns	Propagation Delay (Avg.): Load Fan-out	EACH: 1-99	EACH: 100-999	EACH: 1000-Up
CD2150	Dual 4-Input	3rd Generation Business Computers; High Speed Commercial, Industrial and Scientific Computers	10 to 60	−4.5 to −5.5	6*	−1.6	−0.8	0.1	0.33	44 mA†	3.6	1+10 pF	3.96	2.88	2.40
CD2151	Dual 4-Input w/"Phantom OR"				6*	−1.6	−0.8	0.1	0.33	35 mA†	3.6	1+10 pF	3.96	2.88	2.40
CD2152	8-Input with "Phantom OR"				6*	−1.6	−0.8	0.1	0.33	40 mA†	3.6	1+10 pF	3.96	2.88	2.40
CD2153	Quadruple 2-Input w/"Phantom OR"				6*	−1.6	−0.8	0.1	0.33	35 mA†	3.6	1+10 pF	5.20	3.80	3.15

HIGH-SPEED ECCSL GATES (OR/NOR Positive Logic) (Fig. A)

‡Outputs unloaded. §Output unterminated.

Type No.	Gate Description	Applications	Operating Conditions: Supply Oper. Temp. Range °C	Operating Conditions: Max. Supply Voltage Range V	Operating Conditions: Max. Fan-out per Gate (each output)	Typ. Characteristics—TA=25° C: Logic Levels "O" V	Logic Levels "1" V	DC Input Curr. mA	Noise Immunity V	Device Dissipation mW	Propagation Delay (Avg.): Speed ns	Propagation Delay (Avg.): Load Fan-out	EACH: 1-99	EACH: 100-999	EACH: 1000-Up
CD2100	Dual 4-Input	High-Sp'd Comm., Ind. and Mil. Computers; Electronic Control and High-Frequency Digital Communications Equipment	−55 to +125	−4.68 to −5.72	12§	−1.55‡	−0.75‡	0.05	0.32	88	5.6	1+10 pF	6.20	4.50	3.75
CD2101	Quadruple 2-Input NOR				12§	−1.55‡	−0.75‡	0.05	0.32	120	5.6	1+10 pF	6.50	4.75	3.95

LOW-POWER DTL GATES (NAND Positive Logic) (Fig. A; D Types Fig. B)

Type No.	Gate Description	Applications	Operating Conditions: Supply Oper. Temp. Range °C	Operating Conditions: Max. Supply Voltage Range V	Operating Conditions: Max. Fan-out per Gate (each output)	Typ. Characteristics—TA=25° C: Logic Levels "O" V	Logic Levels "1" V	DC Input Curr. mA	Noise Immunity V	Device Dissipation mW	Propagation Delay (Avg.): Speed ns	Propagation Delay (Avg.): Load Fan-out	EACH: 1-99	EACH: 100-999	EACH: 1000-Up
CD2200 CD2200D	Dual 4-Input w/Expander Node	Aerospace, Airborne Computers, Portable Military Equipment, Instrumentation, and Industrial Control Equipment; other uses where circuits with low device dissipation and high noise immunity are required	−55 to +125	+3.8 to +6.3	6	+0.1	+3.4	−0.33	1.2	2.3/ gate	55	6+60 pF	5.20 5.20	3.80 3.80	3.15 3.15
CD2201 CD2201D	Quadruple 2-Input				6	+0.1	+3.4	−0.33	1.2	2.3/ gate	55	6+60 pF	5.45 5.45	3.95 3.95	3.30 3.30
CD2202 CD2202D	Dual 4-Input Buffer/Exp. Node				25	+0.1	+3.4	−0.33	1.2	12/ gate	48	25+ 250 pF	5.45 5.45	3.95 3.95	3.30 3.30
CD2203 CD2203D	J-K Flip-Flop w/Set-Reset				5	+0.1	+3.4	−0.33	1.2	7/ pkg.	130	5+50 pF	6.95 6.95	5.05 5.05	4.20 4.20
CD2204 CD2204D	Dual 4-Input Expander		Cap. expand. Fan-in to over 20 ECCSL. Compat. w/all inputs LPDTL Series gates Temp. Range, −55 to 125° C.			Low Cap. loading on expanded gate 4 pF typ. Forward Voltage, 0.72 V Typical Leakage Current, 5 nA.						.....	3.71 3.71	2.70 2.70	2.25 2.25
CD2205 CD2205D	Dual 3-Input Expandable AND/OR/NOT		−55 to +125	−3.8 to +6.3	6-Inv. Fan-out	+0.1	+3.4	−0.33	1.2	5/pkg.	71	6+60 pF	5.20 5.20	3.80 3.80	3.15 3.15

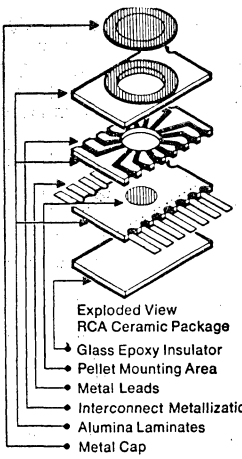
SEE PAGE 6 FOR INTEGRATED CIRCUIT TESTERS

CD2300 FAMILY OF MEDIUM-POWER DTL INTEGRATED CIRCUITS

HOW TO ORDER

When ordering, specify Dept. No. 50 D 1, followed by Mfr's Type No. and Name. Example: 50 D 1 CD2300/930-RCA Designates RCA Type CD2300/930

- High Fan-Out Drive Capability—25
- "Wired OR" Output Logic Capability
- Compatible with Low-Power DTL's
- Replace 830 and 930 Series DTL's
- Single 4.5 V to 5.5 V Power Supply
- Rugged Monolithic Construction



CD2300 Family. Consists of 19 basic medium-power Diode Transistor Logic circuits (DTL's) available in 3 package styles and two temperature ranges. 57 types in all. Direct replacement series for 830 and 930 medium-power DTL's.

Package Styles: CD/2300/930 Series—14-lead ceramic flat package (Figure A). CD2300D/930 Series—14-lead ceramic dual-in-line package (Figure B). CD2300E/830 Series—14-lead plastic dual in-line package (Figure C). Operating Temperature Range: 2300 and 2300D Series (Military)— —55° to +125°C; 2300E Series (Commercial)— 0° to +75°C.

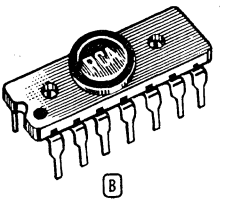
Entire CD2300 family is interchangeable with the familiar 830 and 930 DTL circuits. Offer improved performance and high reliability. They are compatible in pin configuration, power supply and logic levels with the CD2200 family of low-power DTL circuits described on opposite page.

Circuits are provided with either 6000-ohm or 2000-ohm (pullup) resistors. The lower pull resistance provides faster rise time characteristics for driving high capacitance loads. Four Hex Inverter circuits permit using single diode inputs or expandable inputs with external discrete diodes or CD2314 Dual 4-diode Expander.

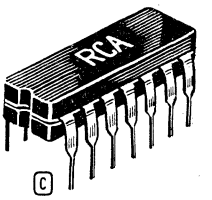
Average power dissipation (per gate)—8 mW typical. Average gate propagation delay—25 ns typical. (Fanout, 7 + 35 pF). Fan-out gate drive capability of 25. Noise immunity—1 V typical at 25°C. Circuits have "Wired OR" output logic capability; operate from single 4.5-5.5 V power supply.

Max. ratings at T_A=25° C. Power Supply Voltage: continuous over temp. range, 8 V; pulse duration less than 1 sec., 12 V. Input Forward Current, —10 mA. Input Reverse Current, 1 mA. Output Current (into output): Gates and Flip-Flops, 30 mA; High Fan-out Gates, 100 mA.

A
14-Lead
Flat Pack



B
TO-116
Ceramic Dual In-line



C
14-Lead
Dual In-line Plastic

NAND GATES

Type No.	Circuit Description	Output Pull-Up	Fig. Pkg.	Oper. Temp. Range	EACH 1-99	EACH 100-999	EACH 1000 & Up
CD2300/930	Dual 4-Input, Expandable	6000 ohm	A	−55° to +125°C	4.13	3.00	2.50
CD2300D/930			B	+125°C	4.13	3.00	2.50
CD2300E/830			C	0° to +75°C	1.73	1.26	1.05
CD2301/961	Dual 4-Input Expandable	2000 ohm	A	−55° to +125°C	4.13	3.00	2.50
CD2301D/961			B		4.13	3.00	2.50
CD2301E/861			C	0° to +75°C	1.73	1.26	1.05
CD2306/932	Dual-4 Expandable, High Fan-Out	Transistor	A	−55° to +125°C	4.54	3.30	2.75
CD2306D/932			B		4.54	3.30	2.75
CD2306E/832			C	0° to +75°C	1.90	1.38	1.15
CD2307/944	Dual-4, Expandable, High Fan-Out	None	A	−55° to +125°C	4.54	3.30	2.75
CD2307D/944			B		4.54	3.30	2.75
CD2307E/844			C	0° to +75°C	1.90	1.38	1.15
CD2308/962	Triple 3-Input	6000 ohm	A	−55° to +125°C	4.54	3.30	2.75
CD2308D/962			B		4.54	3.30	2.75
CD2308E/862			C	0° to +75°C	1.90	1.38	1.15
CD2309/963	Triple 3-Input	2000 ohm	A	−55° to +125°C	4.54	3.30	2.75
CD2309D/963			B		4.54	3.30	2.75
CD2309E/863			C	0° to +75°C	1.90	1.38	1.15
CD2302/946	Quadruple 2-Input	6000 ohm	A	−55° to +125°C	4.54	3.30	2.75
CD2302D/946			B		4.54	3.30	2.75
CD2302E/846			C	0° to +75°C	1.90	1.38	1.15
CD2303/949	Quadruple 2-Input	2000 ohm	A	−55° to +125°C	4.54	3.30	2.75
CD2303D/949			B		4.54	3.30	2.75
CD2303E/849			C	0° to +75°C	1.90	1.38	1.15

HEX INVERTERS

CD2310/936	Diode Input	6000 ohm	A	−55° to +125°C	4.79	3.48	2.90
CD2310D/936			B		4.79	3.48	2.90
CD2310E/836			C	0° to +75°C	1.90	1.38	1.15
CD2311/937	Diode Input	2000 ohm	A	−55° to +125°C	4.79	3.48	2.90
CD2311D/937			B		4.79	3.48	2.90
CD2311E/837			C	0° to +75°C	1.90	1.38	1.15
CD2312	Expandable Input	6000 ohm	A	−55° to +125°C	4.79	3.48	2.90
CD2312D			B		4.79	3.48	2.90
CD2312E			C	0° to +75°C	1.90	1.38	1.15
CD2313	Expandable Input	2000 ohm	A	−55° to +125°C	4.79	3.48	2.90
CD2313D			B		4.79	3.48	2.90
CD2313E			C	0° to +75°C	1.90	1.38	1.15

CLOCKED FLIP-FLOPS

CD2304/945	R-S with J-K Capability	6000 ohm	A	−55° to +125°C	4.95	3.60	3.00
CD2304D/945			B		4.95	3.60	3.00
CD2304E/845			C	0° to +75°C	2.48	1.80	1.50
CD2305/948	R-S with J-K Capability	2000 ohm	A	−55° to +125°C	4.95	3.60	3.00
CD2305D/948			B		4.95	3.60	3.00
CD2305E/848			C	0° to +75°C	2.48	1.80	1.50

INPUT EXPANDER

CD2314/933	Dual 4-Diode	.....	A	−55° to +125°C	3.71	2.70	2.25
CD2314D/933		.....	B		3.71	2.70	2.25
CD2314E/833	Dual 4-Diode	.....	C	0° to +75°C	1.49	1.08	.90

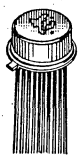
DUAL CLOCKED J-K FLIP-FLOPS

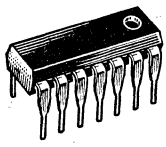
CD2315	Separate CLOCK	6000 ohm	A	−55° to +125°C	6.45	4.70	3.90
CD2315D			B		6.45	4.70	3.90
CD2315E			C	0° to +75°C	4.46	3.24	2.70
CD2316	Separate CLOCK	2000 ohm	A	−55° to +125°C	6.45	4.70	3.90
CD2316D			B		6.45	4.70	3.90
CD2316E			C	0° to +75°C	4.46	3.24	2.70
CD2317	Common CLOCK & CLEAR	6000 ohm	A	−55° to +125°C	6.45	4.70	3.90
CD2317D			B		6.45	4.70	3.90
CD2317E			C	0° to +75°C	4.46	3.24	2.70
CD2318	Common CLOCK & CLEAR	2000 ohm	A	−55° to +125°C	6.45	4.70	3.90
CD2318D			B		6.45	4.70	3.90
CD2318E			C	0° to +75°C	4.46	3.24	2.70

Texas Instruments Integrated Circuits

As New Types Are Released Allied Will Stock Them

FLAT PACKAGE


TO-5


DUAL-INLINE

HOW TO ORDER

When ordering Texas Instruments integrated circuits, specify Department Number 50 D 32, followed by Manufacturer's Type No. and Name.

For Example: 50 D 32 SN15830F-TI
Designates Texas Instruments Type SN15830F

HIGH-SPEED AND MODIFIED DTL INTEGRATED CIRCUITS

High-speed digital integrated circuits offering two versions for wide applications in military or industrial environments. Feature high-speed, low power dissipation, high noise immunity. Multiple circuit functions per package for wide versatility. Single-ended outputs—"Dot-OR" capability. In TO-84 flat pack or 14-lead dual in-line plug-in pack (designated by suffix "N" in table). Temperature ranges: Series 15 830, 0° to +70°C. Series 15 930, —55° to +125°C. Series 53, —55° to +125°C. Series 73, 0° to +70°C.

SERIES 15 830 HIGH-SPEED DIGITAL—DTL

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN15830F	Dual 4-Input Expandable NAND Gate	3.22	2.46	2.15
SN15831F	Flip-Flop with Set and Clear	4.50	3.44	3.00
SN15832F	Dual 4-Input Expandable Buffer	3.22	2.46	2.15
SN15833F	Dual 4-Input Expander	3.00	2.29	2.00
SN15844F	Dual 4-Input Expandable NAND "Power Gate"	3.22	2.46	2.15
SN15845F	Flip-Flop with Set and Clear	4.50	3.44	3.00
SN15846F	Quadruple 2-Input NAND Gate	3.22	2.46	2.15
SN15848F	Flip-Flop with Set and Clear	4.50	3.44	3.00
SN15850F	Pulse Triggered Binary	9.65	7.37	6.44
SN15851F	"One-Shot" Monostable Multivibrator	9.65	7.37	6.44
SN15862F	Triple 3-Input NAND Gate	3.22	2.46	2.15
SN15830N	Dual 4-Input Expandable NAND Gate	1.20	1.20	1.05
SN15831N	Flip-Flop with Set and Clear	2.66	2.03	1.77
SN15832N	Dual 4-Input Expandable Buffer	1.90	1.45	1.26
SN15833N	Dual 4-Input Expander	1.08	1.08	.95
SN15844N	Dual 4-Input Expandable NAND "Power" Gate	1.29	1.20	1.05
SN15845N	Flip-Flop with Set and Clear	1.68	1.68	1.47
SN15846N	Quadruple 2-Input NAND Gate	1.20	1.20	1.08
SN15848N	Flip-Flop with Set and Clear	1.68	1.68	1.47
SN15850N	Pulse Triggered Binary	3.60	3.60	3.15
SN15851N	"One-Shot" Monostable Multivibrator	3.60	3.60	3.15
SN15862N	Triple 3-Input NAND Gate	1.90	1.45	1.26

SERIES 15 930 HIGH-SPEED DIGITAL (Flat Pack)

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN15930	Dual 4-Input Expandable NAND Gate	4.12	3.15	2.75
SN15931	Flip-Flop with Set and Clear	5.77	4.41	3.85
SN15932	Dual 4-Input Expandable Buffer	4.12	3.15	2.75
SN15933	Dual 4-Input Expander	3.79	2.90	2.53
SN15944	Dual 4-Input Expandable NAND "Power Gate"	4.12	3.15	2.75
SN15945	Flip-Flop with Set and Clear	5.77	4.41	3.85
SN15946	Quadruple 2-Input NAND Gate	4.12	3.15	2.75
SN15948	Flip-Flop with Set and Clear	5.77	4.41	3.85
SN15950	Pulse Triggered Binary	12.37	9.45	8.25
SN15951	"One-Shot" Monostable Multivibrator	12.37	9.45	8.25
SN15962	Triple 3-Input NAND Gate	4.12	3.15	2.75

SERIES 53 DIGITAL—MODIFIED DTL (Flat Pack)

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN5300	J-K Flip-Flop with Preset	17.75	14.25	12.10
SN5301	J-K Flip-Flop with Preset and Clear	18.75	14.85	12.75
SN5302	Dual J-K Flip-Flop with Preset	22.75	18.00	15.50
SN5304	Dual J-K Flip-Flop with Preset and Clear	22.75	18.00	15.50
SN5310	5-Input Expandable NAND/NOR Gate	11.35	9.00	7.70
SN5311	Dual 5-Input NAND/NOR Gate	13.00	10.25	8.80
SN5315	10 Input NAND/NOR Gate	13.00	10.25	8.80
SN5331	Triple 3-Input NAND/NOR Gate	13.00	10.25	8.80
SN5340	Dual AND-OR Gate (2 and 3 Inputs)	11.35	9.00	7.70
SN5350	Quadruple Inverter/Driver	11.35	9.00	7.70
SN5370	Dual EXCLUSIVE-OR Gate	16.20	12.90	11.00

SERIES 73 DIGITAL—MODIFIED DTL (Flat Pack)

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN7300	J-K Flip-Flop with Preset	8.10	6.45	5.50
SN7301	J-K Flip-Flop with Preset and Clear	8.50	6.75	5.75
SN7302	Dual J-K Flip-Flop with Preset	10.50	8.35	7.15
SN7310	5-Input Expandable NAND/NOR Gate	5.65	4.50	3.85
SN7311	Dual 5-Input NAND/NOR Gate	6.50	5.15	4.40
SN7315	10-Input, Single Gate	6.50	5.15	4.40
SN7320	5-Input Expander	5.65	4.50	3.85
SN7330	Dual 3-Input NAND/NOR Gate	5.65	4.50	3.85
SN7331	Triple 3-Input NAND/NOR Gate	6.50	5.15	4.40
SN7350	Quadruple Inverter/Driver	5.65	4.50	3.85
SN7360	Quadruple 2-Input NAND/NOR Gate	6.50	5.15	4.40
SN7370	Dual EXCLUSIVE-OR Gate	7.70	6.15	5.25
SN7380	"One Shot" Monostable Multivibrator	9.75	7.75	6.60

SERIES 51 LOW-POWER DIGITAL RCTL INTEGRATED CIRCUITS

Selection of integrated circuits offering very low power dissipation and high fan-out. Multiple circuit functions per package for wide design capabilities in industrial and commercial applications. All have Master slice capability with familiar RCTL logic design. In glass-to-metal hermetically sealed welded flat package. Meets TO-84 for 14 leads; TO-89 for 10 leads. Military temperature range of —55° to +125°C for precision operation in a wide variety of of environments. See "How to Order" information above.

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN510B	R-S Flip-Flop Counter	28.25	22.50	19.20
SN5101B	R-S Flip-Flop Counter with Dual Preset	28.25	22.50	19.20
SN511B	R-S Flip-Flop Counter with Emitter Follower Outputs	31.10	24.75	21.10
SN512B	6-Input NAND/NOR Gate	22.30	17.75	15.15
SN513B	6-Input NAND/NOR Gate with Emitter-Follower Output	24.55	19.55	16.65
SN514B	Dual 3-Input NAND/NOR Gate	22.30	17.75	15.15
SN515B	EXCLUSIVE-OR Gate	22.30	17.75	15.15
SN516B	Dual 2-Input NAND/NOR Gate and Inverter/Buffer	22.30	17.75	15.15
SN5161B	Triple 2-Input NAND/NOR Gate	22.30	17.75	15.15
SN5162B	Triple 2-Input NAND/NOR Gate with Emitter-Follower Output	24.55	19.55	16.65
SN517B	Clock Driver	29.50	23.50	20.00
SN518B	"One Shot" Monostable Multivibrator	29.50	23.50	20.00
SN5191B	Pulse EXCLUSIVE-OR Gate	29.50	23.50	20.00

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Integrated Circuit Listings Continued on the Following Page

Texas Instruments Integrated Circuits

HOW TO ORDER

When ordering, specify Dept. No. 50 D 32, followed by Mfr's Type No. and Name. For Example:
50 D 32 SN5440-TI Designates Texas Instruments Type SN5440

See Page 54 for Complete Package Descriptions and Illustrations

SERIES 54 AND 74 HIGH-SPEED DIGITALS

SERIES 54 HIGH-SPEED DIGITAL—TTL (Flat Pack)

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN5440	Dual 4-Input Positive NAND "Power Gate"	6.10	4.86	4.14
SN5450	Dual AND-OR-INVERT Gate with Expander Inputs	5.31	4.23	3.60
SN5451	Dual EXCLUSIVE-OR Gate	5.31	4.23	3.60
SN5453	Quad-2 AND-OR-INVERT Gate with Expander Inputs	5.31	4.23	3.60
SN5454	Quad-2 AND-OR-INVERT Gate	5.31	4.23	3.60
SN5460	Dual 4-Input Expander	3.98	3.17	2.70
SN5470	Single-Phase J-K Flip-Flop	7.97	6.34	5.41
SN5474	Dual "D" Type Flip-Flop	10.61	8.44	7.20
SN5480	Gated Full Adder	14.28	11.37	9.70
SN5482	2-bit Binary Adder	17.98	14.31	12.20
SN5491	8-bit Shift Register	38.90	31.30	26.40

SERIES 74N TTL (Dual In-Line Pack)

SN7400N	Quadruple 2-Input Pos. NAND Gate	1.86	1.48	1.26
SN7410N	Triple 3-Input Positive NAND Gate	1.86	1.48	1.26
SN7420N	Dual 4-Input Positive Gate	1.58	1.26	1.07
SN7430N	8-Input Positive NAND Gate	1.58	1.26	1.07
SN7440N	Dual 4-Input Pos. NAND "Power"	2.13	1.70	1.45
SN7441AN	BCD-to-Decimal Decoder Driver	10.36	8.25	7.03
SN7450N	Dual AND-OR-INVERT Gate with Expander Inputs	1.86	1.48	1.26
SN7451N	Quad AND-OR-INVERT Gate	1.86	1.48	1.26
SN7453N	Quad-2 AND-OR-INVERT Gate with Expander Inputs	1.86	1.48	1.26
SN7454N	Quad-2 AND-OR-INVERT Gate	1.86	1.48	1.26
SN7470N	Single-Phase J-K Flip-Flop	2.80	2.23	1.90
SN7472N	Single Master/Slave Flip-Flop	2.60	2.07	1.77
SN7473N	Dual Master/Slave Flip-Flop	4.29	3.41	2.91
SN7474N	Dual "D" Type Flip-Flop	3.72	2.96	2.52
SN7476N	Dual Master/Slave Flip-Flop with Preset and Clear	4.51	3.59	3.06
SN7480N	Full Adder	5.02	3.99	3.40
SN7482N	2-bit Binary Adder	7.45	5.93	5.05
SN7483N	4-bit Binary Adder	11.82	9.41	8.02
SN7490N	Decade Counter	7.66	6.10	5.20
SN7491AN	8-bit Shift Register	10.38	8.26	7.05
SN7492N	Divide-by-12 Counter	7.66	6.10	5.20
SN7493N	4-bit Binary Counter	7.66	6.10	5.20

SERIES 74 HIGH-SPEED DIGITAL—TTL (Flat Pack)

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN7400	Quadruple 2-Input Positive NAND Gate	3.54	2.82	2.40
SN7410	Triple 3-Input Positive NAND Gate	3.54	2.82	2.40
SN7420	Dual 4-Input Positive NAND Gate	2.99	2.38	2.03
SN7430	8-Input Positive NAND Gate	2.99	2.38	2.03
SN7440	Dual 4-Input Pos. NAND "Power Gate"	4.06	3.23	2.76
SN7450	Dual AND-OR-INVERT Gate with Expander Inputs	3.54	2.82	2.40
SN7451	Dual AND-OR-INVERT Gate	3.54	2.82	2.40
SN7453	Quad-2 AND-OR-INVERT Gate with Expander Inputs	3.54	2.82	2.40
SN7460	Dual 4-Input Expander	2.65	2.11	1.80
SN7470	Single Phase J-K Flip-Flop	5.31	4.23	3.60
SN7472	Single Master/Slave Flip-Flop	4.95	3.94	3.36
SN7473	Dual Master/Slave Flip-Flop	8.14	6.48	5.53
SN7474	Dual "D" Type Flip-Flop	7.07	5.63	4.80
SN7480	Full Adder	9.52	7.58	6.46
SN7490	Decade Counter	14.53	11.57	9.86
SN7491	8-bit Shift Register	19.90	15.90	13.50

SERIES 54 930 HIGH-SPEED DIGITAL—TTL

FLAT PACK. Replacement for DTL 930 Series.

SN54 930	Dual 4-Input NAND Gate	6.50	5.15	4.40
SN54 932	Dual 4-Input Buffer	7.15	5.70	4.85
SN54 946	Quadruple 2-Input NAND Gate	6.50	5.15	4.40
SN54 948	Flip-Flop	9.05	7.25	6.15
SN54 962	Triple 3-Input NAND Gate	6.50	5.15	4.40
SN54 965	8-Input NAND Gate	6.50	5.15	4.40
SN54 966	Dual AND-OR-INVERT Gate	6.50	5.15	4.40

SERIES 74 930 HIGH-SPEED DIGITAL—TTL

FLAT PACK. Replacement for industrial temperature range 930 DTL.

SN74 930	Dual 4-Input NAND Gate	3.65	2.90	2.50
SN74 932	Dual 4-Input Buffer	4.05	3.20	2.75
SN74 946	Quadruple 2-Input NAND Gate	3.65	2.90	2.50
SN74 948	Flip-Flop	5.10	4.05	3.50
SN74 962	Triple 3-Input NAND Gate	3.65	2.90	2.50
SN74 965	8-Input NAND Gate	3.65	2.90	2.50
SN74 966	Dual AND-OR-INVERT Gate	3.65	2.90	2.50

SERIES 54H AND 74H TTL

Circuit Function	Flat Pack Type 54H	EACH 1-24	25-99	100-999	Flat Pack Type 74H	EACH 1-24	25-99	100-999
Triple 3-Input Positive NAND Gate	SN54H10	7.28	5.80	4.94	SN74H10	4.86	3.87	3.30
Triple 3-Input Positive AND Gate	.....	.....	.....	.....	SN74H11	4.86	3.87	3.30
Dual 4-Input Positive NAND Gate	SN54H20	5.63	4.48	3.82	SN74H20	3.75	2.99	2.55
Dual 4-Input Positive AND Gate	.....	.....	.....	.....	SN74H21	4.86	3.87	3.30
8-Input Positive NAND Gate	SN54H30	5.63	4.48	3.82	SN74H30	3.75	2.99	2.55
Dual 4-Input Positive NAND Buffer	SN54H40	7.28	5.80	4.94	SN74H40	4.86	3.87	3.30
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gate	SN54H50	6.64	5.28	4.50	SN74H50	4.42	3.52	3.00
Expandable 4-Wide 2-2-2-3 Input AND-OR-INVERT Gate	.....	.....	.....	.....	SN74H53	4.42	3.52	3.00
4-Wide 2-Input AND-OR-INVERT Gate	SN54H55	6.64	5.28	4.50	SN74H55	4.42	3.52	3.00
Expandable 2-Wide 4-Input AND-OR-INVERT Gate	SN54H60	4.97	3.96	3.37	SN74H60	3.32	2.64	2.25
Dual 4-Input Expander	SN54H61	4.97	3.96	3.37	SN74H61	3.32	2.64	2.25
Triple 3-Input Expander	SN54H62	4.97	3.96	3.37	SN74H62	3.32	2.64	2.25
J-K Flip-Flop with AND-OR Inputs	SN54H71	10.61	8.44	7.20	SN74H71	7.07	5.63	4.80
J-K Master-Slave Flip-Flop	SN54H72	10.61	8.44	7.20	SN74H72	7.07	5.63	4.80

FIELD-EFFECT TRANSISTORS

By Leonce J. Sevin Jr. of Texas Instruments, Inc. Invaluable aid for the design engineer, technician, anyone involved in solid-state electronics. Provides detailed coverage of low-level linear, nonlinear, and power circuit use of FET's. Also has many informative sections covering physical theory, electrical characterizations and applications. Detailed schematics and circuit diagrams. 144 pages. Size, 7⅛x9⅞". Shpg. wt., 2 lbs.
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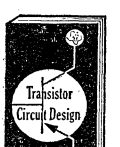

Prepared by the Engineering Staff of Texas Instruments, Inc. A comprehensive reference work written specifically to assist beginning and practicing circuit-design engineers. Has 39 chapters covering virtually every facet of transistor circuit design. Detailed illustrations and schematic diagrams show many basic circuit applications. Includes informative classification of all available transistors. Has 523 pages. Size, 7¼x10¼". Shpg. wt., 4 lbs.
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Texas Instruments and Sylvania Integrated Circuits

TEXAS INSTRUMENTS IC'S

HOW TO ORDER

When ordering, please specify Department No. 50 D 32, followed by the Manufacturer's Type No. and Name. For Example:
50 D 32 SN74H10N-TI
Designates Texas Instruments Type SN74H10N

SERIES 74HN—TTL DUAL IN-LINE

Type No.	Circuit Function	EACH 1-24	25-99	100-999
SN74H10N	Triple 3-Input Positive NAND Gate	2.33	1.85	1.58
SN74H11N	Triple 3-Input Positive AND Gate	2.55	2.03	1.73
SN74H30N	8-Input Positive NAND Gate	1.97	1.57	1.34
SN74H50N	Exp.Dual2-Wide,2-InputAND-OR-INVERT	2.33	1.85	1.58
SN74H53N	Exp.4-Wide2-2-2-3InputAND-OR-INVERT	2.33	1.85	1.58
SN74H55N	Exp.2-Wide4-InputAND-OR-INVERTGate	2.33	1.85	1.58
SN74H60N	Dual 4-Input Expander	1.74	1.39	1.18
SN74H20N	Dual 4-Input Positive NAND Gate	1.97	1.57	1.34
SN74H21N	Dual 4-Input Positive AND Gate	2.55	2.03	1.73
SN74H72N	J-K Master-Slave Flip-Flop	3.72	2.96	2.52

SERIES 73 DUAL IN-LINE MODIFIED DTL DIGITALS

SN7300N	Single-Phase J-K Flip-Flop with Preset	8.10	6.45	5.50
SN7301N	J-K Flip-Flop with Preset and Clear	8.50	6.75	5.75
SN7302N	Dual J-K Flip-Flop with Preset	10.50	8.35	7.15
SN7310N	5-Input Expandable NAND-NOR Gate	5.65	4.50	3.85
SN7311N	Dual 5-Input NAND-NOR Gate	6.50	5.15	4.40
SN7315N	10-Input NAND-NOR Gate	6.50	5.15	4.40
SN7320N	5-Input Expander	5.65	4.50	3.85
SN7330N	Dual 3-Input NAND-NOR Gate	5.65	4.50	3.85
SN7331N	Triple 3-Input NAND-NOR Gate	6.50	5.15	4.40
SN7350N	Quadruple Inverter-Driver	5.65	4.50	3.85
SN7360N	Quadruple 2-Input NAND-NOR Gate	6.50	5.15	4.40
SN7370N	Dual EXCLUSIVE-OR Gate	7.70	7.15	5.25
SN7380N	"One Shot" Monostable Multivibrator	9.75	7.75	6.60

SERIES 52/72 OPERATIONAL/DIFFERENTIAL AMPLIFIERS

Challenge the finest discrete-component amplifiers. Offer the advantages of smaller, simpler, more economical systems and increased reliability through substantial reduction of discrete components needed for any particular circuit design. Series 52 available in military temperature range (−55° to +125° C) for operation in severe environments. Series 72 available in commercial temperature range (0° to +70° C) for less critical applications. Suffix "L" in table indicates 10-pin TO-100 package. Others are flat package.

Type No.	Description	EACH 1-24	25-99	100-999
SN5231AL	General-Purpose Differential Amplifier	26.00	20.60	17.60
SN524A	General-Purpose Operational Amplifier	17.00	13.60	11.60
SN525	High-Performance Differential Amplifier	35.70	28.40	24.20
SN52702	General-Purpose Operational Amplifier	8.02	8.02	6.01
SN52702L	General-Purpose Operational Amplifier	3.15	3.15	2.35
SN52709L	High-Performance Operational Amplifier	2.85	2.85	2.15
SN52710	Differential Voltage Comparator	5.95	5.95	4.46
SN52710L	Differential Voltage Comparator	3.15	3.15	2.35
SN52711L	Dual Differential Voltage Comparator	3.45	3.45	2.60
SN724L	General-Purpose Operational Amplifier	12.15	9.70	8.25
SN725	General-Purpose Differential Amplifier	25.20	20.00	17.10
SN72702	General-Purpose Operational Amplifier	4.24	4.24	3.18
SN72702L	General-Purpose Operational Amplifier	2.75	2.75	2.00
SN72709L	General-Purpose Operational Amplifier	2.50	2.50	1.85
SN72710	Differential Voltage Comparator	4.77	4.77	3.58
SN72710L	Differential Voltage Comparator	2.75	2.75	2.00
SN72711	Dual Differential Voltage Comparator	7.33	7.33	5.50
SN7510	Wideband Video Amplifier	6.50	5.15	4.40
SN7510L	Wideband Video Amplifier	6.50	5.15	4.40

SYLVANIA SF AND SG "SUHL" IC'S

HOW TO ORDER

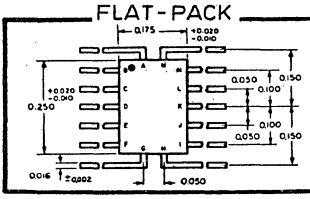
When ordering, please specify Department No. 50 D 12, followed by the Manufacturer's Type No. and Name. For Example:
50 D 12 SG42P-03-SYL
Designates Sylvania Type SG42P-03

Additions to SF and SG line of Sylvania Universal High Level Logic integrated circuits, available in low-cost molded plastic package. Use glassivated wires and chips providing inert interface between plastic and active device. Glass-coated chips are moisture-proof and protected from contamination from foreign matter for long-life performance and added reliability. Heat dissipation capability equivalent to that of a ceramic flat pack. Leads are attached to chips using special aluminum-to-aluminum ultrasonic bonding method. No possibility of self-generated bond failure due to "purple plague." All units have industrial operating temperature range of 0° to +75° C. Storage temperature range is −65° to +150° C. Operating characteristics as follows: V_{cc}, 4.75 to 5.5 volts. Input current, 10 milliamperes. Noise immunity, +1.0, −1.5 volts. All are in dual in-line molded plastic package (designated by suffix -03 in Type No.). All are SUHL II circuits featuring extremely high-speed capabilities while maintaining high levels of efficiency. Av. shpg. wt., 2 oz.

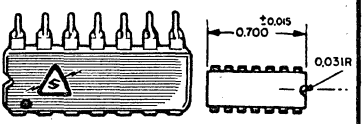
Type No.	Circuit Function	Av.Pd (mW)	Tpd (nsec)	Fan-out	EACH 1-999	1000-4999
SG42P-03	Dual 4-Input NAND/NOR Gate	15	10	12	2.30	1.75
SG43P-03		15	10	6	1.85	1.40
SG52P-03	Expandable Quad 2-Input AND/NOR Gate	30	12	12	2.55	1.95
SG53P-03		30	12	6	2.05	1.55
SG62P-03	Single 8-Input NAND/NOR Gate	15	12	12	2.30	1.75
SG63P-03		15	12	6	1.85	1.40
SG72P-03	Expandable Dual 2-Input AND/NOR Gate	20	12	12	2.55	1.95
SG73P-03		20	12	6	2.10	1.55
SG102P-03	Expandable Triple 3-Input AND/NOR Gate	25	12	12	2.55	1.95
SG103P-03		25	12	6	2.10	1.55
SG112P-03	Expandable Dual 4-Input AND/NOR Gate	20	12	12	2.55	1.95
SG113P-03		20	12	6	2.05	1.55
SG132P-03	Dual 4-Input Driver Gate	30	25	12	2.55	1.95
SG133P-03		30	25	6	2.00	1.50
SG142P-03	Quad 2-Input NAND/NOR Gate	15	10	12	2.30	1.75
SG143P-03		15	10	6	1.85	1.40
SG152P-03	Quad 2-Input OR Expander	20	4	.....	1.60	1.20
SG153P-03		20	4	.....	1.60	1.20
SG172P-03	Dual 4-Input OR Expander	5	3	.....	1.60	1.20
SG173P-03		5	3	.....	1.60	1.20
SG192P-03	Triple 3-Input NAND/NOR Gate	15	10	12	2.30	1.75
SG193P-03		15	10	6	1.85	1.40
SF52P-03	J-K Flip-Flop (AND Input)	40	20MHz	12	3.70	2.80
SF53P-03		40	20MHz	6	2.95	2.25
SF62P-03	J-K Flip-Flop (OR Input)	40	20MHz	12	3.70	2.80
SF63P-03		40	20MHz	6	2.95	2.25
SF102P-03	Dual 35 MHz J-K Flip-Flop Separate Clock	55	35MHz	9	4.95	3.70
SF103P-03		55	35MHz	5	3.95	2.95
SF112P-03	Dual 35 MHz J-K Flip-Flop Common Clock	55	35MHz	9	4.95	3.70
SF113P-03		55	35MHz	5	3.95	2.95
SF122P-03	Dual 50 MHz J-K Flip-Flop Separate Clock	55	50MHz	9	6.00	4.50
SF123P-03		55	50MHz	5	4.80	3.60
SF132P-03	Dual 50 MHz J-K Flip-Flop Common Clock	55	50MHz	9	6.00	4.50
SF133P-03		55	50MHz	5	4.50	3.60
SG212P-03	Expandable Dual 4-Input AND/NOR Gate	30	7	9	3.10	2.35
SG213P-03		30	7	5	2.40	1.85
SG222P-03	Quad 2-Input NAND/NOR Gate	22	6	9	2.80	2.10
SG223P-03		22	6	5	2.25	1.70
SG232P-03	Quad 2-Input OR Expander	28	2	.....	1.60	1.20
SG233P-03		28	2	.....	1.60	1.20
SG242P-03	Dual 4-Input NAND/NOR Gate	22	6	9	2.80	2.10
SG243P-03		22	6	5	2.25	1.70
SG252P-03	Expandable Quad 2-Input AND/NOR Gate	43	7.5	9	3.10	2.35
SG253P-03		43	7.5	5	2.40	1.85
SG262P-03	Single 8-Input NAND/NOR Gate	22	8	9	2.80	2.10
SG263P-03		22	8	5	2.25	1.70
SG272P-03	Dual 4-Input OR Expander	6.7	2	.....	1.60	1.20
SG273P-03		6.7	2	.....	1.60	1.20
SG302P-03	Expandable Triple 3-Input AND/NOR Gate	36	7	9	3.34	2.50
SG303P-03		36	7	5	2.74	2.05
SG312P-03	Expandable Dual 2-Input AND/NOR Gate	30	7	9	3.34	2.50
SG313P-03		30	7	5	2.74	2.05
SF202P-03	Single 50 MHz J-K Flip-Flop (AND Inputs)	55	50MHz	9	5.02	3.75
SF203P-03		55	50MHz	5	4.15	3.10
SF212P-03	Single 50 MHz J-K Flip-Flop (OR Inputs)	55	50MHz	9	5.02	3.75
SF213P-03		55	50MHz	5	4.15	3.10

Sylvania Integrated Circuits

FLAT-PACK



PLUG-IN-PACKAGE



HOW TO ORDER

When ordering; specify Dept. No. 50 D 12, followed by Mfr's Type No. and Name. For Example:

50 D 12 SG42-02-SYL

Designates Sylvania Integrated Circuit Type SG42-02.

Additions to the famous SF and SG line of Sylvania Digital Integrated Circuits. Consist of two SUHL (Sylvania Universal High Level Logic) lines. SUHL I integrated circuits provide the largest selection of compatible digital functions. Specially designed for applications up to and including 50 MHz, with gate propagation delays in the range of 10 nanoseconds. SUHL II integrated circuits satisfy extreme high-speed requirements while maintaining full levels of efficiency. Feature 6 nanosecond gates and up to 50 MHz J-K flip-flops. Both lines are compatible, and both are interchangeable, pin-for-pin. All units have industrial operating temperature range of 0° to +75° C. All units are available in either 14-lead flat pack (designated by suffix −02 in Type No.) or plug-in pack (designated by suffix −03 in Type No.). Integrated circuits below are all SUHL I types except those with *which are SUHL II types.

SF AND SG SERIES DIGITAL INTEGRATED CIRCUITS (Noise Immunity: +1.1, −1.5 V; §+1.0, −1.5 V)

All Sylvania Military and Commercial Integrated Circuits Are Available from Allied, Though They May Not Be Listed

Circuit Function	Supply VDC	Av Pd (mW)	TPD (nsec)	Fan-out Prime	Fan-out Std.	Flat Pack Type No.	EACH 1-24	EACH 25-99	EACH 100-249	Plug-In Type No.	EACH 1-24	EACH 25-99	EACH 100-999
Dual 4 Input	7	15	10	12	.....	SG42-02	4.25	3.40	2.90	SG42-03	4.25	3.40	2.90
NAND/NOR Gate	7	15	10	.....	6	SG43-02	3.50	2.80	2.40	SG43-03	3.50	2.80	2.40
Expandable Quad	7	30	12	12	.....	SG52-02	4.25	3.40	2.90	SG52-03	4.25	3.40	2.90
2 Input or Gate	7	30	12	.....	6	SG53-02	3.50	2.80	2.40	SG53-03	3.50	2.80	2.40
Single 8 Input	7	15	12	12	.....	SG62-02	4.25	3.40	2.90	SG62-03	4.25	3.40	2.90
NAND/NOR Gate	7	15	12	.....	6	SG63-02	3.50	2.80	2.40	SG63-03	3.50	2.80	2.40
Expandable Dual 2-	5	20	12	12	.....	SG72-02	4.25	3.40	2.90	SG72-03	4.25	3.40	2.90
Input Exclusive Gate	5	20	12	.....	6	SG73-02	3.50	2.80	2.40	SG73-03	3.50	2.80	2.40
Dual Pulse Shaper/	5	30	11	12	.....	SG82-02	4.90	3.90	3.30	SG82-03	4.90	3.90	3.30
Delay AND Gate	5	30	11	.....	6	SG83-02	4.10	3.25	2.75	SG83-03	4.10	3.25	2.75
Exclusive or	7	35	12	12	.....	SG92-02	4.25	3.40	2.90	SG92-03	4.25	3.40	2.90
with compliment	7	35	12	.....	6	SG93-02	3.50	2.80	2.40	SG93-03	3.50	2.80	2.40
Expandable Triple	7	25	12	12	.....	SG102-02	4.25	3.40	2.90	SG102-03	4.25	3.40	2.90
3 Input or Gate	7	25	12	.....	6	SG103-02	3.50	2.80	2.40	SG103-03	3.50	2.80	2.40
Expandable Dual	7	20	12	12	.....	SG112-02	4.25	3.40	2.90	SG112-03	4.25	3.40	2.90
4 Input or Gate	7	20	12	.....	6	SG113-02	3.50	2.80	2.40	SG113-03	3.50	2.80	2.40
Exp. Single 8	7	15	18	12	.....	SG122-02	4.25	3.40	2.90	SG122-03	4.25	3.40	2.90
I.P. NAND/NOR Gate	7	15	18	.....	6	SG123-02	3.50	2.80	2.40	SG123-03	3.50	2.80	2.40
Dual 4 Input Line	7	30	25	12	.....	SG132-02	4.90	3.90	3.30	SG132-03	4.90	3.90	3.30
Drvr./Lamp Drvr.	7	30	25	.....	6	SG133-02	4.10	3.25	2.75	SG133-03	4.10	3.25	2.75
Quad 2 Input	7	15	10	12	.....	SG142-02	4.25	3.40	2.90	SG142-03	4.25	3.40	2.90
NAND/NOR Gate	7	15	10	.....	6	SG143-02	3.50	2.80	2.40	SG143-03	3.50	2.80	2.40
Quad 2 Input	7	20	4	.....	.....	SG152-02	3.05	2.40	2.05	SG152-03	3.05	2.40	2.05
or Expander	7	20	4	.....	.....	SG153-02	3.05	2.40	2.05	SG153-03	3.05	2.40	2.05
Triple 2 Input	7	15	15	12	.....	SG162-02	4.90	3.90	3.30	SG162-03	4.90	3.90	3.30
Bus Driver	7	15	15	.....	6	SG163-02	4.10	3.25	2.75	SG163-03	4.10	3.25	2.75
Dual 4 Input	7	5	3	.....	.....	SG172-02	3.05	2.40	2.05	SG172-03	3.05	2.40	2.05
or Expander	7	5	3	.....	.....	SG173-02	3.05	2.40	2.05	SG173-03	3.05	2.40	2.05
Dual 4 Input and	7	.....	.....	.....	.....	SG182-02	3.05	2.40	2.05	SG182-03	3.05	2.40	2.05
Expander	7	.....	.....	.....	.....	SG183-02	3.05	2.40	2.05	SG183-03	3.05	2.40	2.05
Triple 3 Input	7	15	10	12	.....	SG192-02	3.50	2.80	2.40	SG192-03	4.25	3.40	2.90
NAND/NOR Gate	7	15	10	.....	6	SG193-02	3.50	2.80	2.40	SG193-03	3.50	2.80	2.40
Single-Phase SRT	7	30	12 MHz	12	.....	SF32-02	7.35	5.85	4.95	SF32-03	7.35	5.85	4.95
Flip-Flop	7	30	12 MHz	.....	6	SF33-02	6.15	4.90	4.15	SF33-03	6.15	4.90	4.15
J-K Flip-Flop	7	40	20 MHz	12	.....	SF52-02	5.70	4.55	3.85	SF52-03	5.70	4.55	3.85
(and inputs)	7	40	20 MHz	.....	6	SF53-02	4.80	3.85	3.25	SF53-03	4.80	3.85	3.25
J-K Flip-Flop	7	50	20 MHz	12	.....	SF62-02	5.70	4.55	3.85	SF62-03	5.70	4.55	3.85
(or inputs)	7	50	20 MHz	.....	6	SF63-02	4.80	3.85	3.25	SF63-03	4.80	3.85	3.25
Dual "D"	5	48	20 MHz	10	.....	SF81-02	12.90	10.30	8.80	SF81-03	12.90	10.30	8.80
Flip-Flop	5	48	20 MHz	.....	5	SF83-02	7.30	5.80	4.95	SF83-03	7.30	5.80	4.95
Dual 35 MHz J-K Flip-	5	55	35 MHz	9	.....	SF102-02§	8.80	7.05	5.95	SF102-03§	8.80	7.05	5.95
Flop. Separate Clock	5	55	35 MHz	.....	6	SF103-02§	7.35	5.85	4.95	SF103-03§	7.35	5.85	4.95
Dual 35 MHz J-K Flip-	5	55	35 MHz	9	.....	SF112-02§	8.80	7.05	5.95	SF112-03§	8.80	7.05	5.95
Flop, Common Clock	5	55	35 MHz	.....	5	SF113-02§	7.35	5.85	4.95	SF113-03§	7.35	5.85	4.95
Dual 50 MHz J-K Flip-	5	55	50 MHz	9	.....	SF122-02§	9.80	7.80	6.60	SF122-03§	9.80	7.80	6.60
Flop, Separate Clock	5	55	50 MHz	.....	5	SF123-02§	8.15	6.50	5.50	SF123-03§	8.15	6.50	5.50
Dual 50 MHz J-K Flip-	5	55	50 MHz	9	.....	SF132-02	9.80	7.80	6.60	SF132-03	9.80	7.80	6.60
Flop, Common Clock	5	55	50 MHz	.....	5	SF133-02	8.15	6.50	5.50	SF133-03	8.15	6.50	5.50
Expandable Single 8-In-	5	22	8	9	.....	SG202-02*	4.75	3.80	3.20	SG202-03*	4.75	3.80	3.20
put NAND/NOR Gate	5	22	8	.....	5	SG203-02*	3.95	3.15	2.65	SG303-03*	3.95	3.15	2.65
Expandable Dual	7	30	7	9	.....	SG212-02	4.75	3.80	3.20	SG212-03*	4.75	3.80	3.20
4 Input or Gate	7	30	7	.....	5	SG213-02*	3.95	3.15	2.65	SG213-03*	3.95	3.15	2.65
Quad 2 Input	7	22	6	9	.....	SG222-02*	4.75	3.80	3.20	SG222-03*	4.75	3.80	3.20
NAND/NOR Gate	7	22	6	.....	5	SG233-02*	3.95	3.15	2.65	SG223-03*	3.95	3.15	2.65
Quad 2 Input or	7	28	2	.....	.....	SG232-02*	3.05	2.40	2.05	SG232-03*	3.05	2.40	2.05
Expander	7	28	2	.....	.....	SG233-02*	3.05	2.40	2.05	SG233-03*	3.05	2.40	2.05
Dual 4 Input	7	22	6	9	.....	SG242-02*	4.75	3.80	3.20	SG242-03*	4.75	3.80	3.20
NAND/NOR Gate	7	22	6	.....	5	SG243-02*	3.95	3.15	2.65	SG243-03*	3.95	3.15	2.65

See Page 58 for Continuation of Sylvania Integrated Circuit Listing

Sylvania Integrated Circuits

HOW TO ORDER

When ordering, specify Dept. No. 50 D 12 followed by Mfr's Type No. and name. For Example:
50 D 12 SG252-02* SYL designates Sylvania Type SG252-02*

ATTENTION PURCHASING

Allied can supply the entire line of Sylvania Integrated Circuits in quantities up to 24,999. For special price and delivery information, contact the Allied facility nearest you.

SF AND SG SERIES DIGITAL INTEGRATED CIRCUITS (Cont'd)

(Noise Immunity: +1.0, —1.5 V.)

Circuit Function	Supply VDC	Av. Pd. (mW)	TPD (nsec)	Fan-Out Prime	Fan-Out Std.	Flat Pack Type No.	EACH 1-24	EACH 25-99	EACH 100-249	Plug-In Type No.	EACH 1-24	EACH 25-99	EACH 100-249
Expandable Quad 2 Input or Gate	7	43	7.5	9	.....	SG252-02*	4.75	3.80	3.20	SG252-03*	4.75	3.80	3.20
	7	43	7.5	.....	5	SG253-02*	3.95	3.15	2.65	SG253-03*	3.95	3.15	2.65
Single 8 Input NAND/NOR Gate	7	22	8	9	.....	SG262-02*	4.75	3.80	3.20	SG262-03*	4.75	3.80	3.20
	7	22	8	.....	5	SG263-02*	3.95	3.15	2.65	SG263-03*	3.95	3.15	2.65
Dual 4 Input or Expander	7	6.7	2	.....	.....	SG272-02*	3.05	2.40	2.05	SG272-03*	3.05	2.40	2.05
	7	6.7	2	.....	.....	SG273-02*	3.05	2.40	2.05	SG273-03*	3.05	2.40	2.05
Expandable Dual 4-Input AND/OR Gate	5	38	11	9	.....	SG282-02*	4.90	3.90	3.30	SG282-03*	4.90	3.90	3.30
	5	38	11	.....	5	SG283-02*	4.10	3.25	2.75	SG283-03*	4.10	3.25	2.75
Dual 2 and 3 Input Expander	5	15	7	.....	.....	SG292-02*	4.25	3.50	2.90	SG292-03*	4.25	3.40	2.90
	5	15	7	.....	.....	SG293-02*	3.50	2.80	2.50	SG293-03*	3.50	2.80	2.40
Expander Triple 3-Input AND/NOR Gate	5	36	7	9	.....	SG302-02*	4.75	3.80	3.20	SG302-03*	4.75	3.80	3.20
	5	36	7	.....	5	SG303-02*	3.95	3.15	2.65	SG303-03*	3.95	3.15	2.65
Expandable Dual 2-Input Exclusive OR Gate	5	30	7	9	.....	SG312-02*	4.75	3.80	3.20	SG312-03*	4.75	3.80	3.20
	5	30	7	.....	5	SG313-02*	3.95	3.15	2.65	SG313-03*	3.95	2.15	2.65
Triple 3 Input NAND/NOR Gate	5	22	6	11	.....	SG320-02	7.20	5.75	4.85	SG320-03	8.10	6.45	5.45
	5	22	6	.....	6	SG321-02	5.95	4.57	4.05	SG321-03	6.70	5.35	4.55
	5	22	6	9	.....	SG322-02	4.75	3.80	3.20	SG322-03	4.75	3.80	3.20
	5	22	6	.....	.....	SG323-02	3.95	3.15	2.65	SG323-03	3.95	3.15	2.65
Quad 2 Input Lamp Driver	5	18	30	10	.....	SG351-02	7.45	5.95	5.00	SG351-03	8.35	6.65	5.65
	5	18	30	.....	5	SG353-02	4.10	3.25	2.75	SG353-03	4.10	3.25	2.75
Single 50 MHz J-K Flip-Flop AND Input	5	55	50 MHz	9	.....	SF202-02*	8.15	6.50	5.50	SF202-03*	8.15	6.50	5.50
	5	55	50 MHz	.....	5	SF203-02*	6.80	5.40	4.60	SF203-03*	6.80	5.40	4.60
Single 50 MHz J-K Flip-Flop OR Input	5	55	50 MHz	9	.....	SF212-02*	8.15	6.50	5.50	SF212-03*	8.15	6.50	5.50
	5	55	50 MHz	.....	5	SF213-02*	6.80	5.40	4.60	SF212-03*	6.80	5.40	4.60
J-K Flip-Flop and Inputs	7	55	30 MHz	9	.....	SF252-02*	7.10	5.65	4.80	SF252-03*	7.10	5.65	4.80
	7	55	30 MHz	.....	5	SF253-02*	5.90	4.70	4.00	SF253-03*	5.90	4.70	4.00
J-K Flip-Flop (or Inputs)	7	55	30 MHz	9	.....	SF262-02*	7.10	5.65	4.80	SF262-03*	7.10	5.65	4.80
	7	55	30 MHz	.....	5	SF263-02*	5.90	4.70	4.00	SF263-03*	5.90	4.70	4.00

SM SERIES INTEGRATED CIRCUITS

Monolithic digital functional arrays combining as many as 172 conventional IC functions in a single package. Faster speed capabilities, less power drain, fewer external connections. Designed for greater reliability, less costly system assembly. Compatible with SUHL I and II. Noise immunity, ±1.0 V. Temperature range: MIL, —55° to +125° C. *Ceramic flat pack measures ¼x¼". Dividers marked † in the table below are programmable, * indicates 4-bit shift, right shift, left register.

Circuit Function	Supply VDC	Av. Pd. (mW)	TPD (nsec)	Drive *Drive Sense Amp.	Flat Pack Type No.	EACH 1-24	EACH 25-99	EACH 100-249	Plug-In Type No.	EACH 1-24	EACH 25-99	EACH 100-249
Full Adder	5	90 per stage	input to	20 mA at 0.45 V	SM10-02	9.95	7.95	6.75	SM10-03	9.95	7.95	6.75
	5			10 mA at 0.45 V	SM11-02	7.60	6.05	5.15	SM11-03	7.60	6.05	5.15
	5			20 mA at 0.45 V	SM12-02	6.05	4.85	4.10	SM12-03	6.05	4.85	4.10
	5			10 mA at 0.45 V	SM13-02	5.00	4.00	3.40	SM13-03	5.00	4.00	3.40
Dependent Carry Fast Adder	5	125 per stage	sum out 22	20 mA at 0.45 V	SM20-02	11.40	9.10	7.70	SM20-03	11.40	9.10	7.70
	5			10 mA at 0.45 V	SM21-02	8.75	6.95	5.90	SM21-03	8.75	6.95	5.90
	5			20 mA at 0.45 V	SM22-02	6.85	5.50	4.65	SM22-03	6.85	5.50	4.65
	5			10 mA at 0.45 V	SM23-02	5.70	4.55	3.85	SM23-03	5.70	4.55	3.85
Independent Carry For Adder	5	125 per stage	input to carry out	20 mA at 0.45 V	SM30-02	11.40	9.10	7.70	SM30-03	11.40	9.10	7.70
	5			10 mA at 0.45 V	SM31-02	8.75	6.95	5.90	SM31-03	8.75	6.95	5.90
	5			20 mA at 0.45 V	SM32-02	6.85	5.50	4.65	SM32-03	6.85	5.50	4.65
	5			10 mA at 0.45 V	SM33-02	5.70	4.55	3.85	SM33-03	5.70	4.55	3.85
Carry Decoder	5	25 per stage	2	10 mA at 0.45 V	SM41-02	7.35	5.85	4.95	SM41-03	7.35	5.85	4.95
	5		2	10 mA at 0.45 V	SM43-02	4.80	3.85	3.25	SM43-03	4.80	3.85	3.25
4-Bit Reg. Wired "or"	5	30 per bit	20	10 mA at 0.45 V	SM61-02	13.20	10.55	8.95	SM61-03	13.20	10.55	8.95
	5		20	10 mA at 0.45 V	SM63-02	6.60	5.30	4.45	SM63-03	6.60	5.30	4.45
4 Bit Reg. High Cap. Dr.	5	30 per bit	20	10 mA at 0.45 V	SM71-02	13.20	10.55	8.95	SM71-03	13.20	10.55	8.95
	5		20	10 mA at 0.45 V	SM73-02	6.60	5.30	4.45	SM73-03	6.60	5.30	4.45
16 Bit Scratch Pad Memory	5	250	25	*0.4 V max at 40 mA	SM81-02	25.85	20.60	17.45	SM81-03	25.85	20.60	17.45
	5	250	25	*0.4 V max at 40 mA	SM82-02	23.50	18.75	15.85	SM82-03	23.50	18.75	15.85
	5	250	25	*0.4 V max at 20 mA	SM83-02	19.60	15.60	13.20	SM83-03	19.60	15.60	13.20
Decade Frequency Divider	5	120	20	20 mA at 0.45 V	SM90-02	25.30	20.15	17.10	SM90-03	25.30	20.15	17.10
	5	85	17	10 mA at 0.45 V	SM91-02	25.30	20.15	17.10	SM91-03	25.30	20.15	17.10
	5	125	20	20 mA at 0.45 V	SM92-02	12.65	10.10	8.55	SM92-03	12.65	10.10	8.55
	5	85	17	10 mA at 0.45 V	SM93-02	12.65	10.10	8.55	SM93-03	12.65	10.10	8.55
4-Bit Shift §	5	120	25 MHz	16.6 mA at 0.4 V	SM113-02*	13.05	10.40	8.80	SM113-03	13.05	10.40	8.80
Parity Generator Checker	5	125	22	11.6 mA at 0.4 V	SM121-02	19.60	15.60	13.20	SM121-03	19.60	15.60	13.20
	5			11.6 mA at 0.4 V	SM123-02	9.80	7.80	6.60	SM123-03	9.80	7.80	6.60
Comparator 2-Wd. 4-Bit	5	120	17	11.6 mA at 0.4 V	SM131-02	19.60	15.60	13.20	SM131-03	19.60	15.60	13.20
	5			11.6 mA at 0.4 V	SM133-02	9.80	7.80	6.60	SM133-03	9.80	7.80	6.60
Binary Divider†	5	150	25 MHz	11.6 mA at 0.4 V	SM143-02*	13.05	10.40	8.80	SM143-03	13.05	10.40	8.80
Decade Divider†	5	150	25 MHz	11.6 mA at 0.4 V	SM153-02*	13.05	10.40	8.80	SM153-03	13.05	10.40	8.80
Binary Counter	5	135	25 MHz	11.6 mA at 0.4 V	SM163-02*	9.80	7.80	6.60	SM163-03	9.80	7.80	6.60
Decade Counter	5	135	25 MHz	11.6 mA at 0.4 V	SM173-02*	9.80	7.80	6.60	SM173-03	9.80	7.80	6.60
Bin. Up/Dn Counter	5	205	25 MHz	11.6 mA at 0.4 V	SM183-02*	26.90	21.45	18.15	SM183-03	26.90	21.45	18.15
Dec. Up/Dn Counter	5	205	25 MHz	11.6 mA at 0.4 V	SM193-02*	26.90	21.45	18.15	SM193-03	26.90	21.45	18.15
Select In Control	5	130	10-20	11.6 mA at 0.4 V	SM211-02	22.85	18.20	15.40	SM211-03	22.85	18.20	15.40
	5			11.6 mA at 0.4 V	SM213-02	11.45	9.10	7.70	SM213-03	11.45	9.10	7.70
Select Out Control	5	225	9-14	11.6 mA at 0.4 V	SM221-02	22.85	18.20	15.40	SM221-03	22.85	18.20	15.40
	5			11.6 mA at 0.4 V	SM223-02	11.45	9.10	7.70	SM223-03	11.45	9.10	7.70

Sprague Integrated Circuits

SPRAGUE
THE MARK OF RELIABILITY

SPRAGUE DIODE-CLAMPED INTEGRATED CIRCUITS

The Sprague line of Integrated Circuits includes a wide range of devices to give you a broad selection of digital and linear functions with full levels of efficiency and high speed. Ideal for applications in military, industrial, and commercial equipment that requires high performance characteristics and adherence to specifications.

HOW TO ORDER

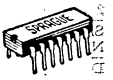
When Ordering, Specify Dept. 50 D 30, Followed by Mfr's Type Number and Name. For Example:

50 D 30 USN7400A

Designates Sprague Type USN7400A

SERIES 74 AND 74H TTL

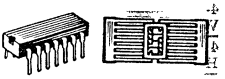
Integrated circuit logic modules offer maximum logic capability in a minimum amount of space, have clamp diode on each input to limit undershoot in typical system applications, prevent "line-ringing." Complex-function circuits take full advantage of semiconductor structures. *16-lead package. †High-speed devices. Wt., 1 oz.



Type	Circuit Function	EACH 1-24	25-99	100-999
USN7400A	Quad 2-Input NAND Gate	1.86	1.48	1.26
USN7401A	Quad 2-Input NAND Gate—No Collector Load	1.86	1.48	1.26
USN7402A	Quad 2-Input NOR Gate	2.13	1.70	1.45
USN7404A	Hex Inverter	2.33	1.85	1.58
USN7405A	Hex Inverter—No Collector Load	2.33	1.85	1.58
USN7408A	Quad 2-Input AND Gate	2.50	2.00	1.70
USN7410A	Triple 3-Input NAND Gate	1.86	1.48	1.26
USN7411A	Triple 3-Input AND Gate	2.50	2.00	1.70
USN7420A	Dual 4-Input NAND Gate	1.58	1.26	1.07
USN7430A	Single 8-Input NAND Gate	1.58	1.26	1.07
USN7440A	Dual 4-Input NAND Buffer Gate	2.13	1.70	1.45
USN7441B*	BCD-to-Decimal Decoder/Driver	15.40	12.25	10.50
USN7450A	Dual 2-Wide, 2-Input Expandable And/Or-Invert Gate	1.86	1.48	1.26
USN7451A	Dual 2-Wide, 2-Input And/Or Inverter Gate	1.86	1.48	1.26
USN7453A	4-Wide, 2-Input Expandable And/Or Inverter Gate	1.86	1.48	1.26
USN7454A	4-Wide, 2-Input And/Or Invert Gate	1.86	1.48	1.26
USN7460A	Dual 4-Input Expander	1.39	1.10	.94
USN7470A	D-C Clocked J-K Flip-Flop	2.80	2.23	1.90
USN7472A	J-K Master Slave Flip-Flop	2.60	2.07	1.77
USN7473A	Dual J-K Master Slave Flip-Flop	4.29	3.41	2.91
USN7474A	Dual D-Type Edge Triggered Flip-Flop	3.72	2.96	2.52
USN7475B*	Quadruple Bistable Latch	6.56	5.22	4.45
USN7476B*	Dual J-K Master Flip-Flop with Sd and Rd	4.51	3.59	3.06
USN7480A	Gated Full Adder	5.02	3.99	3.40
USN7482A	2-Bit Binary Full Adder	7.45	5.93	5.05
USN7483B*	4-Bit Binary Full Adder	11.82	9.41	8.02
USN7490A	Decade Counter	7.66	6.10	5.20
USN7491A	8-Bit Shift Register	10.38	8.26	7.05
USN7492A	Divide by-Twelve Counter	7.66	6.10	5.20
USN7493A	4-Bit Binary Counter	7.66	6.10	5.20
USN7494A	4-Bit Shift Register	8.21	6.54	5.57
USN7495A	4-Bit L/R Shift Register	8.21	6.54	5.57
USN7496A	5-Bit Shift Register	9.84	7.84	6.68
USN7410A	Dual J-K Master Slave Flip-Flop	4.29	3.41	2.91
USN74H00A†	Quad 2-Input NAND Gate	2.33	1.85	1.58
USN74H01A†	Quad 2-Input NAND Gate—No Collector Load	2.33	1.85	1.58
USN74H10A†	Triple 3-Input AND Gate	2.33	1.85	1.58
USN74H11A†	Triple 3-Input AND Gate	2.55	2.03	1.73
USN74H20A†	Dual 4-Input NAND Gate	1.97	1.57	1.34
USN74H30A†	Single 8-Input NAND Gate	1.97	1.57	1.34
USN74H40A†	Dual 4-Input NAND Buffer Gate	2.55	2.03	1.73
USN74H50A†	Dual 2-Wide, 2-Input And/Or Invert Gate, Expandable	2.33	1.85	1.58
USN74H51A†	Dual 2-Wide, 2-Input And/Or Invert Gate	2.33	1.85	1.58
USN74H52A†	4-Wide 2-2-2-3 Input Expandable And/Or Gate	2.33	1.85	1.58
USN74H53A†	4-Wide 2-2-2-3 Input Expandable And/Or Inverter Gate	2.33	1.85	1.58
USN74H54A†	4-Wide 2-2-2-3 Input And/Or Inverter Gate	2.33	1.85	1.58
USN74H55A†	2-Wide, 4-Input Expandable And/Or Inverter Gate	2.33	1.85	1.58
USN74H60A†	Dual 4-Input Expander For And/Or Inverter Gates	1.74	1.39	1.18
USN74H61A†	Triple 3-Input Expander For And/Or Gates	1.74	1.39	1.18
USN74H62A†	3-2-2-3 Input And/Or Expander for And/Or Inverter Gates	1.74	1.39	1.18
USN74H71A†	J-K Flip-Flop with And/Or Inputs	3.72	2.96	2.52
USN74H72A†	J-K Master Slave Flip-Flop	3.72	2.96	2.52

STANDARD HYBRID INTEGRATED CIRCUITS

Standard hybrid integrated circuits, now available in familiar flat-packs or new dual-in-line plastic packs. Complete line especially suited for military, computer, industrial, commercial and consumer markets.



HERMETIC FLAT PACKS

Complete line of hermetic flat packs, hermetic kits (right) and non-hermetic devices. *At right indicates dual-in-line. 1 oz.

Type	Circuit Function	EACH 1-99	100-999
UD-4001	4-Bit Ladder Switch	55.28	46.07
UD-4024	4-Bit Buffer	47.80	39.90
UT-1000	4-Bit 25K Ladder	37.62	31.35
UT-1002	12-Bit 25K Ladder	127.39	106.16
UD-4037	5-Bit Buffer	64.32	53.60
UD-4036	5-Bit Ladder Switch	74.66	62.22
UT-1001	5-Bit 25K Ladder	47.70	39.75
UT-1001A	5-Bit 25K Ladder	52.30	43.65
UD-4146	I Summing Ladder Switch	27.01	22.51
UD-4156	I Summing Ladder Switch	33.23	27.69
UT-1051	Scaling Network	16.20	13.50
UT-1057	Weighted Ladder	64.30	53.60
UD-1062	Weighted Ladder	57.89	48.24
UD-4131	Lamp Driver	21.84	18.20

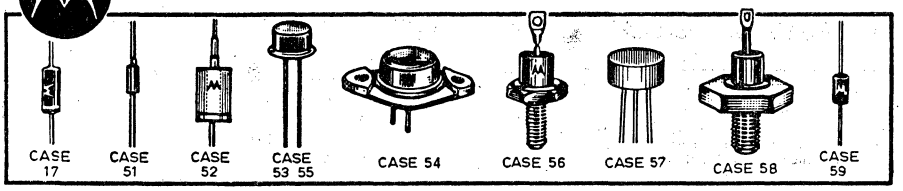
HERMETIC DEVICE KITS

Type	Circuit Function	EACH 1-24	25-99	100-999
UD-4074	Dual Pos. Ref. Buffer Switch	85.80	68.65	57.20
UD-4080	Dual Pos. Ref. Buffer Switch	85.80	68.65	57.20
UT-1041	BCD Adapter Network	25.10	20.10	16.75
UT-1070	4-Bit Ladder for BCD	45.60	36.45	30.40
UT-1071	4-Bit Ladder for BCD	50.30	40.25	33.55
UT-1072	4-Bit Ladder for BCD	55.80	44.60	37.20

NON-HERMETIC DEVICES

Type	Circuit Function	EACH 1-99	100-999
UT-1078*	Scaling Network (UT-1051) DIP	18.40	12.25
UT-1079*	Weighted Ladder (UT-1057) DIP	42.20	28.10
UT-1080*	Weighted Ladder (UT-1062) DIP	34.75	23.15
UD-4174*	I Summing Ladder Switch (UD-4146) DIP	22.75	15.20
UD-4175*	I Summing Ladder Switch (UD-4156) DIP	30.20	20.10
UD-4181*	Lamp Driver DIP	15.00	12.50

Motorola Silicon Zener Diodes



HOW TO ORDER

When ordering, please specify Dept. No. 49 D 26 followed by the Mfr's type No. and name. For Example: 49 D 26 1N1313-MOT designates Motorola 1N1313.

DIFFUSED ZENER DIODES—150 MW TO 50 WATTS

Extensive line of zener diodes covering all popular power categories (from 150 mW to 50 watts) and voltages (from 2.4 to 200 volts). All are 100% oscilloscope-tested. Wide selection of case sizes and mounting arrangements for just about every application.

150-MW DIFFUSED ZENER DIODES (Case 53) ±10% tolerance.

Type No.	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms Max.	EACH 1-99	EACH Assorted 100-999	EACH Single Type 100-999
1N1313	8.75	.200	.....			
1N1314	10.50	.200	.....			
1N1315	12.75	.200	.....			
1N1316	15.75	.200	.....			
1N1317	19.00	.200	.....	3.10	2.70	2.35
1N1320	34.50	.200	.....			
1N1321	41.00	.200	.....			
1N1323	58.00	.200	.....			
1N1324	71.00	.200	.....			
1N1326	105.00	.200	.....			

250-MW DIFFUSED ZENER DIODES (Case 51) ±5% tolerance.

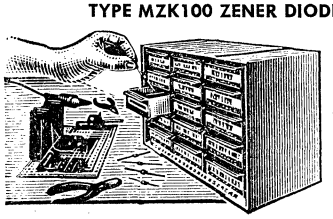
MZ4614	1.8	.250	1200	3.85	3.35	2.90
MZ4615	2.0	.250	1250	3.85	3.35	2.90
MZ4616	2.2	.250	1300	3.85	3.35	2.90
MZ4617	2.4	.250	1400	3.85	3.35	2.90
MZ4618	2.7	.250	1500	3.85	3.35	2.90
MZ4619	3.0	.250	1600	3.85	3.35	2.90
MZ4620	3.3	.250	1650	3.85	3.35	2.90
MZ4621	3.6	.250	1700	3.85	3.35	2.90
MZ4622	3.9	.250	1650	3.85	3.35	2.90
MZ4623	4.3	.250	1600	3.85	3.35	2.90
MZ4624	4.7	.250	1550	3.85	3.35	2.90
MZ4625	5.1	.250	1500	3.85	3.35	2.90
MZ4626	5.6	.250	1400	3.85	3.35	2.90
MZ4627	6.2	.250	1200	3.85	3.35	2.90

¼-WATT PASSIVATED DIFFUSED ZENER DIODES (Case 51)

Maximum noise density, N_D @ I_{ZT}, 40 μV per square root cycle. Types below have standard tolerance of 5%.

1N4099	6.8	.250	200	3.85	3.35	2.90
1N4100	7.5	.250	200	3.85	3.35	2.90
1N4101	8.2	.250	200	3.85	3.35	2.90
1N4102	8.7	.250	200	3.85	3.35	2.90
1N4103	9.1	.250	200	3.85	3.35	2.90
1N4104	10	.250	200	3.85	3.35	2.90
1N4105	11	.250	200	3.85	3.35	2.90
1N4106	12	.250	200	3.85	3.35	2.90
1N4107	13	.250	200	3.85	3.35	2.90
1N4109	15	.250	100	3.85	3.35	2.90
1N4111	17	.250	100	3.85	3.35	2.90
1N4112	18	.250	100	3.85	3.35	2.90
1N4113	19	.250	150	3.85	3.35	2.90
1N4114	20	.250	150	3.85	3.35	2.90
1N4115	22	.250	150	3.85	3.35	2.90
1N4117	25	.250	150	3.85	3.35	2.90
1N4118	27	.250	150	3.85	3.35	2.90
1N4119	28	.250	200	3.85	3.35	2.90
1N4120	30	.250	200	3.85	3.35	2.90
1N4123	39	.250	200	5.05	4.35	3.80
1N4124	43	.250	250	5.05	4.35	3.80
1N4125	47	.250	250	5.05	4.35	3.80
1N4129	62	.250	500	5.05	4.35	3.80
1N4131	75	.250	700	5.05	4.35	3.80
1N4135	100	.250	1500	5.05	4.35	3.80

TYPE MZK100 ZENER DIODE HANDYLAB



$148.00 Value When Bought Separately. Ideal tool for the engineer and technician. Indispensable for lab and prototype work. 100 premium-quality Motorola 1-watt Surmetic zener diodes from 3.3 to 100 volts (±5% tol.), 15-drawer plastic cabinet.

MZK100.....79.00

V_{ZT} and Z_{ZT} @ I_{ZT}, zener breakdown voltage and impedance at test current. Z_{ZK} @ I_{ZK}, zener impedance at zener current near breakover knee. I_R @ V_R, leakage current at reverse bias voltages (before breakover). V_F @ I_F, forward voltage at forward current.

5-WATT DIFFUSED ZENER DIODES (Case 17)

Silicon oxide passivated for tight limits and better operating characteristics. 180-watt surge rating at 8.3 msec. Axial leads. A suffix, ±10% tolerance; add suffix "B" for ±5% tolerance.

Type No.	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms Max.	EACH 1-99	EACH Assorted 100-999	EACH Single Type 100-999
1N5333A	3.3	380	3.0			
1N5334A	3.6	350	2.5			
1N5335A	3.9	320	2.0			
1N5336A	4.3	290	2.0			
1N5337A	4.7	260	2.0			
1N5338A	5.1	240	1.5			
1N5339A	5.6	220	1.0			
1N5340A	6.0	200	1.0			
1N5341A	6.2	200	1.0			
1N5342A	6.8	175	1.0			
1N5343A	7.5	175	1.5			
1N5344A	8.2	150	1.5			
1N5345A	8.7	150	2.0			
1N5346A	9.1	150	2.0			
1N5347A	10	125	2.0			
1N5348A	11	125	2.5			
1N5349A	12	100	2.5			
1N5350A	13	100	2.5			
1N5351A	14	100	2.5			
1N5352A	15	75	2.5			
1N5353A	16	75	2.5	"A" suffix, ±10% tol.		
1N5354A	17	70	2.5	2.20	1.90	1.65
1N5355A	18	65	2.5			
1N5356A	19	65	3.0	"B" suffix, ±5% tol.		
1N5357A	20	65	3.0	2.45	2.10	1.85
1N5358A	22	50	3.5			
1N5359A	24	50	3.5			
1N5360A	25	50	4.0			
1N5361A	27	50	5.0			
1N5362A	28	50	6.0			
1N5363A	30	40	8.0			
1N5364A	33	40	10			
1N5365A	36	30	11			
1N5366A	39	30	14			
1N5367A	43	30	20			
1N5368A	47	25	25			
1N5369A	51	25	27			
1N5370A	56	20	35			
1N5371A	60	20	40			
1N5372A	62	20	42			
1N5373A	68	20	44			
1N5374A	75	20	45			
1N5375A	82	15	65			
1N5376A	87	15	75			
1N5377A	91	15	75			
1N5378A	100	12	90			
1N5379A	110	12	125			
1N5380A	120	10	170			
1N5381A	130	10	190	"A" suffix, ±10% tol.		
1N5382A	140	8.0	230	2.60	2.25	1.95
1N5383A	150	8.0	330			
1N5384A	160	8.0	350	"B" suffix, ±5% tol.		
1N5385A	170	8.0	380	2.85	2.50	2.15
1N5386A	180	5.0	430			
1N5387A	190	5.0	450			
1N5388A	200	5.0	480			

ATTENTION PURCHASING AGENTS

Allied maintains complete stocks of Motorola semiconductor devices with new types added as soon as they are released. Allied will take care of all your semiconductor needs, while saving you time and cutting your costs. You get factory OEM prices, same-day shipment and personalized service. Write, wire or phone the Allied facility nearest you for price and delivery information.

Specify Dept. No. 49 D 26, Mfr's Type No. and Name When Ordering

Motorola Silicon Zener Diodes

SEE PAGE 60 FOR ILLUSTRATIONS AND COLUMN EXPLANATIONS

400-mW DIFFUSED ZENER DIODES (Case 51)

Types 1N4370 to 1N759, No suffix ±10% tolerance; suffix "A," ±5% tolerance, Types 1N957 to 1N992, No suffix ±20% tolerance; suffix "A," ±10% tolerance. To order MIL-S-19500/127, use prefix "JAN"; for Meg-A-Life II, Level 1, add suffix "ML1"; for Meg-A-Life II, Level 2, add suffix "ML2"; for Meg-A-Life II, Level 3, add suffix "ML 3."

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	EACH 1-99	Assorted 100-999	Single Type 100-999
1N4370	2.4	20	30			
1N4371	2.7	20	30			
1N4372	3.0	20	29			
1N746	3.3	20	28			
1N747	3.6	20	24		No Suffix (±10% tolerance)	
1N748	3.9	20	23			
1N749	4.3	20	22	2.00	1.70	1.50
1N750	4.7	20	19			
1N751	5.1	20	17			
1N752	5.6	20	11			
1N753	6.2	20	7		"A" Suffix (±5% tolerance)	
1N754	6.8	20	5			
1N755	7.5	20	6			
1N756	8.2	20	8	2.75	2.35	2.05
1N757	9.1	20	10			
1N758	10.0	20	17			
1N759	12.0	20	30			
1N957	6.8	18.5	4.5			
1N958	7.5	16.5	5.5			
1N959	8.5	15	6.5			
1N960	9.1	14	7.5			
1N961	10	12.5	8.5			
1N962	11	11.5	9.5			
1N963	12	10.5	11.5		No Suffix (±20% tolerance)	
1N964	13	9.5	13			
1N965	15	8.5	16			
1N966	16	7.8	17	2.15	1.85	1.60
1N967	18	7.0	21			
1N968	20	6.2	25			
1N969	22	5.6	29			
1N970	24	5.2	33		"A" Suffix (±10% tolerance)	
1N971	27	4.6	41			
1N972	30	4.2	49	2.35	2.00	1.75
1N973	33	3.8	58			
1N974	36	3.4	70			
1N975	39	3.2	80			
1N976	43	3.0	93		"B" Suffix (±5% tolerance)	
1N977	47	2.7	105			
1N978	51	2.5	125	2.95	2.55	2.20
1N979	56	2.2	150			
1N980	62	2.0	185			
1N981	68	1.8	230			
1N982	75	1.7	270			
1N984	91	1.4	400			
1N985	100	1.3	500		No Suffix (±20%)	
1N986	110	1.1	750	2.60	2.25	1.95
1N987	120	1.0	900		"A" Suffix (±10%)	
1N988	130	.95	1100	3.00	2.60	2.25
1N989	150	.85	1500		"B" Suffix (±5%)	
1N990	160	.80	1700			
1N991	180	.68	2200	3.65	3.15	2.75
1N992	200	.65	2500			

1-WATT SURMETIC ZENER DIODES (Case 59)

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	EACH 1-99	Assorted 100-999	Single-Type 100-999
1N4728	3.3	76	10			
1N4729	3.6	69	10			
1N4730	3.9	64	9			
1N4731	4.3	58	9			
1N4732	4.7	53	8			
1N4733	5.1	49	7			
1N4734	5.6	45	5			
1N4735	6.2	41	2			
1N4736	6.8	37	3.5		No suffix, ±10% tol.	
1N4737	7.5	34	4.0			
1N4738	8.2	31	4.5	1.26	1.09	.95
1N4739	9.1	28	5.0			
1N4740	10	25	7		"A" suffix, ±5% tol.	
1N4741	11	23	8			
1N4742	12	21	9	1.93	1.66	1.45
1N4743	13	19	10			
1N4744	15	17	14			
1N4745	16	15.5	16			
1N4746	18	14	20			
1N4747	20	12.5	22			
1N4748	22	11.5	23			
1N4749	24	10.5	25			
1N4750	27	9.4	35			
1N4751	30	8.5	40			

1-WATT SURMETIC ZENER DIODES (Cont'd) (Case 59)

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	EACH 1-99	Assorted 100-999	Single-Type 100-999
1N4752	33	7.5	45			
1N4753	36	7.0	50			
1N4754	39	6.5	60			
1N4755	43	6.0	70			
1N4756	47	5.5	80		No suffix, ±10% tol.	
1N4757	51	5.0	95	1.26	1.09	.95
1N4758	56	4.5	110			
1N4759	62	4.0	125		"A" suffix, ±5% tol.	
1N4760	68	3.7	150			
1N4761	75	3.3	175	1.93	1.66	1.45
1N4762	82	3.0	200			
1N4763	91	2.8	250			
1N4764	100	2.5	350			

1-WATT LOW-VOLTAGE ZENER DIODES (Case 52)

Add suffix "A" for 5% tol. No suffix, 10% tol. *When ordering MIL types, add prefix "JAN." For Meg-A-Life II level 1, add suffix "ML1"; level 2, "ML2"; level 3, "ML3." MIL and Meg-A-Life types available in 5% tol. only, at slightly higher prices.

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	EACH 1-99	Assorted 100-999	Single-Type 100-999
*1N3821	3.3	76	10			
*1N3822	3.6	69	10			
*1N3823	3.9	64	9		No suffix, ±10% tol.	
*1N3824	4.3	58	9	2.10	1.85	1.60
*1N3825	4.7	53	8			
*1N3826	5.1	49	7			
*1N3827	5.6	45	5		"A" suffix, ±5% tol.	
*1N3828	6.2	41	2	2.65	2.30	2.00
1N3829	6.8	37	1.5			
1N3830	7.5	34	1.5			

1-WATT DIFFUSED ZENER DIODES (Case 52)

Add suffix "A" for 10% tolerance, suffix "B" for 5% tolerance. No suffix indicates normal 20% tolerance. For MIL types, add prefix JAN. For Meg-A-Life II, level 1, add suffix ML1; level 2, ML2; level 3, ML3. MIL and Meg-A-Life types available in 5% tolerance only, at slightly higher prices. Reverse polarity available on special order, add suffix "R."

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	EACH 1-99	Assorted 100-999	Single-Type 100-999
1N3016	6.8	37	3.5			
1N3017	7.5	34	4.0			
1N3018	8.2	31	4.5			
1N3019	9.1	28	5			
1N3020	10	25	7			
1N3021	11	23	8			
1N3022	12	21	9			
1N3023	13	19	10			
1N3024	15	17	14			
1N3025	16	15.5	16			
1N3026	18	14	20			
1N3027	20	12.5	22		No suffix, ±20% tolerance.	
1N3028	22	11.5	23			
1N3029	24	10.5	25	2.85	2.45	2.15
1N3030	27	9.5	35			
1N3031	30	8.5	40		"A" suffix, ±10% tolerance.	
1N3032	33	7.5	45			
1N3033	36	7.0	50	3.20	2.75	2.40
1N3034	39	6.5	60			
1N3035	43	6.0	70		"B" suffix, ±5% tolerance.	
1N3036	47	5.5	80			
1N3037	51	5.0	90	3.70	3.20	2.80
1N3038	56	4.5	110			
1N3039	62	4.0	125			
1N3040	68	3.7	150			
1N3041	75	3.3	175			
1N3042	82	3.0	200			
1N3043	91	2.8	250			
1N3044	100	2.5	350			
1N3045	110	2.3	450		No suffix, ±20% tolerance.	
1N3046	120	2.0	550	2.95	2.55	2.20
1N3047	130	1.9	700		"A" suffix, ±10% tolerance.	
1N3048	150	1.7	1000	3.25	2.80	2.45
1N3049	160	1.6	1100			
1N3050	180	1.4	1200		"B" suffix, ±5% tolerance.	
1N3051	200	1.2	1500	4.65	4.05	3.50

1.5-WATT DIFFUSED ZENER DIODES (Case 55)

Add suffix "A" for 10% tolerance, suffix "B" for 5% tolerance. No suffix indicates normal 20% tolerance. Reverse polarity available on Special Order. For reverse polarity, add suffix "R."

Type No.	Vz @ Izt Volts	Izt mA	Zzt@Izt Ohms (max.)	
1N3785	6.8	55	2.7	
1N3786	7.5	50	3.0	Prices same as 1N3790 to 1N3813, page 62
1N3787	8.2	46	3.5	
1N3788	9.1	41	4.0	
1N3789	10	37	5	

Motorola Silicon Zener Diodes

SEE PAGE 60 FOR ILLUSTRATIONS AND COLUMN EXPLANATIONS

1.5-WATT DIFFUSED ZENER DIODES (Cont'd) (Case 55)

**No suffix, 20% tolerance; †"A" suffix, 10% tolerance; §"B" suffix, 5% tolerance.

Type No.	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms (max)	EACH 1-99	Assorted 100-999	Single-Type 100-999
1N3790	11	34	6			
1N3791	12	31	7			
1N3792	13	29	8			
1N3793	15	25	10			
1N3794	16	23	11			
1N3795	18	21	13			
1N3796	20	19	15			
1N3797	22	17	16			
1N3798	24	16	17			
1N3799	27	14	20	No suffix, ±20% tol.		
1N3800	30	12	25	3.75	3.20	2.80
1N3801	33	11	30	"A" suffix, ±10% tol.		
1N3802	36	10	35	5.30	4.60	4.00
1N3803	39	10	40	"B" suffix, ±5% tol.		
1N3804	43	9.0	45	6.95	6.00	5.25
1N3805	47	8.0	55			
1N3806	51	7.4	65			
1N3807	56	6.7	75			
1N3808	62	6.0	85			
1N3809	68	5.5	95			
1N3810	75	5.0	110			
1N3811	82	4.5	130			
1N3812	91	4.1	150			
1N3813	100	3.7	200			
1N3815	120	3.1	350	4.75** 6.45† 8.35§	4.10** 5.60† 7.20§	3.55** 4.85† 6.30§
1N3817	150	2.5	700	4.75**	4.10**	3.55**
1N3818	160	2.3	750	7.05†	6.10†	5.30†
1N3820	200	1.9	1000	8.80§	7.60§	6.60§

10-WATT DIFFUSED ZENER DIODES (Case 56)

Add suffix "A" for 10% tol., suffix "B," 5% tol. No suffix, 20% tol. *For MIL types, add prefix JAN. For Meg-A-Life II, level 1, add suffix ML1; level 2, ML2; level 3, ML3. MIL and Meg-A-Life available in 5% tolerance only, at slightly higher prices. For reverse polarity in above types (same prices), add suffix "R." Quantities of 500 and up will be factory shipped. Contact Allied for prices.

Type No.	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms (max)	EACH 1-99	Assorted 100-999	Single-Type 100-499
*1N2970	6.8	370	1.2			
*1N2971	7.5	335	1.3			
*1N2972	8.2	305	1.5			
*1N2973	9.1	275	2.0			
*1N2974	10	250	3			
*1N2975	11	230	3			
*1N2976	12	210	3			
*1N2977	13	190	3			
1N2978	14	180	3			
*1N2979	15	170	3			
*1N2980	16	155	4			
*1N2982	18	140	4			
*1N2984	20	125	4			
*1N2985	22	115	5			
*1N2986	25	105	5			
1N2987	25	100	6	No suffix, ±20% tol.		
*1N2988	27	95	7	5.45	4.70	4.10
*1N2989	30	85	8	"A" suffix, ±10% tol.		
*1N2990	33	75	9	5.85	5.05	4.40
*1N2991	36	70	10	"B" suffix, ±5% tol.		
*1N2992	39	65	11	7.30	6.30	5.50
*1N2993	43	60	12			
1N2994	45	55	13			
*1N2995	47	55	14			
1N2996	50	50	15			
*1N2997	51	50	15			
1N2998	52	50	15			
*1N2999	56	45	16			
*1N3002	75	33	22			
*1N3003	82	30	25			
*1N3004	91	28	35			
*1N3005	100	25	40			
1N3006	105	25	45			
*1N3007	110	23	55			
*1N3008	120	20	75			
*1N3009	130	19	100			
*1N3011	150	15	175			
1N3013	175	14	250	6.00	5.15	4.50
*1N3014	180	14	260	9.00	7.75	6.75
*1N3015	200	12	300	13.75	11.90	10.35

HOW TO ORDER

Specify Dept. No. 49 D 26, Mfr's Type No. and Name. Example: 49 D 26 1N3790-MOT Designates Motorola 1N3790

10-WATT LOW-VOLTAGE ZENER DIODES

Add suffix "A" for 5% tolerance. No suffix in Type indicates 10% tolerance. For MIL types, add prefix JAN. For Meg-A-Life II, level 1, add suffix ML1; level 2, ML2, level 3; ML3. MIL and Meg-A-Life types, in 5% tolerance only, at slightly higher prices. For reverse polarity (at same prices) add suffix "R."

Type No. Case 56	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms (max)	EACH 1-99	Assorted 100-999	Single Type 100-999
1N3993	3.9	640	2.0			
1N3994	4.3	580	1.5			
1N3995	4.7	530	1.2	No suffix, ±10% tol.		
1N3996	5.1	490	1.1	5.65	4.90	4.25
1N3997	5.6	445	1.0	"A" suffix, ±5% tol.		
1N3998	6.2	405	1.1	7.70	6.65	5.80
1N3999	6.8	370	1.2			
1N4000	7.5	335	1.3			

50-WATT DIFFUSED ZENER DIODES

Add suffix "A" for 10% tolerance suffix "B" for 5% tolerance. No suffix, 20% tolerance. *For MIL types, add prefix JAN. For Meg-A-Life II, level 1, add suffix ML1; level 2, ML2; level 3, ML3. MIL and Meg-A-Life types in 5% tolerance only, at slightly higher prices. For reverse polarity (at same prices), add suffix "R."

Type No. Case 54	Type No. Case 58	Vz @ Izt Volts	Izt mA	Zzt @ Izt Ohms	EACH 1-99	Assorted 100-999	Single Type 100-999
*1N2804	1N3305	6.8	1850	0.2			
*1N2805	1N3306	7.5	1750	0.3			
*1N2806	1N3307	8.2	1500	0.4			
*1N2807	1N3308	9.1	1370	0.5			
*1N2808	1N3309	10	1200	0.6			
*1N2809	1N3310	11	1100	0.8			
*1N2810	1N3311	12	1000	1.0			
*1N2811	1N3312	13	960	1.1			
1N2812	1N3313	14	890	1.2			
*1N2813	1N3314	15	830	1.4			
.....	1N3315	16	780	1.6			
.....	1N3316	17	740	1.8			
*1N2816	1N3317	18	700	2.0			
1N2817	1N3318	19	660	2.2	No suffix, ±20% tol.		
*1N2818	1N3319	20	630	2.4	5.65	4.90	4.25
*1N2819	1N3320	22	570	2.5	"A" suffix, ±10% tol.		
*1N2820	1N3321	24	520	2.6	7.65	6.60	5.75
1N2821	1N3322	25	500	2.7	"B" suffix, ±5% tol.		
*1N2822	1N3323	27	460	2.8	10.65	9.20	8.00
.....	1N3324	30	420	3.0			
*1N2824	1N3325	33	380	3.2			
*1N2825	1N3326	36	350	3.5			
*1N2826	1N3327	39	320	4.0			
*1N2827	1N3328	43	290	4.5			
1N2828	1N3329	45	280	4.5			
*1N2829	1N3330	47	270	5.0			
1N2830	1N3331	50	250	5.0			
*1N2831	1N3332	51	245	5.2			
.....	1N3334	56	220	6			
*1N2833	1N3335	62	200	7			
*1N2834	.....	68	180	8			
*1N2835	.....	75	170	9			
.....	1N3338	82	150	11			
.....	1N3339	91	140	15			
*1N2838	1N3340	100	120	20			
1N2839	1N3341	105	120	25			
*1N2840	1N3342	110	110	30	No suffix, ±20% tol.		
*1N2841	1N3343	120	100	40	6.80	5.85	5.10
*1N2842	1N3344	130	95	50	"A" suffix, ±10% tol.		
.....	1N3345	140	90	60	11.30	9.75	8.50
*1N2843	1N3346	150	85	75	"B" suffix, ±5% tol.		
.....	1N3347	160	80	80			
.....	1N3848	175	70	85	17.95	15.50	13.50
*1N2846	1N3350	200	65	100			

50-WATT LOW-VOLTAGE ZENER DIODES

1N4557	1N4549	3.9	3.2	0.16	No suffix, ±20% tol.		
.....	1N4550	4.3	2.9	0.16	6.05	5.25	4.55
.....	1N4551	4.7	2.65	0.12	"A" suffix, ±10% tol.		
1N4560	1N4552	5.1	2.45	0.12	8.00	6.90	6.00
1N4561	1N4553	5.6	2.25	0.12	"B" suffix, ±5% tol,		
1N4562	1N4554	6.2	2.0	0.14	11.50	9.95	8.65
.....	.....	....	....	.....			
.....	.....	....	....	.....			

Motorola Silicon Reference Diodes

SEE PAGE 60 FOR ILLUSTRATIONS AND COLUMN EXPLANATIONS

250 MILLIWATT (Case 51)

For applications requiring zener currents of 0.5 to 1 mA. V_Z, 6.4 volts ±5% @ I_{ZT}, of 1.0 mA. Test temperatures: No suffix, (20% tolerance), 0, +25, +75°C. A suffix (10% tolerance), —55, 0, +25, +75, +100°C.

Type No.	ΔVz Volts (max.)	T. C. %/°C	Zzt Ohms (max.)	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
1N4571	0.024	0.005	100	7.30	6.30	5.50
1N4572	0.010	0.002	100	13.25	11.45	9.95
1N4573	0.005	0.001	100	24.25	21.00	18.25
1N4574	0.002	0.0005	100	56.50	48.85	42.50
1N4571A	0.050	0.005	100	8.10	7.00	6.10
1N4572A	0.020	0.002	100	14.75	12.75	11.10
1N4573A	0.010	0.001	100	27.00	23.35	20.30
1N4574A	0.005	0.0005	100	63.15	54.60	47.50

400 MILLIWATT TYPES (Case 51)

For types 1N4896 to 1N4899A. V_Z, 12.8 volts ±5% at I_{ZT} of 0.5 A. For types 1N4900 to 1N4903A. V_Z, 12.8 volts ±5% at I_{ZT} of 1.0 mA. For types 1N4904 to 1N4907A. V_Z, 12.8 volts ±5% at I_{ZT} of 2.0 mA. For types 1N4908 to 1N4911A. V_Z, 12.8 volts ±5% at I_{ZT} of 4.0 mA. For types 1N4916 to 1N4918A. V_Z, 19.2 volts ±5% at I_{ZT} of 0.5 mA. For types 1N4919 to 1N4921A. V_Z, 19.2 volts ±5% at I_{ZT} of 1.0 mA. For types 1N4922 to 1N4924A. V_Z, 19.2 volts ±5% at I_{ZT} of 2.0 mA. For types 1N4925 to 1N4928A. V_Z, 19.2 volts ±5% at I_{ZT} of 4.0 mA. Test temperatures: No suffix (20% tol.), +25, +75, +100°C). A suffix (10% tol.), —55, 0, +25, +75, +100°C.

1N4896	0.096	0.01	400	18.20	15.75	13.70
1N4897	0.048	0.005	400	20.90	18.05	15.70
1N4898	0.019	0.002	400	42.80	37.05	32.20
1N4899	0.010	0.001	400	74.10	64.05	55.70
1N4896A	0.198	0.01	400	20.10	17.35	15.10
1N4897A	0.099	0.005	400	23.40	20.25	17.60
1N4898A	0.040	0.002	400	47.60	41.15	35.80
1N4899A	0.020	0.001	400	82.45	71.30	62.00
1N4900	0.096	0.01	200	10.50	9.10	7.90
1N4901	0.048	0.005	200	13.15	11.40	9.90
1N4902	0.019	0.002	200	23.80	20.60	17.90
1N4903	0.010	0.001	200	43.75	37.85	32.90
1N4900A	0.198	0.01	200	11.70	10.10	8.80
1N4901A	0.099	0.005	200	14.65	12.65	11.00
1N4902A	0.040	0.002	200	26.60	23.00	20.00
1N4903A	0.020	0.001	200	48.65	42.10	36.60
1N4904	0.096	0.01	100	5.40	4.65	4.05
1N4905	0.048	0.005	100	6.60	5.70	4.95
1N4906	0.019	0.002	100	11.85	10.25	8.92
1N4907	0.010	0.001	100	21.85	18.90	16.45
1N4904A	0.198	0.01	100	6.00	5.15	4.50
1N4905A	0.099	0.005	100	7.20	6.20	5.41
1N4906A	0.040	0.002	100	13.15	11.40	9.90
1N4907A	0.020	0.001	100	24.35	21.05	18.30
1N4908	0.096	0.01	50	5.40	4.65	4.05
1N4909	0.048	0.005	50	6.60	5.70	4.95
1N4910	0.019	0.002	50	11.85	10.25	8.90
1N4911	0.010	0.001	50	19.75	17.05	14.85
1N4908A	0.198	0.01	50	6.00	5.15	4.50
1N4909A	0.099	0.005	50	7.20	6.20	5.40
1N4910A	0.040	0.002	50	13.15	11.40	9.90
1N4911A	0.020	0.001	50	22.00	19.05	16.55
1N4916	0.144	0.01	600	20.75	17.95	15.60
1N4917	0.072	0.005	600	28.05	24.25	21.10
1N4918	0.029	0.002	600	57.20	49.45	43.00
1N4916A	0.298	0.01	600	23.25	20.10	17.50
1N4917A	0.149	0.005	600	31.25	27.00	23.50
1N4918A	0.060	0.002	600	63.45	54.85	47.70
1N4919	0.144	0.01	300	14.05	12.15	10.55
1N4920	0.072	0.005	300	17.55	15.20	13.20
1N4921	0.029	0.002	300	31.80	27.50	23.90
1N4919A	0.298	0.01	300	15.60	13.50	11.75
1N4920A	0.149	0.005	300	19.40	16.80	14.60
1N4921A	0.060	0.002	300	35.35	30.60	26.60
1N4922	0.144	0.01	150	7.20	6.20	5.40
1N4923	0.072	0.005	150	8.75	7.60	6.60
1N4924	0.029	0.002	150	15.80	13.70	11.90
1N4922A	0.298	0.01	150	8.00	6.90	6.00
1N4923A	0.149	0.005	150	9.55	8.30	7.20
1N4924A	0.060	0.002	150	17.55	15.20	13.20
1N4925	0.144	0.01	75	7.20	6.20	5.40
1N4926	0.072	0.005	75	8.75	7.60	6.60
1N4927	0.029	0.002	75	15.80	13.70	11.90
1N4928	0.014	0.001	75	26.35	22.75	19.80
1N4925A	0.298	0.01	75	8.00	6.90	6.00
1N4926A	0.149	0.005	75	9.55	8.30	7.20
1N4927A	0.060	0.002	75	17.55	15.20	13.20
1N4928A	0.030	0.001	75	29.40	25.40	22.10

400 MILLIWATT (Case 51)

For Types 1N821 to 1N829A, V_Z, 6.2 volts ±5% @ I_{ZT}, 7.5 mA. For Types 1N3154 to 1N3157A, V_Z, 8.4 volts ±5% @ I_{ZT}, 10 mA. Test Temp.: —55, 0, +25, +75, +100° C. A suffix, 10% tol.

Type No.	ΔVz V. (max.)	T. C. %/°C	Zzt Ohms (max.)	EACH 1-24	EACH 25-99	EACH Asst'd 100-999	EACH Single Type 100-999
1N821	0.096	0.01	15	2.75	2.35	2.10	1.90
1N823	0.048	0.005	15	3.60	3.10	2.75	2.50
1N825	0.019	0.002	15	5.80	5.00	4.40	4.00
1N827	0.009	0.001	15	10.85	9.35	8.25	7.50
1N829	0.005	0.0005	15	16.30	14.05	12.35	11.25
1N821A	0.096	0.01	10	3.05	2.60	2.30	2.10
1N823A	0.048	0.005	10	3.90	3.35	2.95	2.70
1N825A	0.019	0.002	10	6.50	5.60	4.95	4.50
1N827A	0.009	0.001	10	13.05	11.25	9.90	9.00
1N829A	0.005	0.0005	10	19.55	16.85	14.85	13.50
1N3154	0.130	0.01	15	2.60	2.25	2.00	1.80
1N3155	0.065	0.005	15	3.55	3.05	2.70	2.45
1N3156	0.026	0.002	15	6.15	5.30	4.65	4.25
1N3157	0.013	0.001	15	7.60	6.55	5.75	5.25
1N3154A	0.172	0.015	15	3.60	3.10	2.75	2.50
1N3155A	0.086	0.005	15	4.35	3.75	3.30	3.00
1N3156A	0.034	0.002	15	7.10	6.10	5.40	4.90
1N3157A	0.017	0.001	15	11.10	9.55	8.40	7.65

500 MILLIWATT (Case 51)

For Types 1N935 to 1N939B, V_Z, 0.9 volts ±5% @ I_{ZT}, 7.5 mA. For Types 1N941 to 1N946B, V_Z, 11.7 volts ±5% @ I_{ZT}, 7.5 mA. Test Temperatures: No suffix (20% tol.), 0, +25, +75° C. A suffix (10% tol.)—55, 0, +25, +75, +100° C. B suffix (5% tol.), —55, 0, +25, +75, +100, +150° C. *Available as military and Meg-A-life II units at prices slightly higher than listed.

Type No.	ΔVz V. (max.)	T. C. %/°C	Zzt Ohms (max.)	EACH 1-24	EACH 25-99	EACH Asst'd 100-999	EACH Single Type 100-999
1N935	0.067	0.01	20	2.30	2.00	1.75	1.60
1N936	0.033	0.005	20	2.75	2.35	2.10	1.90
1N937	0.013	0.002	20	5.35	4.60	4.05	3.70
1N938	0.006	0.001	20	6.95	6.00	5.30	4.80
1N939	0.003	0.0005	20	18.00	15.50	13.65	12.40
1N935A	0.139	0.01	20	2.60	2.25	2.00	1.80
1N936A	0.069	0.005	20	3.55	3.05	2.70	2.45
1N937A	0.027	0.002	20	6.15	5.30	4.65	4.25
1N938A	0.013	0.001	20	7.55	6.50	5.70	5.20
1N939A	0.007	0.0005	20	25.35	21.85	19.25	17.50
*1N935B	0.184	0.01	20	3.55	3.05	2.70	2.45
1N936B	0.092	0.005	20	4.20	3.60	3.20	2.90
*1N937B	0.037	0.002	20	7.10	6.10	5.40	4.90
*1N938B	0.018	0.001	20	10.00	8.60	7.60	6.90
*1N939B	0.009	0.0005	20	27.35	23.55	20.75	18.85
1N941	0.088	0.01	30	3.20	2.75	2.40	2.20
1N942	0.044	0.005	30	3.50	3.00	2.65	2.40
1N943	0.018	0.002	30	6.90	5.95	5.20	4.75
1N944	0.009	0.001	30	10.15	8.75	7.70	7.00
1N945	0.004	0.0005	30	26.70	23.00	20.25	18.40
1N946	0.02	0.002	30	59.30	51.10	45.00	40.90
1N941A	0.181	0.01	30	3.40	2.90	2.55	2.34
1N942A	0.090	0.005	30	4.35	3.75	3.30	3.00
1N943A	0.036	0.002	30	6.95	6.00	5.30	4.80
1N946A	0.004	0.002	30	70.30	60.60	53.35	48.50
1N946B	0.005	0.002	30	77.00	66.35	58.40	53.10

750 MILLIWATT (Case 52)

For all types below, V_Z, 9.3 volts ±5% @ I_{ZT}, 10 mA. Test Temperatures: No suffix (20% tol.), 0, +25, +75° C. Suffix A (10% tol.), —55, 0, +25, +75, +100° C. Suffix B (5% tol.), —55, 0, +25, +75, +100, +150° C.

Type No.	ΔVz Volts (max.)	T. C. %/°C	Zzt Ohms (max.)	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
1N2620	0.070	0.01	15	4.10	3.55	3.05
1N2621	0.035	0.005	15	4.60	3.95	3.45
1N2622	0.014	0.002	15	7.60	6.55	5.70
1N2623	0.007	0.001	15	8.80	7.60	6.60
1N2624	0.003	0.0005	15	22.00	19.00	16.55
1N2620A	0.144	0.01	15	4.35	3.75	3.25
1N2621A	0.072	0.005	15	5.55	4.80	4.15
1N2622A	0.029	0.002	15	8.15	7.05	6.10
1N2623A	0.014	0.001	15	10.05	8.70	7.55
1N2624A	0.007	0.0005	15	28.80	24.90	21.65
1N2620B	0.191	0.01	15	4.90	4.20	3.65
1N2621B	0.095	0.005	15	6.75	5.85	5.05
1N2622B	0.038	0.002	15	9.35	8.05	7.00
1N2623B	0.019	0.001	15	13.50	11.65	10.15
1N2624B	0.010	0.0005	15	38.50	33.30	28.95

Motorola Diodes

SEE PAGE 60 FOR EXPLANATION OF COLUMN HEADS—ILLUSTRATIONS ON FACING PAGE

400 MILLIWATT DIODES (Case 51)

Types 1N4912 to 1N4915A. V_Z, 12.8 volts ±5% at I_{ZT} of 7.5 mA.
Types 1N4929 to 1N4932A. V_Z, 19.2 volts ±5% at I_{ZT} of 7.5 mA.
Test temperatures: No suffix (20% tolerance), +25, +75, +100° C. A suffix (10% tolerance), —55, 0, +25, +75, +100° C.

Type No.	V_Z Volts (max.)	T. C. %/°C	Z_{ZT} Ohms (max.)	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
1N4912	0.096	0.01	25	6.00	5 15	4.50
1N4913	0.048	0.005	25	7.20	6.20	5.40
1N4914	0.019	0.002	25	13.15	11.40	9.90
1N4915	0.010	0.001	25	21.95	18.95	16.50
1N4912A	0.198	0.01	25	10.15	8.80	7.65
1N4913A	0.099	0.005	25	13.15	11.40	9.90
1N4914A	0.040	0.002	25	20.20	17.50	15.20
1N4915A	0.020	0.001	25	29.40	25.40	22.10
1N4929	0.144	0.01	36	8.10	7.00	6.10
1N4930	0.072	0.005	36	9.70	8.40	7.30
1N4931	0.029	0.002	36	17.80	15.40	13.40
1N4932	0.014	0.001	36	29.40	25.40	22.10
1N4929A	0.298	0.01	36	13.75	11.90	10.35
1N4930A	0.149	0.005	36	17.80	15.40	13.40
1N4931A	0.060	0.002	36	26.85	23.25	20.20
1N4932A	0.030	0.001	36	39.10	33.80	29.40

Types 1N4575 to 1N4579A. V_Z, 6.4 volts ±5% at I_{ZT} of 2.0 mA.
Types 1N4580 to 1N4584A. V_Z, 6.4 volts ±5% at I_{ZT} of 4.0 mA.
Test temperatures: No suffix (20% tolerance), 0, +25, +75° C. A suffix (10% tolerance), —55, 0, +25, +75, +100° C.

Type No.	V_Z Volts (max.)	T. C. %/°C	Z_{ZT} Ohms (max.)	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
1N4575	0.048	0.01	50	3.00	2.60	2.25
1N4576	0.024	0.005	50	3.65	3.15	2.75
1N4577	0.010	0.002	50	6.60	5.70	4.95
1N4578	0.005	0.001	50	12.15	10.50	9.15
1N4579	0.002	0.0005	50	28.25	24.45	21.25
1N4575A	0.099	0.01	50	3.30	2.85	2.50
1N4576A	0.050	0.005	50	4.05	3.50	3.05
1N4577A	0.020	0.002	50	7.30	6.30	5.50
1N4578A	0.010	0.001	50	13.50	11.65	10.15
1N4579A	0.005	0.0005	50	31.40	27.15	23.60
1N4580	0.048	0.01	25	3.00	2.60	2.25
1N4581	0.024	0.005	25	3.65	3.15	2.75
1N4582	0.010	0.002	25	6.60	5.70	4.95
1N4583	0.005	0.001	25	12.15	10.50	9.15
1N4584	0.002	0.0005	25	28.25	24.45	21.25
1N4580A	0.099	0.01	25	3.30	2.85	2.50
1N4581A	0.050	0.005	25	4.05	3.50	3.05
1N4582A	0.020	0.002	25	7.30	6.30	5.50
1N4583A	0.010	0.001	25	13.50	11.65	10.15
1N4584A	0.005	0.0005	25	31.40	27.15	23.60

MOLDED ASSEMBLY REFERENCE DIODES (†Illus. on Page 60)

Type No.	Case	V_Z ±5% Volts	T. C. %/°C	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
*1N429	53†	6.2	0.01	5.45	4.70	4.10
1N1530	57†	8.4	0.002	16.55	14.30	12.45
1N1735	41	6.2	0.01	5.40	4.65	4.05
1N1736	41	12.4	0.01	8.75	7.60	6.60
1N1736A	41	12.4	0.005	10.70	9.25	8.05
1N1738A	41	24.8	0.005	16.20	14.05	12.20
1N2767	41	20.4	0.005	9.05	7.80	6.80
1N2767A	41	20.4	0.0025	11.70	10.10	8.80
1N2769	41	34.0	0.005	13.70	11.85	10.30
1N2769A	41	34.0	0.0025	17.15	14.85	12.90
1N2770	41	40.8	0.005	15.75	13.65	11.85
1N2770A	41	40.8	0.0025	20.70	17.90	15.55

*Military types available. Prices slightly higher.

PRECISION REFERENCE DIODES (Case 51)

V_Z=6.2 V. ±5% @ I_{ZT}=7.5 mA; Δ V_Z=2.5 mV DC. Test temp., +25, +75, +100° C.

Type No.	μV/ 1000 hr.	ppm/ 1000 hr.	EACH 1-10	EACH 11-99	EACH 100-999
MZ605	30	<5	54.55	47.15	41.00
MZ610	60	<10	27.80	24.05	20.90
MZ620	120	<20	20.95	18.10	15.75
MZ640	240	<40	18.55	16.05	13.95

V_Z=8.4 V. ±5% @ I_{ZT}=10 mA. ΔV_Z=3.5 mV DC. Test temp., +25, +75, +100° C.

MZ805	45	<5	46.55	40.25	35.00
MZ810	90	<10	22.35	19.30	16.80
MZ820	180	<20	16.30	14.10	12.25
MZ840	360	<40	13.95	12.05	10.50

750 MILLIWATT DIODES (Case 52)

V_Z, 9.4 volts ±0.4 V (±0.2 V suffix A, 10% to 1.). I_{ZT}, 10 mA.

Type No.	V_Z Volts (max.)	T. C. %/°C	Z_{ZT} Ohms (max.)	EACH 1-99	EACH Assorted 100-999	EACH Single-Type 100-999
1N2163	0.033	0.005	15	3.30	2.85	2.50
1N2163A	0.033	0.005	15	3.45	3.00	2.60
1N2166	0.007	0.001	15	6.80	5.85	5.10
1N2166A	0.007	0.001	15	8.10	7.00	6.10
1N2169	0.004	0.0005	15	16.95	14.65	12.75
1N2169A	0.004	0.0005	15	25.00	21.60	18.80
1N2164	0.086	0.005	15	4.50	3.90	3.40
1N2164A	0.086	0.005	15	5.50	4.75	4.15
1N2167	0.017	0.001	15	8.65	7.45	6.50
1N2167A	0.017	0.001	15	11.05	9.55	8.30
1N2170	0.009	0.0005	15	23.95	20.70	18.00
1N2170A	0.009	0.0005	15	36.95	31.95	27.80
1N2165	0.115	0.005	15	5.65	4.90	4.25
1N2165A	0.115	0.005	15	7.30	6.30	5.50
1N2168	0.023	0.001	15	11.90	10.30	8.95
1N2168A	0.023	0.001	15	15.95	13.80	12.00
1N2171	0.012	0.0005	15	34.85	30.15	26.20
1N2171A	0.012	0.0005	15	44.50	38.50	33.50

500-MILLIWATT ZENER REGULATOR DIODES (Case 51)

Type No.	V_Z @ I_{ZT} (V)	(mA)	EACH 1-24	25-99	100-249	250-499	500-999	1000-4999
1N5221	2.4	20						
1N5222	2.5	20						
1N5223	2.7	20						
1N5224	2.8	20						
1N5225	3.3	20						
1N5226	3.3	20						
1N5227	3.6	20						
1N5228	3.9	20						
1N5229	4.3	20						
1N5230	4.7	20						
1N5231	5.1	20						
1N5232	5.6	20						
1N5233	6.0	20						
1N5234	6.2	20						
1N5235	6.8	20						
1N5236	7.5	20						
1N5237	8.2	20						
1N5238	8.7	20						
1N5239	9.1	20						
1N5240	10	20						
1N5241	11	20						
1N5242	12	20						
1N5243	13	9.5						
1N5244	14	9.0						
1N5245	15	8.5						
1N5246	16	7.8						
1N5247	17	7.4						
1N5248	18	7.0						
1N5249	19	6.6						
1N5250	20	6.2						
1N5251	22	5.6						
1N5252	24	5.2						
1N5253	25	5.0						
1N5254	27	4.6						
1N5255	28	4.5						
1N5256	30	4.2						
1N5257	33	3.8						
1N5258	36	3.4						
1N5259	39	3.2						
1N5260	43	3.0						
1N5261	47	2.7						
1N5262	51	2.5						
1N5263	56	2.2						
1N5264	60	2.1						
1N5265	62	2.0						
1N5266	68	1.8						
1N5267	75	1.7						
1N5268	82	1.5						
1N5269	87	1.4						
1N5270	91	1.4						
1N5271	100	1.3						
1N5272	110	1.1						
1N5273	120	1.0						
1N5274	130	0.95						
1N5275	140	0.90						
1N5276	150	0.85						
1N5277	160	0.80						
1N5278	170	0.74						
1N5279	180	0.68						
1N5280	190	0.66						
1N5281	200	0.65						

No Suffix (±10% Tolerance) (Guaranteed limits on 3 parameters)

.67	.60	.45	.43	.40	.38

"A" Suffix (±10% Tolerance) (Guaranteed limits on 6 parameters)

.90	.80	.60	.57	.54	.51

"B" Suffix (±5.0% Tolerance)

1.05	.93	.70	.66	.63	.59

No Suffix (±10% Tolerance) (Guaranteed limits on 3 parameters)

.90	.80	.60	.57	.54	.51

"A" Suffix (±10% Tolerance) (Guaranteed limits on 6 parameters)

1.12	1.00	.75	.71	.67	.64

"B" Suffix (±5.0% Tolerance)

1.27	1.13	.85	.81	.76	.72

(No Suffix (±10% Tolerance) (Guaranteed limits on 3 parameters)

1.27	1.13	.85	.81	.76	.72

"A" Suffix (±10% Tolerance) (Guaranteed limits on 6 parameters)

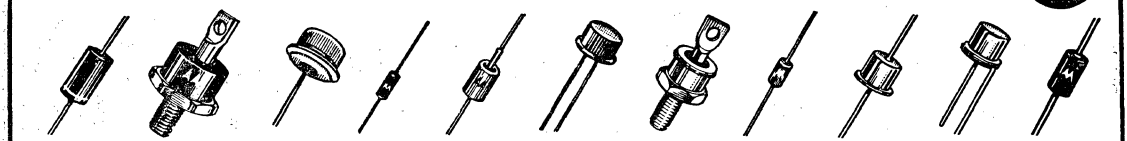
1.50	1.33	1.00	.95	.90	.85

"B" Suffix (±5.0% Tolerance)

1.65	1.46	1.10	1.04	.99	.93

Specify Dept. No., Mfr's. Type No. and Name When Ordering

Motorola Silicon Rectifiers



†REVERSE POLARITY AVAILABLE AT SAME PRICE ON SPECIAL ORDER, ADD SUFFIX "R" TO TYPE NO.

LOW-CURRENT TYPES

$I_{FM(surge)}$, 2.5 amps @ 15° C. Case 51

Type No.	$V_{RM(rep)}$ Volts.	I_o @ 25° C Amp	EACH 1-99	EACH 100-999
1N3282	1000	0.1	2.45	1.65
1N3283	1500	0.1	3.05	2.05
1N3284	2000	0.1	7.95	5.30
1N3285	2500	0.1	10.05	6.70
1N3286	3000	0.1	17.25	11.50

$I_{FM(surge)}$, 2.5 amps @ 25° C. Case 41.

1N1731	1500	0.20	6.00	4.00
1N1732	2000	0.20	6.75	4.50
1N1733	3000	0.15	7.80	5.20
1N1734	5000	0.10	11.60	7.75

$I_{FM(surge)}$, 15 amps @ 75° C. Case 59.

MR990	1000	0.25	1.42	.95
MR991	1500	0.25	2.10	1.40
MR992	2000	0.25	4.95	3.30
MR993	2500	0.25	6.60	4.40
MR994	3000	0.25	7.85	5.25

$I_{FM(surge)}$, 15 amps @ 75° C. Case 169.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ A (25° C)	EACH 1-99	EACH 100-999
MR990A	1000	0.1	.75	.50
MR991A	1500	0.1	.82	.55
MR992A	2000	0.1	.90	.60
MR993A	2500	0.1	.97	.65
MR994A	3000	0.1	1.05	.70
MR995A	4000	0.1	1.20	.80
MR996A	5000	0.1	1.35	.90

$I_{FM(surge)}$, 70 amps @ 75° C.
I_o, 1.5A @ 55°C, 0.3A @ 150°C. Case 55.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ mA (25° C)	EACH 1-99	EACH 100-999
1N1563	100	0.005	1.57	1.05
1N1563A	100	0.003	1.80	1.20
1N1564	200	0.005	1.72	1.15
1N1565	300	0.005	1.87	1.25
1N1566	400	0.005	2.02	1.35
1N1566A	400	0.003	2.70	1.80

$I_{FM(surge)}$, 30 amps @ 25° C. Case 59.

Type No.	$V_{RM(rep)}$ Volts	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
1N4001	50	.45	.30	.24	.21
1N4002	100	.49	.33	.26	.23
1N4003	200	.60	.40	.32	.28
MR2273	200	.48	.32	.....	.....
1N4004	400	.67	.45	.36	.32
MR2272	400	.57	.38	.....	.....
1N4005	600	.75	.50	.40	.35
1N4006	800	.82	.55	.44	.39
MR2266	800	1.08	.72	.....	.....
1N4007	1000	.90	.60	.48	.42

$I_{FM(surge)}$, 300 amps @ 75° C. $I_{R(AV)}$, 1.5 mA @ 75°C. I_o, 3.0A @ 75°C.

Case 60	Case 70	V_{RM} (rep) Volts	EACH 1-99	EACH 100-999	EACH 1000-4999
1N4719	1N4997	50	.66	.44	.42
1N4720	1N4998	100	.73	.49	.46
1N4721	1N4999	200	.82	.55	.52
MR1033A	MR1033B	300	.93	.62	.59
1N4722	1N5000	400	1.12	.75	.71
MR1035A	MR1035B	500	1.32	.88	.84
1N4723	1N5001	600	1.50	1.00	.95
1N4724	1N5002	800	2.25	1.50	1.40
1N4725	1N5003	1000	3.35	2.25	2.15

LOW-CURRENT TYPES (Cont'd)

$I_{FM(surge)}$, 300 amps @ 150° C. Case 56A.
I_o, 12.0 amps at 150° C.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ @ 150°C mA	EACH 1-99	EACH 100-999
MR1120†	50	1.5	1.03	.69
MR1121†	100	1.5	1.15	.77
MR1122†	200	1.5	1.32	.88
MR1123†	300	1.5	1.48	.99
MR1124†	400	1.5	1.65	1.10
MR1125†	500	1.5	2.02	1.35
MR1126†	600	1.5	2.45	1.65
MR1128†	800	1.5	5.60	3.75
MR1130†	1000	1.5	7.85	5.25

$I_{FM(surge)}$, 10 amps 75° C. Case 59.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ @ 150°C mA	EACH 1-99	EACH 100-999
MR2064	50	.05	.36	.24
MR2065	100	.05	.40	.27
MR2066	200	.05	.48	.32
MR2067	400	.05	.54	.36
MR2068	600	.05	.67	.45

MEDIUM-CURRENT TYPES

$I_{FM(surge)}$, 250 amps @ 25° C. Case 42.
I_o, 15 amps at 150° C.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ @ 150°C mA	EACH 1-99	EACH 100-999
1N3208†	50	10	1.10	.75
1N3209†	100	10	1.25	.85
1N3210†	200	10	1.70	1.15
1N3211†	300	10	2.30	1.55
1N3212†	400	10	2.55	1.70

$I_{FM(surge)}$, 350 amps @ 150° C. Case 42.
I_o, 20 amps @ 150° C.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ @ 150°C mA	EACH 1-99	EACH 100-999
1N248B†	50	5.0	1.50	1.00
1N1191†	50	5.0	1.35	.90
1N249B†	100	5.0	1.65	1.10
1N1192†	100	5.0	1.50	1.05
1N249C†	110	3.6	1.95	1.30
1N1193†	150	5.0	1.80	1.20
1N250B†	200	5.0	2.40	1.60
1N1194†	200	5.0	2.60	1.75
1N250C†	220	3.4	2.70	1.80
1N1195†	300	5.0	3.80	2.55
1N1196†	400	5.0	4.35	2.90
1N3213†	500	10.0	3.45	2.30
1N1197†	500	5.0	5.55	3.70
1N3214†	600	10.0	3.90	2.60
1N1198†	600	5.0	6.75	4.50
1N1198A†	600	1.5	7.05	4.70

$I_{FM(surge)}$, 300 amps @ 175° C. Case 43.
I_o, 25 amps @ 130° C.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ @ 150° C mA	EACH 1-99	EACH 100-999	EACH 1000-4999
1N3491†	50	10	.67	.45	.40
1N3492†	100	10	.76	.51	.46
1N3493†	200	8.0	1.11	.74	.67
1N3494†	300	6.0	1.27	.85	.76
1N3495†	400	4.0	1.48	.99	.89
MR327†	500	3.0	2.40	1.60	1.45
MR328†	600	2.5	3.35	2.25	2.00
MR330†	800	2.0	6.75	4.50	4.05
MR331†	1000	1.5	9.75	6.50	5.85

HOW TO ORDER

When ordering, specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name.
Example: 49 D 26 1N3282-MOT
Designates Motorola Type 1N3282

MEDIUM-CURRENT TYPES (Cont'd)

$I_{FM(surge)}$, 400 amps @ 150° C. Case 43.
I_o, 25 amps @ 150° C.

Type No.	$V_{RM(rep)}$ Volts	$I_{R(AV)}$ mA	EACH 1-99	EACH 100-999
1N3659†	50	5.0 @ 150°C	.90	.60
1N3660†	100	4.5 @ 150°C	.99	.66
1N3661†	200	4.0 @ 150°C	1.33	.89
1N3662†	300	3.5 @ 150°C	1.48	.99
1N3663†	400	3.0 @ 150°C	1.70	1.14

$I_{FM(surge)}$, 400 amps @ 140° C. Case 42.

1N1183†	50	10 @ 140°C	1.80	1.20
1N1184†	100	10 @ 140°C	2.10	1.40
1N1185†	150	10 @ 140°C	2.60	1.75
1N1186†	200	10 @ 140°C	3.15	2.10
1N1187†	300	10 @ 140°C	4.65	3.10
1N1188†	400	10 @ 140°C	5.25	3.50
1N1189†	500	10 @ 140°C	6.00	4.00
1N1190†	600	10 @ 140°C	6.75	4.50

FAST-SWITCHING POWER TYPES

$I_{FM(surge)}$, 30 amps @ 75° C. Case 52.

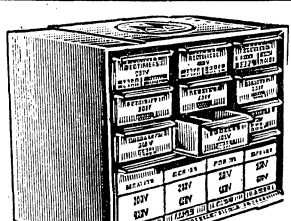
MR1337-1	50	0.75 @ 75°C	3.35	2.25
MR1337-2	100	0.75 @ 75°C	4.95	3.30
MR1337-3	200	0.75 @ 75°C	6.75	4.50

$I_{FM(surge)}$, 75 amps @ 100° C. Case 56A.

1N3879†	50	3.0 @ 100°C	4.20	2.80
1N3880†	100	3.0 @ 100°C	4.65	3.10
1N3881†	200	3.0 @ 100°C	6.60	4.40
1N3882†	300	3.0 @ 100°C	9.90	6.60
1N3883†	400	3.0 @ 100°C	13.65	9.10

$I_{FM(surge)}$, 150 amps @ 100° C. Case 56A.

1N3889†	50	5.0 @ 100°C	5.00	3.35
1N3890†	100	5.0 @ 100°C	5.40	3.60
1N3891†	200	5.0 @ 100°C	7.80	5.20
1N3892†	300	5.0 @ 100°C	11.70	7.80
1N3893†	400	5.0 @ 100°C	17.25	11.50



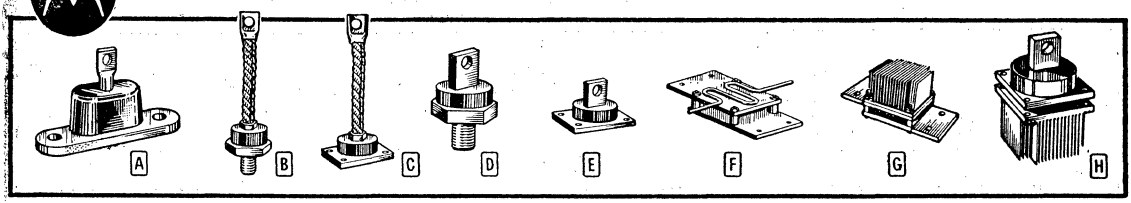
MOTOROLA'S RECTIFIER HANDYLab KIT MRK 200

Rectifiers and molded bridges to cover virtually every lab and benchwork need. More than 80 separate devices with ratings from 0.25 to 35 amperes, 200 to 3000 volts. Save time in prototyping. Separate cost of items in kit, $237.46. Shpg. wt. 6 lbs.

MRK 200..... 94.50

See Page 60 for Explanations of Column Headings

Motorola Rectifiers and MIDA Assemblies



When ordering specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For example:
49 D 26 MR1200FL-MOT Designates Motorola Type MR1200FL.

A 50-AMP TYPES

$I_{FM(surge)}$, 800 amps @ 150°C. $I_{R(AV)}$, 10 mA at 150°C.

$V_{RM(rep)}$ Volts	Flat Mount Flange Lug	EACH 1-24	25-99	100-999
50	MR1200FL	3.20	2.90	2.40
100	MR1201FL	4.10	3.70	3.10
150	MR1202FL	5.60	5.05	4.20
200	MR1203FL	5.60	5.05	4.20
300	MR1205FL	6.40	5.75	4.80
400	MR1207FL	7.30	6.60	5.50
500	MR1208FL	8.65	7.80	6.50
600	MR1209FL	10.30	9.30	7.75

80-AMP TYPES

$I_{FM(surge)}$, 2000 amps @ 150°C. $I_{R(AV)}$, 15 mA. @ 150°C.

V_{RM} (rep) Volts	Fig. B Flex. Braid Type No.	EACH 1-24	25-99	100-999	Fig. D Solid Lug Type No.	EACH 1-24	25-99	100-999
50	MR1210SB	4.80	4.30	3.60	MR1210SL	4.40	3.95	3.30
100	MR1211SB	5.65	5.10	4.25	MR1211SL	5.25	4.75	3.95
150	MR1212SB	7.00	6.30	5.25	MR1212SL	6.60	5.95	4.95
200	MR1213SB	7.00	6.30	5.25	MR1213SL	6.60	5.95	4.95
250	MR1214SB	8.15	7.40	6.15	MR1214SL	7.80	7.00	5.85
300	MR1215SB	8.15	7.40	6.15	MR1215SL	7.80	7.00	5.85
350	MR1216SB	10.35	9.35	7.80	MR1216SL	9.95	9.00	7.50
400	MR1217SB	10.35	9.35	7.80	MR1217SL	9.95	9.00	7.50
500	MR1218SB	11.30	10.20	8.50	MR1218SL	10.90	9.85	8.20
600	MR1219SB	13.55	12.25	10.20	MR1219SL	13.15	11.90	9.90

100-AMP TYPES

$I_{FM(surge)}$, 2000 amps @ 150° C. $I_{R(AV)}$. 15 mA. @ 150° C.

V_{RM} (rep) Volts	Fig. B Flex. Braid Type No.	EACH 1-24	25-99	100-999	Fig. E Solid Lug Type No.	EACH 1-24	25-99	100-999
50	MR1810SB	5.45	4.90	4.10	MR1810SL	5.05	4.55	3.80
100	MR1811SB	6.30	5.70	4.75	MR1811SL	5.90	5.35	4.45
150	MR1812SB	7.65	6.90	5.75	MR1812SL	7.25	6.55	5.45
200	MR1813SB	7.65	6.90	5.75	MR1813SL	7.25	6.55	5.45
250	MR1814SB	8.70	7.85	6.55	MR1814SL	8.30	7.50	6.25
300	MR1815SB	8.70	7.85	6.55	MR1815SL	8.30	7.50	6.25
350	MR1816SB	11.05	9.95	8.30	MR1816SL	10.65	9.60	8.00
400	MR1817SB	11.05	9.95	8.30	MR1817SL	10.65	9.60	8.00
500	MR1818SB	11.95	10.80	9.00	MR1818SL	11.55	10.45	8.70
600	MR1819SB	14.25	12.85	10.70	MR1819SL	13.85	12.50	10.40

160-AMP TYPES

$I_{FM(surge)}$, 3600 amps @ 150° C. $I_{R(AV)}$, 20 mA @ 150°C.

$V_{RM(rep)}$ Volts	Fig. B Flexible Braid	Fig. D Solid Lug	EACH 1-24	25-99	100-999
50	MR1220SB	MR1220SL	11.30	10.20	8.50
100	MR1221SB	MR1221SL	11.95	10.80	9.00
150	MR1222SB	MR1222SL	12.65	11.40	9.50
200	MR1223SB	.....	12.65	11.40	9.50
300	MR1225SB	MR1225SL	15.30	13.80	11.50
400	MR1227SB	MR1227SL	17.95	16.20	13.50
500	MR1228SB	MR1228SL	19.95	18.00	15.00
600	MR1229SB	MR1229SL	23.95	21.60	18.00

V_{RM} (rep) Volts	Fig. C Flex. Braid Type No.	EACH 1-24	25-99	100-999	Fig. E Solid Lug Type No.	EACH 1-24	25-99	100-999
50	MR1220FB	11.30	10.20	8.50	MR1220FL	9.95	9.00	7.50
100	.....	.....	.....	.....	MR1221FL	10.65	9.60	8.00
150	MR1222FB	12.65	11.40	9.50	MR1222FL	12.25	11.05	9.20
200	MR1223FB	12.65	11.40	9.50	MR1223FL	12.25	11.05	9.20
300	MR1225FB	15.30	13.80	11.50	MR1225FL	14.90	13.45	11.20
400	MR1227FB	17.95	16.20	13.50	.....	.....	.....	.....
500	MR1228FB	19.95	18.00	15.00	MR1228FL	19.55	17.65	14.70
600	MR1229FB	23.95	21.60	18.00	MR1229FL	23.55	21.25	17.70

HIGH-CURRENT MULTI-CELL RECTIFIERS

All types listed below are available in reverse polarity at the same prices. When you are ordering reverse polarity rectifiers, be sure to add suffix "R" to type number.

240-AMP TYPES

$I_{FM(surge)}$, 5000 amps @ 150°C. $I_{R(AV)}$, 35 mA @ 150°C.

$V_{RM(rep)}$ Volts	Fig. B Flexible Braid	Fig. D Solid Lug	EACH 1-24	25-99	100-999
50	MR1230SB	MR1230SL	15.30	13.80	11.50
100	MR1231SB	MR1231SL	16.30	14.70	12.25
150	MR1232SB	MR1232SL	17.30	15.60	13.00
200	MR1233SB	MR1233SL	17.30	15.60	13.00
300	MR1235SB	MR1235SL	19.60	17.70	14.75
400	MR1237SB	MR1237SL	24.25	21.90	18.25

V_{RM} (rep) Volts	Fig. C Flex. Braid Type No.	EACH 1-24	25-99	100-999	Fig. E Solid Lug Type No.	EACH 1-24	25-99	100-999
50	MR1230FB	15.30	13.80	11.50	MR1230FL	14.65	13.20	11.00
100	MR1231FB	16.30	14.70	12.25	MR1231FL	15.60	14.10	11.75
150	MR1232FB	17.30	15.60	13.00	MR1232FL	16.30	14.70	12.25
200	MR1233FB	17.30	15.60	13.00	.....	.....	.....	.....
300	.....	.....	.....	.....	MR1235FL	18.00	16.25	13.55
400	MR1237FB	24.25	21.90	18.25	.....	.....	.....	.....

F 1000-AMP BUS BAR TYPES

$I_{FM(surge)}$, 18,000 amps @ 150°C. $I_{R(AV)}$, 200 mA @ 150° C.

$V_{RM(rep)}$ Volts	Bus-Bar Mount Water-Cooled	EACH 1-24	25-99
50	MR1290	60.00	54.00
100	MR1291	66.50	60.00
150	MR1292	76.50	69.00
200	MR1293	76.50	69.00
300	MR1295	87.50	79.00
400	MR1297	98.50	88.75
500	MR1298	152.95	138.00
600	MR1299	199.50	180.00

400-AMP TYPES

$I_{FM(surge)}$, 8000 amps @ 150°C; $I_{R(AV)}$, 50 mA @ 150° C.

$V_{RM(rep)}$ Volts	Fig. B Flex. Braid	Fig. D SolidLug	EACH 1-24	25-99	100-999
100	MR1241SB	MR1241SL	21.95	19.80	16.50
150	MR1242SB	MR1242SL	22.85	20.65	17.20
200	MR1243SB	MR1243SL	22.85	20.65	17.20
400	MR1247SB	MR1247SL	31.40	28.30	23.60

650-AMP TYPES

$I_{FM(surge)}$, 12,000 amps @ 150°C. $I_{R(AV)}$, 100 mA @ 150° C.

$V_{RM(rep)}$ Volts	Fig. A Solid Lug	EACH 1-24	25-99	100-999
50	MR1260FL	28.60	25.80	21.50
100	MR1261FL	36.55	33.00	27.50
150	MR1262FL	55.20	49.80	41.50
200	MR1263FL	55.20	49.80	41.50
300	MR1265FL	61.20	55.20	46.00
400	MR1267FL	67.85	61.20	51.00

1000-AMP TYPES

I_O=750 amps; $I_{FM(surge)}$=12,000 amps; $I_{R(AV)}$=80 mA. (At 150° C).

$V_{RM(rep)}$ Volts	Type No.	Fig.	EACH 1-24	25-99	100-999
50	MR2080HA	H	33.90	30.60	25.50
100	MR2081HA	H	42.55	38.40	32.00
200	MR2082HA	H	51.20	46.20	38.50
300	MR2083HA	H	59.85	54.00	45.00
400	MR2084HA	H	71.15	64.20	53.50

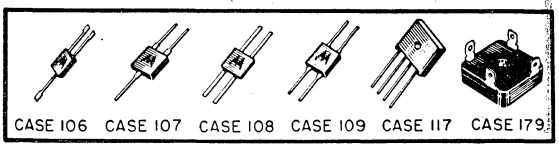
I_O=1100 amps; $I_{FM(surge)}$=18,000 amps; $I_{R(AV)}$=110 mA. (At 150°C).

50	MR2100HA	G	59.85	54.00	45.00
100	MR2101HA	G	66.50	60.00	50.00
200	MR2102HA	G	76.45	69.00	57.50
300	MR2103HA	G	87.80	79.20	66.00
400	MR2104HA	G	98.40	88.80	74.00

To Order, Specify 49 D 26, Mfr's Type No., and Name

Motorola MIDA & Silicon Rectifier Assemblies

MIDA RECTIFIER ASSEMBLIES



HOW TO ORDER

When ordering, specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For Example:
49 D 26 MDA960-1-MOT designates Motorola Type MDA960-1

0.5 amp single-phase voltage doublers. $I_{FM(surge)}$, 32 amps. $I_{R(AV)}$, 60 μA.

$V_{RM(rep)}$ Volts	Case 106 Type No.	Case 107 Type No.	EACH 1-24	25-99	100-999
25	.....	MDA930A-1	.82	.73	.55
50	.....	MDA930A-2	.90	.80	.60
100	MDA930-3	MDA930A-3	.97	.86	.65
200	MDA930-4	MDA930A-4	1.14	1.01	.76
300	.....	MDA930A-5	1.21	1.08	.81
400	MDA930-6	MDA930A-6	1.27	1.13	.85
600	MDA930-7	MDA930A-7	1.65	1.46	1.10

1.0 amp single-phase full-wave bridges.

$V_{RM(rep)}$ Volts	Case 108 Type No.	Case 109 Type No.	EACH 1-24	25-99	100-999
25	MDA920-1	MDA920A-1	1.42	1.26	.95
50	MDA920-2	MDA920A-2	1.69	1.50	1.13
100	MDA920-3	MDA920A-3	1.95	1.73	1.30
200	MDA920-4	MDA920A-4	2.30	2.05	1.55
300	MDA920-5	MDA920A-5	2.40	2.10	1.60
400	MDA920-6	MDA920A-6	2.45	2.20	1.65
600	MDA920-7	MDA920A-7	3.20	2.85	2.15

1.0 amp. Single-phase center tap, common anode.

$V_{RM(rep)}$ Volts	Case 106 Type No.	Case 107 Type No.	EACH 1-24	25-99	100-999
25	.....	MDA940A-1	.82	.73	.55
50	.....	MDA940A-2	.90	.80	.60
100	.....	MDA940A-3	.97	.86	.65
200	.....	MDA940A-4	1.14	1.01	.76
300	.....	MDA940A-5	1.21	1.08	.81
400	.....	MDA940A-6	1.27	1.13	.85
600	.....	MDA940A-7	1.65	1.46	1.10

1.0 amp. Single-phase center tap, common cathode.

25	.....	MDA950A-1	.82	.73	.55
50	.....	MDA950A-2	.90	.80	.60
100	.....	MDA950A-3	.97	.86	.65
200	MDA950-4	MDA950A-4	1.14	1.01	.76
300	.....	MDA950A-5	1.21	1.08	.81
400	.....	MDA950A-6	1.27	1.13	.85
600	MDA950-7	MDA950A-7	1.65	1.46	1.10

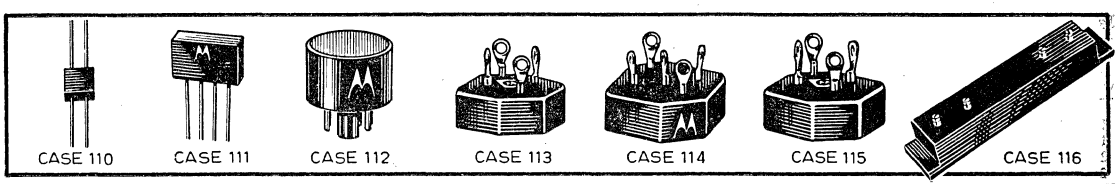
2.5 amp. Single-phase full-wave bridge rectifiers. $I_{FM(surge)}$ 75 amps. I_R, 1.0 mA.

$V_{RM(rep)}$ Volts	Case 117 Type No.	EACH 1-24	25-99	100-999
50	MDA960-1	2.90	2.55	1.95
100	MDA960-2	3.35	2.95	2.25
200	MDA960-3	3.75	3.30	2.50

4.0 amp. Single-phase full-wave bridge rectifiers. $I_{FM(surge)}$, 150 amps. I_R, 1.0 mA.

50	MDA970-1	3.20	2.90	2.15
100	MDA970-2	3.65	3.30	2.45
200	MDA970-3	4.10	3.70	2.75
CASE 179. I_{out}=12 amps @ 55° C.				
50	MDA980-1	3.20	2.90	2.40
100	MDA980-2	3.45	3.10	2.60
200	MDA980-3	4.05	3.65	3.05
300	MDA980-4	4.50	4.10	3.40
400	MDA980-5	5.05	4.55	3.80
600	MDA980-6	6.90	6.25	5.20
CASE 179. I_{out} 25=amps @ 55° C.				
50	MDA990-1	4.00	3.60	3.00
100	MDA990-2	4.25	3.85	3.20
200	MDA990-3	4.80	4.30	3.60
300	MDA990-4	5.30	4.80	4.00
400	MDA990-5	5.80	5.20	4.30
600	MDA990-6	7.85	7.10	5.95

MOLDED RECTIFIER BRIDGE ASSEMBLIES



Individually hermetically-sealed rectifiers interconnected and encapsulated in molded assemblies for use as single-phase and three-phase full-wave bridge configurations. Output current range from 1.5 to 16 amps, peak reverse voltage ($V_{RM(rep)}$) from 50 to 600 V.

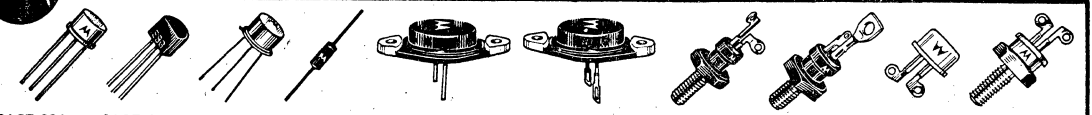
SINGLE-PHASE FULL WAVE BRIDGES—1.5 AMPS

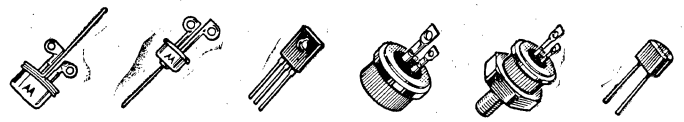
$V_{RM(rep)}$ Volts	Case 110 Type No.	EACH 1-24	25-99	100-999	Case 111 Type No.	EACH 1-24	25-99	100-999	Case 112 Type No.	EACH 1-24	25-99	100-999
50	MDA942-1	2.50	2.20	1.85	MDA942A-1	2.60	2.35	1.95	MDA1491-1	2.11	1.92	1.60
100	MDA942-2	2.80	2.50	2.10	MDA942A-2	2.90	2.65	2.20	MDA1491-2	2.39	2.16	1.80
200	MDA942-3	3.25	2.95	2.45	MDA942A-3	3.40	3.05	2.55	MDA1491-3	2.66	2.40	2.00
300	MDA942-4	3.70	3.35	2.80	MDA942A-4	3.85	3.50	2.90	MDA1491-4	2.82	2.64	2.20
600	MDA942-5	4.20	3.80	3.15	MDA942A-5	4.30	3.90	3.25	MDA1491-5	3.12	2.82	2.35
600	MDA942-6	4.65	4.20	3.50	MDA942A-6	4.80	4.30	3.60	MDA1491-6	4.12	3.72	3.10
					4.0 AMPS—(Case 112)				6.0 AMPS—(Case 113)			
50	.....	.....	.....	.....	MDA1591-1	2.66	2.40	2.00	MDA952-1	3.25	2.95	2.45
100	.....	.....	.....	.....	MDA1591-2	2.82	2.64	2.20	MDA952-2	3.50	3.20	2.65
200	.....	.....	.....	.....	MDA1591-3	3.62	3.18	2.65	MDA952-3	4.45	4.00	3.35
300	.....	.....	.....	.....	MDA1591-4	3.92	3.54	2.95	MDA952-4	4.90	4.45	3.70
400	.....	.....	.....	.....	MDA1591-5	4.52	4.08	3.40	MDA952-5	6.00	5.40	4.50
600	.....	.....	.....	.....	MDA1591-6	5.65	5.10	4.25	MDA952-6	7.30	6.60	5.50
					10 AMPS—(Case 114)				16 AMPS—(Case 116)			
50	.....	.....	.....	.....	MDA962-1	3.65	3.30	2.75	MDA972-1	9.65	8.70	7.25
100	.....	.....	.....	.....	MDA962-2	3.90	3.55	2.95	MDA972-2	10.25	9.25	7.70
200	.....	.....	.....	.....	MDA962-3	4.85	4.40	3.65	MDA972-3	11.45	10.30	8.60
300	.....	.....	.....	.....	MDA962-4	5.30	4.80	4.00	MDA972-4	12.55	11.35	9.45
400	.....	.....	.....	.....	MDA962-5	6.40	5.75	4.80	MDA972-5	13.75	12.40	10.35

8.0 AMPS THREE-PHASE FULL WAVE BRIDGES—(Case 115)

$V_{RM(rep)}$ Volts	Type No.	1-24, EA.	25-99, EA.	100-999, EA.	$V_{RM(rep)}$ Volts	Type No.	1-24, EA.	25-99, EA.	100-999, EA.
50	MDA1505-1	5.65	5.10	4.25	300	MDA1505-4	7.91	7.15	5.95
100	MDA1505-2	6.05	5.45	4.55	400	MDA1505-5	9.30	8.40	7.00
200	MDA1505-3	7.32	6.60	5.50	600	MDA1505-6	10.45	9.42	7.85

Motorola Thyristors





HOW TO ORDER

When ordering, please specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For Example:

49 D 26 2N5060-MOT designates Motorola Type 2N5060

9 voltages from 25-800 V and currents to 35 amps rms, plus special thyristor types: for low-cost consumer applications; fast switching industrial/military use; also bidirectional types and pulse modulator types. 15 cases meet all mounting requirements. Case numbers in tables below and in listings on facing page refer to illustrations above. 86L cases have extended leads.

I_F =800 mA, I_{GT} =0.2 mA. For quantity prices of 1000-4999 refer to Directory, (starts on page 6).

Type No.	Case	V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	EACH 1-99	EACH 100-999
2N5060	29	30	.77	.51
2N5061	29	60	.83	.55
2N5062	29	100	.96	.64
2N5063	29	150	1.09	.85

1.6 amp types. Same as MCR914 series. Surge current, ½ cycle @ $T_{J(max)}$, 15 amps. Junction temperature, 125° C. Forward "On" voltage (1A @ 25° C), 2.0 volts (max.). Gate trigger current @ 25° C, 10 mA (max.).

2N1595	31A	50	2.15	1.45
2N1596	31A	100	2.60	1.75
2N1597	31A	200	4.95	3.30
2N1598	31A	300	8.60	5.75
2N1599	31A	400	12.35	8.25

As above, but forward "On" voltage, 1.5 V, Gate trigger current, 0.1 mA.

2N4212	31A	25	2.15	1.45
2N4213	31A	50	2.60	1.75
2N4214	31A	100	3.30	2.20
2N4215	31A	150	4.50	3.00
2N4216	31A	200	4.95	3.30

As above, Junc. temp., 100° C. Forward "On" voltage, 1.75 V, trigger mA, 1 (max.).

MCR1906-1	31A	25	1.57	1.05
MCR1906-2	31A	50	1.65	1.10
MCR1906-3	31A	100	1.87	1.25
MCR1906-4	31A	200	1.98	1.35

As above, but Junc. temp., 125° C. Forward "On" voltage, 1.5 volts (max.). Gate trigger current, 200 μA.

2N2322	31	25	2.30	1.55
2N2323	31	50	2.85	1.90
2N2324	31	100	3.75	2.50
2N2325	31	150	4.95	3.30
2N2326	31	200	5.40	3.60

2.0 amp types. Surge current, ½ cycle @ $T_{J(max)}$, 30 amps. Junc. temp., 105° C. Forward "On" voltage. 1.6 V (max.) Gate trigger current @ 25° C, 50 mA (max.).

MCR846-1	63	25	5.15	3.45
MCR846-3	63	100	7.35	4.90

I_F =4.0 A, I_{GT} =200 μA.

MCR406-1	90	30	.90	.60
MCR406-2	90	60	1.05	.70
MCR406-3	90	100	1.12	.75
MCR406-4	90	200	1.27	.85

I_F =4.0 A, I_{GT} =500 μA.

MCR407-1	90	30	.82	.55
MCR407-2	90	60	.96	.65
MCR407-3	90	100	1.05	.70
MCR407-4	90	200	1.20	.80

I_F =8.0 A, I_{GT} =30 mA.

2N4441	90	50	1.20	.80
2N4442	90	200	1.50	1.00
2N4443	90	400	2.00	1.35
2N4444	90	600	4.50	3.00

8-amp types. Same as MCR2304 and MCR2304L series. Surge current, ½ cycle @ $T_{J(max)}$, 100 amps. Junction temp. 100° C. Forward "On", (5A @ 25° C). 1.3 V (max.). Gate trigger mA @ 25° C, 20 (max.) Holding mA @ 25° C, 25 (max.).

V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	Case 85 Type No.	EACH 1-99	EACH 100-999	Case 85L Type No.	EACH 1-99	EACH 100-999
25	2N4151	1.45	1.05			
50	2N4152	1.60	1.10	2N4160	1.60	1.10
100	2N4153	1.75	1.25			
200	2N4154	1.95	1.35	2N4162	1.95	1.35
300	2N4155	2.40	1.60			
400	2N4156	2.80	1.85	2N4164	2.80	1.85
	Case 86			Case 86L		
25	2N4167	1.60	1.20	2N4175	1.60	1.20
50	2N4168	1.75	1.25			
100	2N4169	1.90	1.40	2N4177	1.90	1.40
200	2N4170	2.10	1.50	2N4178	2.10	1.50
300	2N4171	2.55	1.75	2N4179	2.55	1.75
400	2N4172	2.95	2.00	2N4180	2.95	2.00
500	2N4173	5.15	3.50			
600	2N4174	6.90	4.65	2N4182	6.90	4.65

	Case 87	Case 88		Case 87L	Case 88L		
25	MCR2604-1	MCR2605-1	1.55	1.15	2N4183	2N4191	1.59	1.19
50	MCR2604-2	MCR2605-2	1.70	1.20	2N4184	2N4192	1.74	1.24
100	MCR2604-3	MCR2605-3	1.85	1.35	2N4185	2N4193	1.89	1.39
200	MCR2604-4	MCR2605-4	2.05	1.45	2N4186	2N4194	2.09	1.49
300	MCR2604-5	MCR2605-5	2.50	1.70	2N4187	2N4195	2.54	1.74
400	MCR2604-6	MCR2605-6	2.90	1.95	2N4188	2N4196	2.94	1.99
500	MCR2604-7	MCR2605-7	5.10	3.45	2N4189		5.14	3.49
600	MCR2604-8	MCR2605-8	6.85	4.60	2N4190	2N4198	6.89	4.64

16-amp types. Surge current, 1-cycle @ $T_{J(max)}$ 125 amps. Gate trigger current @ 25° C. 80 mA (max.). Junc. temps., 100° C, *125° C. Fwd. "On" voltage, (max.), 1.8 V, †1.6 V,

V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	Case 64 Type No.	EACH 1-99	EACH 100-999	*†Case 64 Type No.	EACH 1-99	EACH 100-999
25	2N1842	3.00	2.00	2N1842A	3.15	2.10
50	2N1843	3.75	2.50	2N1843A	4.05	2.70
100	2N1844	5.00	3.35			
150	2N1845	5.70	3.80	2N1845A	6.05	4.05
200	2N1846	6.00	4.00	2N1846A	6.35	4.25
250	2N1847	6.30	4.20	2N1847A	6.75	4.50
300	2N1848	13.25	8.85	2N1848A	14.25	9.50
400	2N1849	15.00	10.00	2N1849A	16.10	10.75
500	2N1850	18.15	12.10	2N1850A	19.80	13.20

BIDIRECTIONAL THYRISTORS (T_J=100°C)

I_A, 8.0 A @ T_C, 75°C. Commutation: 5.0 V/μs typ. Series MAC1, 2, 3: Surge current, 80 A; V_F =1.5 V @ I_F, 5.0 A. Series MAC4, 5, 6: Surge current, 80 A; V_F =1.5 V @ I_F, 5.0 A.

V_{BOM} V	I_{GT} mA max.	I_{HO} mA max.	Type No. Case 85	EACH 1-99	EACH 100-999	Type No. Case 86	EACH 1-99	EACH 100-999	Type No. Case 87L	EACH 1-99	EACH 100-999
50	30	30	MAC1-2	2.40	1.60	MAC2-2	2.55	1.75	MAC3-2	2.50	1.70
200	30	30	MAC1-4	3.30	2.20	MAC2-4	3.45	2.35	MAC3-4	3.40	2.30
400	30	30	MAC1-6	5.25	3.50	MAC2-6	5.40	3.65	MAC3-6	5.35	3.60
50	50	50	MAC4-2	2.05	1.35	MAC5-2	2.20	1.50	MAC6-2	2.30	1.60
200	50	50	MAC4-4	2.70	1.80	MAC5-4	2.85	1.95	MAC6-4	2.95	2.05
400	50	50	MAC4-6	3.70	2.50	MAC5-6	3.85	2.65	MAC6-6	4.00	2.75

BILATERAL TRIGGER DIODES

Case 182 Type	I_{pulse} @ 30 μs, 120 Hz Amp max.	$I_{(BR)}$ μAmp max.	$V_{(BR)}$ Volts min./max.	ΔV Volts min./typ.	EACH 1-99	EACH 100-999	EACH 1000-9999
MPT20	2.0	100	16/24	5.0/7.0	.67	.45	.38
MPT28	2.0	50	24/32	7.0/10	.67	.45	.38
MPT32	2.0	50	28/36	7.0/10	.67	.45	.38

Specify Dept. No., Mfr's Type No. and Name When Ordering

Motorola Thyristors, Transistors & Diodes

SEE PAGE 68 FOR ILLUSTRATIONS

20-AMP THYRISTORS

Gate trigger current, @ 25° C, 40 mA (max.). Fwd. "On" voltage, (20 A @ 25° C), 1.4 V (max.). T_J (max.), 100° C. MCR2818 series replaces MCR808 series, MCR2918 series replaces MCR1308 series.

V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	Case 91 Type No.	EACH 1-99	EACH 100-999	Case 92 Type No.	EACH 1-99	EACH 100-999
25	MCR2818-1	3.00	2.00	MCR2918-1	3.40	2.25
100	MCR2818-3	3.75	2.50	MCR2918-3	4.10	2.75
300	MCR2818-5	5.55	3.70	MCR2918-5	5.90	3.95
500	MCR2818-7	8.85	5.90	MCR2918-7	9.20	6.15

I_F =20 A, I_{GT} =40 mA. T_J =100°C. $I_{FM(surge)}$ @ 1 cycle =240 amps. max. Forward "on" voltage: V_F =1.5 volts max. @ $I_{F(peak)}$ =20 amps.

50	2N5164	3.30	2.20	2N5168	3.70	2.45
200	2N5165	4.65	3.10	2N5169	5.00	3.35
400	2N5166	6.45	4.30	2N5170	6.80	4.55
600	2N5167	9.75	6.50	2N5171	10.10	6.75

Surge current, 1 cycle @ $T_{J(max)}$, 260 amps. Gate trigger current @ 25° C, 80 mA (max.). Forward "On" voltage (20 A @ 25° C), 1.5 volts (max.). Junction temperature, 100° C.

Case 61 Type No.	Case 54 Type No.	V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	EACH 1-99	EACH 100-999
MCR649-1	MCR649P-1	25	3.10	2.05
MCR649-2	MCR649P-2	50	3.45	2.30
MCR649-3	MCR649P-3	100	3.90	2.60
MCR649-4	MCR649P-4	200	5.25	3.50
MCR649-5	MCR649P-5	300	9.90	6.60
MCR649-6	MCR649P-6	400	11.50	7.70
MCR649-7	MCR649P-7	500	13.70	9.15

25-AMP THYRISTORS

Surge current, ½-cycle @ $T_{J(max)}$, 260 amps. Junction temperature, 125° C. Forward "On" voltage (20 A @ 25° C), 1.4 volts (max.). Gate trigger current @ 25° C, 40 mA (max.).

.....	MCR649AP-1	25	3.40	2.25
2N2574	MCR649AP-2	50	3.90	2.60
2N2575	MCR649AP-3	100	5.00	3.35
2N2576	MCR649AP-4	200	5.70	3.80
2N2577	MCR649AP-5	300	11.20	7.50
.....	MCR649AP-6	400	13.00	8.65
2N2579	MCR649AP-7	500	15.40	10.30

Surge current, 1 cycle @ $T_{J(max)}$, 200 amps. Junction temperature, 125° C. Forward "On" voltage (20 A @ 25° C), 1.5 volts (max.). Gate trigger current @ 25° C, 25 mA (max.).

Case 64 Type No.	V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	EACH 1-99	EACH 100-999
2N681	25	3.30	2.20
2N682	50	4.10	2.75
2N683	100	5.60	3.75
2N684	150	6.30	4.20
2N685	200	6.60	4.40
2N686	250	6.95	4.65
2N687	300	14.60	9.75
2N688	400	17.10	11.40
2N689	500	20.60	13.75
MCR1907-1	25	9.00	6.00
MCR1907-2	50	9.75	6.50
MCR1907-3	100	11.25	7.50
MCR1907-4	200	16.20	10.80
MCR1907-5	300	24.45	16.30
MCR1907-6	400	29.25	19.50

35-AMP THYRISTORS

Surge current, ½ cycle @ $T_{J(max)}$, 325 amps. Junction temperature, 100° C. Forward "On" voltage (35 A @ 25° C), 1.6 volts (max.). Gate trigger current @ 25° C, 40 mA (max.). Holding current @ 25° C, 50 mA (max.).

V_{FXM}/V_{FOM} and V_{RXM}/V_{ROM}	Case 91 Type No.	EACH 1-99	EACH 100-999	Case 92 Type No.	EACH 1-99	EACH 100-999
25	MCR2835-1	3.75	2.50	MCR2935-1	4.10	2.75
50	MCR2835-2	4.50	3.00	MCR2935-2	4.85	3.25
100	MCR2835-3	4.85	3.25	MCR2935-3	5.25	3.50
200	MCR2835-4	5.85	3.90	MCR2935-4	6.20	4.15
300	MCR2835-5	7.20	4.80	MCR2935-5	7.55	5.05
400	MCR2835-6	8.25	5.50	MCR2935-6	8.60	5.75
500	MCR2835-7	10.65	7.10	MCR2935-7	11.00	7.35
600	MCR2835-8	12.35	8.25	MCR2935-8	12.75	8.50

RADAR MODULATOR THYRISTORS (SCR'S)

$I_{FM(rep)}$ =50 A; PW =10 μs; T_J =85° C; dv/dt, 100 V/μs typ.; I_{HO} 3 mA min.; I_{GT} =10 mA max.

Case 31 Type No.	V_{FOM} Volts	V_{ROM} Volts	Forward "On" Volts	EACH 1-24	EACH 25-99	EACH 100-999
MCR2130-4	200	.....	.....	48.75	43.20	32.50
MCR2140-5	300	.....	.....	54.00	47.90	36.00
MCR2130-6	400	.....	.....	60.00	53.20	40.00
MCR2130-7	500	.....	.....	67.50	59.85	45.00

$I_{FM(rep)}$, 100 A. I_F =2 A; di/dt, 5000A/μs. $I_{FM\ (pulse)}$, 100 A. PW = 10 μs. T_J =105° C. dv/dt, 600 v/μs typ. I_{HO}, 3 mA min.; I_{GT}, 50 mA max. †I_C, 2 A DC.

Case 63 Type No.	V_{FOM} Volts	$V_{ROM(rep)}$ Volts	Forward "On" Volts	EACH 1-24	EACH 25-99	EACH 100-999
2N4199	300	50	1.5 max.†	21.25	19.10	15.00
2N4200	400	50	1.5 max.†	28.75	25.80	20.00
2N4202	600	50	1.5 max.†	44.25	38.40	29.50
2N4203	700	50	1.5 max.†	51.75	45.05	34.50
2N4204	800	50	1.5 max.†	63.75	55.70	42.50

$I_{FM(rep)}$ =300 A. I_F =1 A. di/dt, 1000 A/μs. dv/dt, 250 v/μs. PW = 10 μs. I_{HO}, 1 mA min.; I_{GT}, 40 mA max.

Case 63 Type No.	V_{FOM} Volts	V_{ROM} Volts	Forward "On" Volts	EACH 1-24	EACH 25-99	EACH 100-999
MCR1336-5	300	50	2.0	20.60	18.30	13.75
MCR1336-6	400	50	2.0	28.85	25.60	19.25
MCR1336-7	500	50	2.0	33.75	29.90	22.50
MCR1336-8	600	50	2.0	44.55	39.50	29.70
MCR1336-9	700	50	2.0	52.85	46.90	35.25
MCR1336-10	800	50	2.0	66.75	59.20	44.50

Forward current, 25 A, rms. Pulse current, (PW, 10 μs), 1000 amps di/dt, 1000 A/μs. Holding current, 5.0 A (min.). Gate trigger current, 50 mA (max.). †I_C 25 A DC.

Case 64 Type No.	V_{FOM} Volts	V_{ROM} Volts	Forward "On" Volts	EACH 1-24	EACH 25-99	EACH 100-999
MCR1718-5	300	300	1.3 max.†	25.50	22.60	17.00
MCR1718-6	400	400	1.3 max.†	30.00	26.60	20.00
MCR1718-7	500	500	1.3 max.†	37.50	33.25	25.00
MCR1718-8	600	600	1.3 max.†	45.00	39.90	30.00

UNIJUNCTION TRANSISTORS (Case 22A)

For general purpose use in a wide variety of commercial and industrial applications. P_D, 300 mW rms. V_{B2B1}, 35 volts. T_J range —65 to +125° C. R_{BBO}, —4.7 to 0.9K ohms. @ V_{BB}, 3 V. Type 2N5431: P_D, 300 mW rms. I_o, 1.5 amps peak. V_{B2E}, 30 volts. T_J range, —65° to 125° C. R_{BBO}, —6.0 to 8.5K ohms @ V_{BB}, 3 V.

Type No.	η @ V_{BB},10V. min/max	I_V @ V_{BB}, 20 V. R_{B2}, 100Ω mA (min)	I_P @ V_{BB1},25V. μA (max)	I_{EB2O} @ V_{B2O},30 V. μA (max)	EACH 1-99	EACH 100-999	EACH 1000-4999
2N2646	0.56/0.75	4.0	5.0	12	2.10	1.40	....
2N2647	0.68/0.82	8.0	2.0	0.2	3.00	2.00	....
2N3980	0.68/0.82	1.0	2.0	0.01	3.40	2.25	....
2N4851	0.56/0.75	2.0	2.0	0.1	1.10	.75	....
2N4852	0.70/0.85	4.0	2.0	0.1	1.10	.75	....
2N4853	0.70/0.85	6.0	0.4	0.05	2.25	1.50	....
2N4948	0.55/0.82	2.0	2.0	0.01	1.35	.90	....
2N4949	0.74/0.86	2.0	1.0	0.01	2.40	1.60	....
2N5431	0.72/0.80	2.0	0.4	0.01	5.70	3.80	....

UNIJUNCTION TRANSISTORS (Case 29)

Reliable unijunction transistors designed to provide the user with a wide range of design parameters at low cost. For general industrial use in triggering circuits, time delays, relaxation oscillators—any application for which precise adherence to specifications is required. Case 29 (see below) is TO-92 Unibloc plastic package providing compact size and top operating performance. Plastic silicon annular types. Other specs same as above.

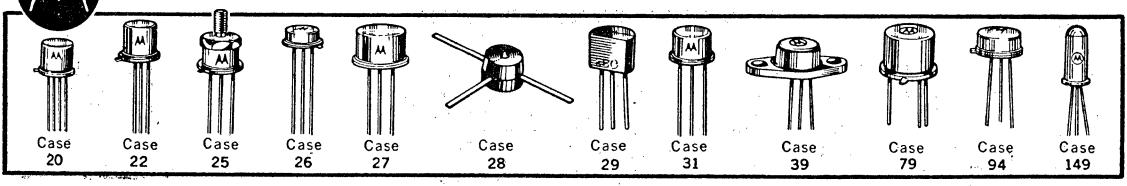
2N4870	0.56/0.75	2.0	5.0	1.0	.75	.50	.43
2N4871	0.70/0.85	4.0	5.0	1.0	.68	.45	....
MU4891	4.0/9.1	2.0	5.0	0.01	.90	.60	.51
MU4892	4.0/9.1	2.0	2.0	0.01	1.23	.82	.70
MU4893	4.0/12.0	2.0	2.0	0.01	.96	.64	.54
MU4894	4.0/12.0	2.0	1.0	0.01	1.05	.70	.59

4-LAYER DIODES

$I_{(BR)F}$ =50 μA max.; V_F =1.5 volts max. @ I_F=150 mA.

Mfr's Type	$V_{(BR)F}$ Volts min./max.	I_{HO} mA min./max.	EACH 1-24	EACH 25-99	EACH 100-999
M4L3052	8.0/10	1.0/20	4.20	3.65	2.80
M4L3053	9.0/11	1.0/20	3.60	3.10	2.40
M4L3054	10/12	1.0/20	3.45	3.00	2.30

Motorola Silicon Annular Switching Transistors



HOW TO ORDER

When ordering, specify Dept. No., 49 D 26 followed by Mfr's Type No. and Name. For example:
49 D 26 2N702-MOT Designates Motorola Type 2N702

NPN HIGH-SPEED LOW-CURRENT TYPES

NPN types for high-speed low-current applications. Offer stable performance and reliable operation at low cost. h_{FE}, in table below is measured with I_C at 10 mA, except type 2N3493, I_C, 0.5 mA. Case column refers to illustrations above.

Type No.	Case	V_{CB} (V)	P_D mW	h_{FE} min/max	f_T MHz(min)	EACH 1-99	100-999	1000-4999	5000-9999
2N702	22	25	300	20/160	70	6.75	4.50	....	....
2N703**	22	25	300	40/100	70	6.75	4.50	....	....
2N706**	22	25	300	20/—	200	.46	.40	.35	.34
2N706A	22	25	300	20/60	200	1.18	.79	....	....
2N706B	22	25	300	20/60	200	1.48	.99	....	....
2N706(JAN)	22	25	300	30/120	200	.58	.50	.45	.44
2N708	22	40	360	30/120	300	.49	.43	.38	.36
2N743	22	12	200	40/120	282	6.20	4.15	....	....
2N744	22	20	300	40/120	280	2.90	1.95	....	....
2N753	22	25	300	40/120	200	1.97	1.31	....	....
2N834	22	40	300	25/—	350	2.00	1.35	....	....
2N835	22	25	300	20/—	300	1.50	1.00	....	....
2N914	22	40	360	30/120	300	.95	.63	....	....
2N1708	26	12	300	20/—	200	3.20	2.20	....	....
2N2242	22	15	360	40/120	250	5.80	3.90	....	....
2N2256	22	7	150	171/—	250	1.12	.75	....	....
2N2257	22	7	150	40/—	250	1.27	.85	....	....
2N2368	22	40	360	20/60	400	1.07	.93	.82	....
2N2369	22	40	360	40/120	500	1.07	.93	.82	....
2N2369A**	22	15	360	40/—	500	1.65	1.10	....	....
2N2481**	22	40	360	40/120	300	2.63	1.75	....	....
2N2501	22	40	360	50/150	350	4.70	3.15	....	....
2N2710	22	15	360	40/—	500	7.50	5.00	....	....
2N3009	27	6	360	30/120	350	1.98	1.32	....	....
2N3010	22	12	300	25/125	600	1.90	1.27	....	....
2N3011	22	15	360	30/120	400	1.00	.67	....	....
2N3013	27	20	360	30/120	350	7.00	4.69	....	....
2N3014	27	15	360	30/120	350	3.60	2.40	....	....
2N3210	22	15	360	30/120	300	.83	.55	....	....
2N3211	22	20	360	50/150	350	1.27	.85	....	....
2N3227	22	40	360	100/300	500	2.40	1.60	....	....
2N3509	26	40	400	100/300	500	5.40	3.60	....	....
2N3946	22	60	360	50/150	250	2.40	1.60	....	....
2N3947	22	60	360	100/300	300	2.75	1.85	....	....
2N3959	22	20	400	40/200	1300	10.50	7.00	....	....
2N3960	22	15	400	40/200	1600	13.10	8.75	....	....
MM709	27	15	400	15/200	300	1.35	.90	....	....
MM1605	20	10	200	25/200	2000	13.50	9.00	8.10	....
MM1606	20	10	200	25/200	2000	11.25	7.50	6.75	....
MM1607	20	10	200	25/200	1700	8.25	5.55	5.00	....
MM1748	27	6	300	20/120	600	.53	.35	....	....
MMT2222	28	30	225	50/—	200	2.85	1.90	....	....
MMT2369	28	15	225	40/120	500	1.95	1.30	....	....
MMT3903	28	40	225	50/150	250	2.40	1.60	....	....
MMT3904	28	40	225	100/300	300	3.00	2.00	....	....
MMT3960A	28	8	225	30/200	2250	10.35	6.90	....	....

PNP HIGH-SPEED LOW-CURRENT TYPES

h_{FE} @ I_C, 10 mA.

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	100-999	1000-4999	5000-9999
2N869A**	22	25	360	40/120	400	4.50	3.00	....	....
2N2894	22	12	360	30/—	400	1.95	1.30	....	....
2N3248	22	15	360	50/150	250	3.90	2.60	....	....
2N3249	22	15	360	100/300	300	4.65	3.10	....	....
2N3250**	22	50	360	50/150	250	3.90	2.60	....	....
2N3250A**	22	60	360	50/150	250	4.50	3.00	....	....
2N3251**	22	50	360	100/300	300	4.65	3.10	....	....
2N3251A**	22	60	360	100/300	300	5.25	3.50	....	....
2N3304	22	6.0	300	30/120	500	4.50	3.00	....	....
2N3546	22	15	360	30/120	700	5.25	3.50	....	....

**Meg-A-Life II, military units available at slightly higher prices.

PNP HIGH-SPEED LOW-CURRENT TYPES (Cont'd)

h_{FE} @ I_C, 10 mA, except 2N4411 (I_C, 5.0 mA).

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	100-999	1000-4999	5000-9999
2N4260	20	15	200	30/150	1600	12.35	8.25	....	....
2N4261	20	15	200	30/150	2000	14.60	9.75	....	....
2N4411	20	15	150	40/160	400	18.00	12.00	....	....
MMT3546	28	12	225	30/—	700	6.15	4.10	....	....
MMT3905	28	40	200	50/150	200	2.40	1.60	....	....
MMT3906	28	40	200	100/300	250	3.00	2.00	....	....

NPN HIGH-SPEED MEDIUM-CURRENT TYPES

h_{FE} @ I_C, 150 mA. #Solid header.

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	100-999	1000-4999	5000-9999
2N696	31		600	20/60	40	....	....	....	....
2N697	31	60	600	40/120	50	.52	.46	.40	.38
2N699	79	80	600	40/120	50	1.32	.88	....	....
2N718	22	60	400	40/120	50	.46	.40	.35	.34
2N718A	22	75	500	40/120	60	.79	.68	.60	.57
2N956	22	75	500	100/300	70	.85	.74	.65	.61
2N1420	31	60	600	100/300	50	.65	.56	.50	.48
2N1613	31	75	800	40/120	60	.79	.68	.60	.57
2N1711	31	75	800	100/300	70	.85	.74	.65	.61
2N1959	31	40	600	40/120	100	4.45	2.95	....	....
2N2224	31	40	600	40/120	250	3.75	2.50	....	....
2N2410	31	40	800	30/120	200	4.50	3.00	....	....
2N2476	31	20	600	20/—	250	1.65	1.14	....	....
2N2477	31	20	600	40/—	250	2.06	1.35	....	....
2N2537	31	60	800	50/150	250	4.95	3.30	....	....
2N2538	31	60	800	100/300	250	5.85	3.90	....	....
2N2845	31	30	360	30/120	250	4.95	3.30	....	....
2N2846	31	30	800	30/120	250	4.95	3.30	....	....
2N2847	22	20	360	40/140	250	5.10	3.40	....	....
2N2848	31	20	800	40/140	250	5.10	3.40	....	....
2N2895	22	65	500	40/120	120	1.41	.97	....	....
2N2896	22	90	500	60/200	120	2.06	1.43	....	....
2N2897	22	45	500	50/200	100	1.16	.80	....	....
2N2958	31	60	600	40/120	250	2.25	1.50	....	....
2N2959	31	60	600	100/300	250	2.70	1.80	....	....
2N3015	31	30	800	30/120	250	1.93	1.29	....	....
2N3053	79#	60	1000	50/250	100	.83	.57	.50	....
2N3115	22	60	400	40/120	250	1.95	1.30	....	....
2N3116	22	60	400	100/300	250	2.40	1.60	....	....
2N3299	31	30	800	40/120	000	.75	.50	....	....
2N3300	31	30	800	100/300	000	1.05	.70	....	....
2N3301	22	30	20	35/—	000	.75	.50	....	....
2N3510	27	40	360	25/150	350	1.42	.95	....	....
2N3511	27	40	360	30/120	450	1.80	1.20	....	....
2N3647	26	40	400	25/150	350	2.25	1.50	....	....
2N3648	26	40	400	30/120	450	2.70	1.80	....	....

PNP HIGH-SPEED MEDIUM-CURRENT TYPES

h_{FE} @ I_C, 150 mA except 2N2695 (I_C, 50 mA).

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	100-999	1000-4999	5000-9999
2N722	22	50	400	30/90	60	1.46	1.27	....	....
2N1131**	31	50	400	20/45	50	5.60	3.75	....	....
2N1132**	31	50	600	30/90	60	1.46	1.27	1.10	....
2N1132A	31	60	600	30/90	60	12.00	8.00	....	....
2N1991	31	30	600	15/60	40	3.95	2.96	....	....
2N2303	31	50	600	75/200	60	8.25	5.50	....	....
2N2695	26	25	360	30/130	100	4.35	2.90	....	....
2N2800	31	50	800	30/90	120	6.75	4.50	....	....
2N2801	31	50	800	75/225	120	7.10	4.75	....	....
2N2838	22	50	500	75/225	120	7.10	4.75	....	....
2N3133	31	50	600	40/120	200	4.95	3.30	....	....
2N3134	31	50	600	100/300	200	5.85	3.90	....	....
2N3135	22	50	400	40/120	200	4.95	3.30	....	....
2N3136	22	50	400	100/300	200	5.85	3.90	....	....
2N3486	26	60	400	100/300	200	10.20	6.80	....	....
2N3486A	26	60	400	100/300	200	13.50	9.00	....	....
2N3671	31	50	600	70/225	200	4.50	3.00	....	....
2N3672	22	50	400	70/225	200	4.50	3.00	....	....
2N3673	26	50	350	70/225	200	5.20	3.40	....	....

**Meg-A-Life II, military units available at slightly higher prices.

Specify Dept. No., Mfr's Type No. and Name

Motorola Silicon Annular Switching Transistors

SEE PAGE 70 FOR ILLUSTRATIONS AND GENERAL SPECIFICATIONS

HOW TO ORDER

When ordering, specify Dept. No., 49 D 26 followed by Mfr's Type No. and Name. For example:
49 D 26 2N656-MOT Designates Motorola Type 2N656

NPN HIGH-CURRENT TYPES

h_{FE} @ Ic, *150 mA, †500 mA, ‡1.5 A., §1.0 A. #Solid Header

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	EACH 100-999
2N656	31#	60	1000	30/90	.....	2.03	1.35
2N657	31#	100	1000	30/90	.....	2.20	1.47
2N1893	31#	80	800	*40/120	50	1.57	1.05
2N2192	31#	60	1000	*100/300	50	4.20	2.80
2N2192A	31#	60	1000	*100/300	50	4.40	2.95
2N2193	31#	80	1000	*40/120	50	2.90	1.95
2N2193A	31#	80	1000	*40/120	50	3.15	2.10
2N2194	31#	60	1000	*20/60	50	2.18	1.45
2N2194A	31#	60	1000	*20/60	50	2.40	1.60
2N2195	31#	45	1000	*20/—	50	1.38	.92
2N2195A	31#	45	1000	*20/—	50	1.53	1.02
2N2405	79#	120	1000	*60/200	45	1.82	1.25
2N3252	31#	60	1000	†30/90	200	9.75	6.50
2N3253	31#	75	1000	†25/75	175	9.75	6.50
2N3303	94	12	600	30/120	450	13.50	9.00
2N3444	31#	80	1000	†20/60	175	12.00	8.00
2N3506	31#	60	1000	‡40/200	60	11.55	7.70
2N3507	31#	80	1000	‡30/150	60	13.20	8.80
2N3734	31#	50	1000	§30/120	250	6.00	4.00
2N3735	31#	50	1000	§30/80	250	6.00	4.00
2N3736	26	75	500	§30/120	250	6.60	4.40
2N3737	26	75	500	§20/80	250	6.60	4.40
MM3724	31#	40	1000	†25/150	200	5.25	3.50
MM3725	31#	50	1000	†25/150	200	5.60	3.75

PNP HIGH-CURRENT TYPES

h_{FE} @ Ic, *150 mA, †500 mA, §1.0 A. #Solid header.

2N3244	31#	40	1000	†50/150	175	15.75	10.50
2N3245	31#	50	1000	†30/90	150	15.75	10.50
2N3467	31#	40	1000	†40/120	175	9.75	6.50
2N3762	31#	40	1000	§30/120	180	7.50	5.00
2N3763	31#	60	1000	§20/80	150	7.50	5.00
2N3765	26	60	500	§20/80	150	8.25	5.50
2N4890	31	40	1000	*50/250	100	1.12	.75
MM3726	31#	50	1000	†30/120	200	6.75	4.50

NPN HIGH-VOLTAGE TYPES

h_{FE} @ Ic, 150 mA, except *30 mA, †10 mA. #Solid header.

2N3498	31#	100	1000	40/120	150	6.60	4.40
2N3499	31#	100	1000	100/300	150	7.40	4.95
2N3500	31#	150	1000	40/120	150	11.25	7.50
2N3501	31#	150	1000	100/300	150	12.60	8.40
2N3742	31#	300	1000	*20/200	30	12.60	8.40
MM3000	79	100	1000	†20/—	150	1.25	.83
MM3001	79	150	1000	†20/—	150	1.40	.93
MM3002	79	200	1000	†20/—	150	1.65	1.10
MM3003	79	250	1000	†20/—	150	1.90	1.25

PNP HIGH-VOLTAGE TYPES (#Solid header)

h_{FE} @ Ic, *10 mA, †50 mA, §30 mA, ‡500 mA, ††100 mA.

Type No.	Case	V_{CB} V	P_D mW	h_{FE} min/max	f_T MHz (min) + (typ)	EACH 1-99	EACH 100-999
2N3494	22	80	600	*40/—	200	9.75	6.50
2N3495	22	120	600	*40/—	150	12.75	8.50
2N3496	22	80	400	*40/—	200	9.75	6.50
2N3634	31#	140	1000	†50/150	150	13.20	8.80
2N3635	31#	140	1000	†100/300	200	14.40	9.60
2N3636	31#	175	1000	†50/150	150	19.40	12.95
2N3637	31#	175	1000	†100/300	200	21.30	14.20
2N3743	31	300	1000	§25/250	30	29.25	19.50
2N4928	79	100	600	*25/200	100	4.05	2.70
2N4929	79	150	1000	*25/200	100	4.95	3.30
2N4930	79	200	1000	*20/200	20	5.90	3.95
2N4931	79	250	1000	*20/200	20	6.75	4.50
2N5357	39	300	30W	‡25/100	50	15.00	10.00
MM4000	79	100	600	*20/—	.....	1.24	.83
MM4001	79	150	1000	*20/—	.....	1.39	.93
MM4002	79	200	1000	*20/—	.....	1.65	1.10
MM4003	79	250	1000	*20/—	.....	1.85	1.25
MM4545	39	200	20W	††25/—	40	9.00	6.00
MM4546	39	300	20W	††25/—	40	10.50	7.00
MM4547	39	400	20W	††25/—	30	15.00	11.00

GERMANIUM MESA PNP SWITCHING TRANSISTORS

HIGH-SPEED LOW-CURRENT TYPES

Mfr's Type	Case	V_{EB} (V)	P_D (mW)	h_{FE}@Ic min/max	mA	f_T MHz(min)	EACH 1-99	EACH 100-999
2N499	149	30	60	20/80	1.0	120	3.60	2.40
2N499A	149	30	60	20/80	1.0	120	4.30	2.85
2N502	31	20	60	9.01/—	2.0	.....	3.25	2.15
2N502A	31	30	75	15/—	2.0	.....	3.75	2.50
2N502B	31	30	75	20/80	2.0	.....	4.20	2.80
2N705	22	3.5	150	25/...	10	...	1.03	.69
2N710	22	2.0	150	25/...	10	...	1.33	.89
2N711	22	1.0	150	20/...	10	...	.88	.59
2N711A	22	1.5	150	25/150	10	...	.88	.59
2N711B	22	2.0	150	30/150	10	...	.94	.63
2N779A	22	....	60	50/200	10	.....	3.75	2.50
2N828	22	2.5	150	25/...	10	300	3.30	2.20
2N829	22	....	150	50/—	10	300	4.45	2.95
2N960	22	2.5	150	20/...	10	300	.96	.64
2N961	22	2.0	150	20/...	10	300	.91	.61
2N962	22	1.25	150	20/...	10	300	.85	.57
2N963	22	2.0	150	20/...	10	300	.82	.55
2N964	22	2.5	150	40/...	10	300	.99	.66
2N964A	22	2.5	150	40/...	10	300	5.25	3.50
2N965	22	2.0	150	40/...	10	300	.94	.63
2N966	22	1.25	150	40/...	10	300	.88	.59
2N967	22	2.0	150	40/...	10	300	.87	.58
2N968	22	2.5	150	17/...	10	250	.90	.60
2N970	22	1.25	150	17/...	10	250	.81	.54
2N985	22	3.0	150	40/...	10	300	2.88	1.92
2N1500	31	12	60	20/—	10	120	7.65	5.10
2N1742	31	....	60	.....	.....	.....	2.70	1.80
2N2258	22	7.0	150	20/—	10	250	1.12	.75
2N2259	22	7.0	150	40/—	10	250	1.27	.85
2N2955	22	3.5	150	20/...	10	200	2.48	1.65
2N2956	22	3.5	150	30/...	10	200	2.63	1.75
2N2957	22	3.5	150	60/...	10	300	3.37	2.25

HIGH-SPEED MEDIUM-CURRENT TYPES

2N1204	31	20	300	15/...	400	110	1.65	1.10
2N1204A	31	20	300	25/...	200	110	1.65	1.10
2N1494	25	20	500	15/...	400	110	2.17	1.45
2N1495	31	40	300	25/...	200	150	3.30	2.20
2N1496	25	40	500	25/...	200	150	3.80	2.55
2N2382	31	20	300	25/...	200	300	5.15	3.45
2N2635	22	30	150	30/...	100	150	.94	.63
2N3883	31	25	300	30/...	200	100	1.35	.90

PLASTIC SILICON ANNULAR SWITCHING TRANSISTORS

NPN HIGH-SPEED LOW-CURRENT TYPES (Case 29)

Mfr's Type	V_{CEO} *V_{CER} (V)	P_D (mW)	h_{FE} @ Ic min/max	mA	f_T MHz (min)	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
2N3903	40	310	50/150	10	250	.75	.50	.37	.35
2N3904	40	310	100/300	10	300	.82	.55	.41	.38
2N4123	30	310	50/150	2.0	250	.52	.35	.26	.24
2N4124	25	310	120/360	2.0	300	.60	.40	.30	.28
2N4264	15	310	40/160	10	300	.48	.32	.24	.22
2N4265	12	310	100/400	10	300	.54	.36	.27	.25
2N5224	12	310	40/400	10	250	.24	.16	.14	.12
MPS706	20*	310	20/...	10	200	.45	.30	.22	.21
MPS706A	15	310	20/60	10	200	.63	.42	.32	.29
MPS834	30	310	25/...	10	350	.52	.35	.26	.24
MPS835	20	310	20/—	10	.....	.60	.40	.30	.28
MPS2369	15	310	40/120	10	500	.53	.35	.26	.24
MPS2713	18	310	30/90	2.0	250	.41	.27	.23	.19
MPS2714	18	310	75/225	2.0	250	.43	.29	.24	.21
MPS3646	15	310	30/120	30	350	.52	.34	.31	.29

PNP HIGH-SPEED LOW-CURRENT TYPES (Case 29)

2N3905	40	310	50/150	10	200	.75	.50	.37	.35
2N4125	30	310	50/150	2.0	200	.52	.35	.26	.24
2N4126	25	310	120/360	2.0	250	.60	.40	.30	.28
MPS3639	6	310	30/120	10	500	.41	.27	.25	.23
MPS3640	12	310	30/120	10	500	.44	.29	.26	.24

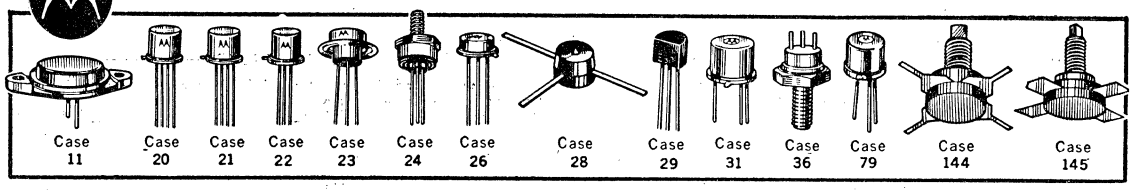
NPN HIGH-SPEED MEDIUM-CURRENT TYPES (Case 29) †PNP

2N4400	40	310	50/150	150	200	.60	.40	.30	.28
2N4401	40	310	100/300	150	250	.75	.50	.38	.35
2N4402†	40	310	50/150	150	150	.60	.40	.30	.28
2N4403†	40	310	100/300	150	200	.75	.50	.38	.35
MPS3638†	25	310	20/...	10	100	.45	.30	20	.1
MPS3638A†	25	310	100/...	10	150	.59	.39	.35	.3

NPN HIGH-VOLTAGE TYPES (Case 29)

2N4409	50	310	60/400	1.0	60	.67	.45	.34	.31
2N4410	80	310	60/400	1.0	60	.96	.64	.48	.45

Motorola RF Power Transistors



For high power output at high frequencies with consistent power gain, from either 13.6 or 28 V power supply . . . including RF amplifiers from 30 to 400 MHz and oscillators from 30 to 1500 MHz.

PNP GERMANIUM MESA TYPES

Mfr's Type No.	Case	P_D@ 25°C W(max)	V_{CB} V (max)	C_{ob} pF (max)	f_T MHz (Typ)	P_{out} @ f W (min)	MHz	EACH 1-99	100-999
2N1561	23	3.0	25	10	500	0.5	160	21.75	14.50
2N1562	23	3.0	25	10	450	0.4	160	14.25	9.50
2N1692	24	3.0	25	10	500	0.5	160	22.50	17.00
2N1693	24	3.0	25	10	450	0.4	160	18.00	12.00

NPN SILICON ANNULAR TYPES

P_D at 25°C. *Solid header. TO-5 case. ‡Oscillator. #Oscillator, 3 W @ 400 MHz. †Minimum. For 1000-4999 quantity prices, see Semiconductor Directory, pages 6-38.

2N707	22	1.0	56	10	350	0.2	100	6.30	4.20
2N2947	11	25	60	60	100†	15	50	22.50	15.00
2N2949	23	6.0	60	20	100†	3.5	50	10.50	7.00
2N2950	24	6.0	60	20	100†	3.5	50	11.25	7.50
2N2951	31	3.0	60	8.0	400	0.6	50	4.50	3.00
2N3137	31*	2.0	40	3.5	600	0.4	250	3.45	2.30
2N3295	31	2.0	60	8.0	200†	0.3	30	6.00	4.00
2N3296	24	6.0	60	20	100†	3.0	30	15.00	10.00
2N3298	22	1.0	25	6.0	400†	0.06‡	80‡	2.40	1.60
2N3375	36	11.6	65	10	500	7.5#	100#	10.80	8.95
2N3553	79	7.0	65	10	500	2.5	175	4.37	3.18
2N3733	36	23	65	20	400	10	400	34.20	22.80
2N3839	20	0.2	30	.....	1000	30	500	13.80	11.40
2N3866	79	5.0	55	3.0	800	1.0	400	2.97	2.05
2N3924	79	7.0	36	20	500	4.0	175	4.00	2.80
2N3925	24	10	36	20	500	5.0	175	6.00	4.10
2N3948	79	5.0	36	4.5	700†	1.0	400	5.15	3.42
2N3950	36	70	65	120	150	50	50	34.20	22.80
2N3961	24	10	65	10	500	4.0	175	8.70	5.80
2N4012	36	11.6	65	10	500†	2.5	1002	14.20	11.75
2N4072	22	0.8	40	4.0	550	0.25	175	2.25	1.50
2N4073	31*	1.5	40	4.0	550	0.5	175	2.70	1.80
2N4427	79	3.5	40	.....	500	1.0	175	2.15	1.50
2N4924	79	5.0	100	.....	100†	.....	.....	2.03	1.35
2N4925	79	5.0	150	.....	100†	.....	.....	2.50	1.65
2N4926	79	5.0	200	.....	30†	.....	.....	2.95	1.95
2N4927	79	5.0	250	.....	30†	.....	.....	3.15	2.10
MM1500	23	3.5	30	5.0	1500	0.25‡	1500‡	42.00	28.00
MM1501	23	3.5	30	5.0	1000	0.15‡	1500‡	27.00	18.00
MM1803	31*	2.0	50	3.5	600	0.56	250	11.70	7.80
MM1941	22	0.6	30	2.5	800	0.1	175	1.95	1.30
MM1549	144	7.5	60	.....	800	2.5	400	7.50	6.00
MM1550	144	15	60	.....	600	7.5	400	22.80	18.20
MM1551	145	30	60	.....	450	20	400	57.50	46.00
MM1557	144	15	65	.....	650	7.0	175	6.40	4.28
MM1558	145	30	65	.....	400	20	175	21.30	14.20
MM1559	145	60	65	.....	250	40	175	40.40	26.90
MM1601	144	15	36	.....	.....	3.0	175	7.10	4.75
MM1602	145	30	36	.....	.....	10	175	14.30	11.10
MM1603	145	70	36	.....	.....	25	175	24.60	19.40

SMALL-SIGNAL AMPLIFIER/OSCILLATOR TRANSISTORS

NPN SILICON ANNULAR TYPES

*Solid header. ‡V_{CEO}. #Military type; †JAN/JANTX; available.

Mfr's Type No.	Case	P_D (mW)	V_{CB} (V)	h_{FE} min/ max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	100-999	1000-4999
2N720A	22	500	120	40/120	.....	50	1.32	.88	.....
2N735	22	500	80	30/100	.....	.....	2.50	1.65	.....
2N736	22	500	80	60/200	.....	.....	2.50	1.65	.....
2N739	22	500	125	30/100	.....	.....	2.70	1.80	.....
2N740	22	500	125	60/200	.....	.....	2.70	1.80	.....
2N840	22	500	40‡	30/100	.....	1.5	3.60	2.45	.....
2N841	22	500	40	60/400	.....	2.0	4.40	2.95	.....
2N910	22	500	100	75/...	.....	60	2.37	1.58	.....
2N911	22	500	100	30/...	.....	50	5.55	3.70	.....
2N918#	20	200	30	20/...	1.7	600	3.30	2.20	.....
2N2857	20†	200	30	.....	.....	600	4.05	2.70	2.45
2N929#	22	300	45‡	40/120	8.0	30	2.25	1.50	.....
2N929A#	22	500	60	40/120	.....	45	4.50	3.00	.....
2N930#	22	300	45‡	100/300	8.0	30	2.60	1.75	.....
2N930A#	22	500	60	100/300	.....	45	5.40	3.60	.....
2N1983	31	600	50	70/210	.....	40	2.50	1.67	.....
2N1984	31	600	50	35/100	.....	40	2.33	1.56	.....

HOW TO ORDER

When ordering, please specify Department Number 49 D 26, followed by the Manufacturer's Type No. and Name.
For Example: 49 D 26 2N1561-MOT
Designates Motorola Type 2N1561

AMPLIFIER/OSCILLATOR TRANSISTORS (Cont'd)

Type No.	Case	P_D (mW)	V_{CB} (V)	h_{FE} min/ max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	100-999	1000-4999
2N1990	79	600	100	20/...	.....	.....	2.25	1.50	.....
2N2217	31	800	60	20/60	.....	250	3.35	2.25	.....
2N2218#	31	800	60	40/120	.....	250	.75	.50	.....
2N2218A#	31	800	75	40/120	.....	250	4.50	3.00	.....
2N2219#	31	800	60	100/300	.....	250	1.05	.70	.....
2N2219A#	31	800	75	100/300	.....	300	5.25	3.50	.....
2N2221#	22	500	60	40/120	.....	250	.75	.50	.....
2N2221A#	22	500	75	40/120	.....	250	4.10	2.75	.....
2N2222#	22	500	60	100/300	.....	250	1.05	.70	.....
2N2222A#	22	500	75	100/300	.....	30	4.85	3.25	.....
2N3019	31*	800	140	100/300	12	.....	6.00	4.00	.....
2N3020	31*	800	140	40/120	12	.....	5.70	3.80	.....
2N3114	31*	800	150	40/...	9.0	40	6.00	4.00	.....
2N3287	20	200	40	15/100	1.1	350	5.60	3.75	3.35
2N3288	20	200	40	15/100	1.5	350	5.10	3.40	3.00
2N3290	20	200	30	10/150	1.5	300	4.00	2.65	2.40
2N3293	20	200	20	10/...	2.0	250	1.65	1.10	1.00
2N3294	20	200	20	10/...	2.0	250	1.50	1.00	.90
2N5179	20	200	.....	.....	.....	.....	1.25	.90	.70
MM8000	79	3500	40	.....	.....	700	3.30	2.20	1.80
MM8001	79	3500	40	.....	.....	900	3.75	2.55	2.09
MM8002	79	3500	40	.....	.....	1200	4.60	3.10	2.54
MM8003	144	5000	40	.....	.....	1200	10.65	7.10	.....
2N3712	31*	100	150	30/150	9.0	40	2.25	1.50	.....
MM1812	31*	1000	175	35/200	10	50	3.75	2.50	.....
MM2258	31*	1000	120	50/...	9.0	1.5	3.90	2.60	.....
MM2259	31*	1000	175	25/...	8.0	1.5	4.20	2.80	.....
MM2260	31*	1000	175	50/...	8.0	1.5	4.50	3.00	.....
MM2483	22	360	60	40/120	6.0	60	3.15	2.10	.....
MM2484	22	360	60	100/500	6.0	60	3.50	2.35	.....
MMT918	28	225	30	20/...	.....	600	3.30	2.20	.....
MMT930	28	225	60	150/...	.....	60	3.60	2.40	.....
MMT2484	28	225	60	250/...	.....	60	5.90	3.95	.....
MMT2857	28	225	30	30/...	.....	1000	5.45	3.65	.....

PNP SILICON ANNULAR TYPES T_J=200°C., except †T_J=175°C.

Type No.	Case	P_D (mW)	V_{CB} (V)	h_{FE} min/ max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	100-999	1000-4999
2N721	22	400	50	20/45	.....	50	1.46	1.27	.....
2N869	22	360	25	20/120	9.0	100	5.85	3.90	.....
2N915	22	360	25	20/120	.....	100	4.95	3.30	.....
2N916	22	360	70	50/200	.....	250	3.65	2.45	.....
2N995	22	360	20	35/140	10	100	5.85	3.90	.....
2N2604	26	400	60	40/120	.....	30	3.50	2.30	.....
2N2605	26	400	60	100/300	.....	30	4.00	2.70	.....
2N2904†	31	600	40	40/120	.....	200	2.85	1.90	.....
2N2904A†	31	600	60	40/120	.....	200	5.60	3.75	.....
2N2905†	31	600	40	100/300	.....	200	2.85	1.90	.....
2N2905A†	31	600	60	100/300	.....	200	6.40	4.25	.....
2N2906†	22	400	40	40/120	.....	200	2.85	1.90	.....
2N2906A†	22	400	60	40/120	.....	200	5.40	3.60	.....
2N2907†	22	400	40	100/300	.....	200	2.85	1.90	.....
2N2907A	22	400	60	100/300	.....	200	5.40	3.60	.....
2N3307	20	200	40	40/250	1.3	300	10.50	7.00	.....
2N3308	20	200	30	25/250	1.6	300	9.00	6.00	.....
2N3798	22	360	60	150/450	4.0	100	6.15	4.10	.....
2N3799	22	360	60	300/900	4.0	100	6.75	4.50	.....
2N4404	79	1250	80	40/120	.....	200	8.25	5.50	.....
2N4405	79	1250	80	100/300	.....	200	9.75	6.50	.....
2N4406	79	1250	80	25/100	.....	150	11.25	7.50	.....
2N4407	79	1250	80	75/225	.....	150	12.75	8.50	.....
2N4957	20	200	30	.....	.....	1200	20.25	13.50	8.25
2N4958	20	200	30	.....	.....	1000	10.35	6.90	5.50
2N4959	20	200	30	.....	.....	1000	6.75	4.50	3.95
2N5160	79	5.0	60	.....	.....	900	6.75	4.50	4.05
2N5161	36	20	60	.....	.....	500	18.75	12.50	.....
2N5162	36	20	60	.....	.....	500	27.00	18.00	.....
MM4048	22	36	45	150/450	.....	100	4.10	2.75	.....
MMT2907	28	225	60	100/300	.....	200	3.50	2.35	.....
MMT3798	28	225	60	150/450	.....	40	4.40	2.95	.....
MMT3799	28	225	60	300/900	.....	40	5.55	3.70	.....

Specify Department No. 49 D 26, and Mfr's Type No. and Name for Semiconductors

Motorola RF Power Transistors

(See Page 72 for Illustrations)

AMPLIFIER/OSCILLATOR TRANSISTORS (Cont'd)

PNP GERMANIUM MESA TYPES

*Non-epitaxial. †h_{fe}. #Mil type available. †Typ. §C_{eb}. ¶C_{re}.

Type No.	Case	P_D (mW)	V_{CB} (V)	h_{FE} min. max.	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	EACH 100-999
2N700*	21	75	25	4.0/—‡	1.5	500	7.35	4.90
2N700A#	21	75	25	4.0/50‡	1.4	800	11.85	8.70
2N741	22	150	15	10/—	10	360	2.18	1.45
2N741A	22	150	20	10/—	10	360	3.30	2.20
2N1141	31	300	35	10/—	1.5	800†	4.83	3.22
2N1142#	31	300	30	10/—	1.1	700†	4.20	2.80
2N1143	31	300	25	10/—	1.1	800†	3.50	2.33
2N1195#	31	250	30	.....	1.5	800†	3.95	2.63
2N2415	20	75	15	10/200	2.0	500	6.00	4.00
2N2929	31	300	25	10/100	2.5	1100†	6.75	4.50
2N3127#	20	100	25	20/100	1.2	400	5.10	3.40
2N3279	20	100	30	10/70	1.0	400	4.50	3.00
2N3280	20	100	30	10/70	1.2	400	4.10	2.75
2N3282	20	100	30	10/100	1.2	300	2.15	1.45
2N3283	20	100	25	10/—	1.5	400†	1.50	1.00
2N3284	20	100	25	10/—	1.5	400†	1.42	.95
2N3286	20	100	20	5.0/—	1.5	400†	.97	.65
2N3323	22	150	35	30/200	3.0	200	.90	.60
2N3324	22	150	35	30/200	3.0	200	.82	.55
2N3325	22	150	35	30/200	3.0	200	.75	.50
2N3785	20	150	15	15/200	1.2	700	6.75	4.50
MM380	22	250	25	15/—	1.8§	400	1.26	.84
MM1139*	20	125	30	15/—	0.3§	400	1.35	.90
MM5000	20	125	30	15/...	.....	400	4.40	2.95
MM5001	20	150	30	30/...	.....	800	3.15	2.10
MM5002	20	150	30	30/...	.....	800	2.25	1.50
MM5043	20	150	15	15/150	.....	1500	9.75	6.50
MM5044	20	150	15	15/150	.....	1200	6.00	4.00
AF139*	20	60	20	50 (typ)	0.23¶	500†	1.95	1.30
AF239*	20	60	20	50 (typ)	0.23¶	700†	2.17	1.45

LINEAR AMPLIFIERS

NPN SILICON EPITAXIAL ANNULAR TYPES

2N3295	31	2.0	60	20	8.0	200	6.00	4.00
2N3296	24	6.0	60	5.0	20	100	15.00	10.00

PLASTIC RF AND SMALL-SIGNAL TRANSISTORS (CASE 29)

Unibloc plastic silicon annular transistors offer wide selection of high-performance, high-frequency PNP and NPN switches and amplifiers. For low-cost industrial circuits and consumer applications. Rugged, one-piece Unibloc plastic encapsulation.

NPN SILICON RF TRANSISTORS

P_D is 310 mW at 25°C except MPS6545, 500 mW. *C_{re}.

Type No.	V_{CB} (V)	V_{EB} (V)	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS6507	30	3.0	2.5	700	.75	.50	.38	.35
MPS6511	30	3.0	2.5	.....	.68	.45	.34	.32
MPS3693	45	4.0	3.5	.....	.44	.29	.26	.25
MPS3694	45	4.0	3.5	.....	.44	.29	.26	.25
MPS6540	30	4.0	2.5	.....	.75	.50	.38	.35
MPS6542	30	3.0	1.5	700	1.20	.80	.60	.56
MPS6543	35	3.0	1.0	750	1.32	.88	.66	.62
MPS6544	60	4.0	0.65*	.....	.54	.36	.31	.27
MPS6545	60	4.0	0.58*	.....	.84	.56	.46	.37
MPS6546	35	3.0	0.35*	600	1.24	.83	.62	.58
MPS6547	35	3.0	0.45*	600	1.35	.90	.67	.63
MPS6568	20	3.0	0.50*	375	1.50	1.00	.75	.70
MPS6569	20	3.0	0.50*	300	1.11	.74	.55	.52
MPS6570	20	3.0	0.50*	300	.96	.64	.48	.45

NPN SILICON SMALL-SIGNAL TRANSISTORS

P_D 310 mW except MPS2923, MPS2924, MPS2925, MPS3563, 200 mW. †Typ. (Listing continued next column.)

Type No.	V_{CB} (V)	h_{FE} min/max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
2N4409	80	60/400	12	60	.67	.45	.34	.31
2N4410	120	60/400	12	60	.96	.64	.48	.45
2N5088	30	300/900	.....	50	.75	.50	.38	.35
2N5089	25	400/1200	.....	50	.98	.65	.49	.46
2N5225	25	30/600	.....	50	.27	.18	.16	.13
2N5550	160	60/250	.....	100	.69	.46	.41	.....
2N5551	180	80/250	.....	100	.84	.56	.50	.....
MPS2711	18	30/90	4.0	.....	.34	.23	.19	.15
MPS2712	18	75/225	4.0	.....	.32	.21	.18	.17
MPS2716	18	75/225	3.5	.....	.60	.40	.30	.28
MPS2923	25	90/180	12	.....	.32	.21	.18	.16
MPS2924	25	150/300	12	.....	.34	.23	.19	.17

HOW TO ORDER

When ordering, specify Dept. No., 49 D 26 followed by Mfr's Type No. and Name. For example:
49 D 26 MPS2925-MOT Designates Motorola Type MPS2925

NPN SILICON SMALL-SIGNAL TRANSISTORS (Cont'd)

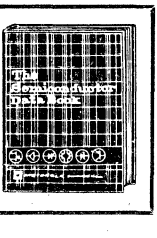
Type No.	V_{CB} (V)	h_{FE} min/max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS2925	25	235/470	12	.....	.41	.27	.23	.20
MPS2926	18	35/470	3.5	300†	.29	.19	.17	.15
MPS3392	25	150/300	3.5	.....	.32	.21	.18	.15
MPS3393	25	90/180	3.5	.....	.32	.21	.18	.15
MPS3394	25	35/170	3.5	.....	.27	.18	.15	.13
MPS3395	25	150/500	3.5	.....	.45	.30	.27	.25
MPS3398	25	55/800	3.5	.....	.57	.38	.28	.27
MPS3563	30	20/200	1.7	.....	.44	.29	.26	.24
MPS3704	50	100/300	12	100	.61	.41	.31	.29
MPS3705	50	50/150	12	100	.57	.38	.28	.27
MPS3706	40	30/600	12	100	.52	.35	.26	.24
MPS3707	30	100/400	.....	.....	.60	.37	.28	.26
MPS3708	30	45/660	.....	.....	.45	.30	.23	.21
MPS3709	30	45/165	.....	.....	.45	.30	.22	.21
MPS3710	30	90/330	.....	.....	.49	.33	.25	.23
MPS3711	30	180/660	.....	.....	.54	.36	.27	.25
MPS6512	40	50/100	3.5	330	.54	.36	.27	.25
MPS6513	40	90/180	3.5	480	.57	.38	.28	.27
MPS6514	40	150/300	3.5	480	.60	.40	.30	.28
MPS6515	40	250/500	3.5	480	.64	.43	.32	.30
MPS6520	40	200/400	3.5	480	.82	.55	.41	.38
MPS6521	25	300/600	3.5	480	.90	.60	.45	.42
MPS6530	60	40/120	5.0	390†	.64	.43	.32	.30
MPS6531	60	90/270	5.0	390†	.75	.50	.37	.35
MPS6532	50	30/—	5.0	390†	.54	.36	.27	.25
MPS6560	40	50/—	6.0	60	.78	.52	.39	.36
MPS6561	40	100/—	6.0	60	.69	.46	.35	.32
MPS6565	60	40/160	3.5	200	.52	.35	.26	.24
MPS6566	60	100/400	3.5	200	.57	.38	.28	.27
MPS6567	40	25/—	0.7	.....	1.00	.67	.50	.47
MPS6571	20	250/1000	.....	50	.60	.40	.30	.28
MPS-A05†	50	100/....	.....	50	.53	.35	.26	.25
MPS-A06†	80	100/....	.....	50	.60	.40	.30	.28
MPS-A09	50	100/600	.....	30	.54	.36	.27	.25
MPS-A10	40	40/400	.....	20	.29	.19	.14	.10
MPS-A12	20	20,000/..	.....	.....	.67	.45	.34	.32
MPS-A13	30	5,000/...	.....	125	.47	.32	.24	.22
MPS-A14	30	10,000/..	.....	125	.54	.36	.27	.25
MPSL-01	120	50/300	.....	60	.59	.39	.35	.31

PNP SILICON SMALL-SIGNAL TRANSISTORS

P_D, 310 mW. †Typical.

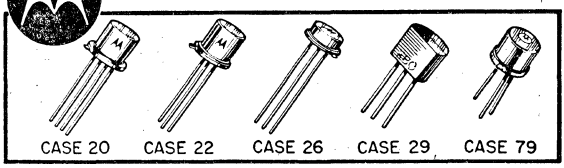
Type No.	V_{CB} (V)	h_{FE} min/max	Max. C_{ob} (pF)	Min. f_T (MHz)	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
2N5086	50	150/500	.....	40	.75	.50	.38	.35
2N5087	50	250/800	.....	40	.81	.54	.40	.38
2N5400	120	40/180	.....	100	.75	.50	.45	.....
2N5401	150	60/240	.....	150	.91	.61	.55	.....
MPS3702	40	60/300	12	100	.45	.30	.22	.21
MPS3703	50	30/150	12	100	.39	.26	.20	.18
MPS6516	40	50/100	4.0	200	.60	.40	.30	.28
MPS6517	40	90/180	4.0	200	.63	.42	.31	.29
MPS6518	40	150/300	4.0	420	.67	.45	.34	.31
MPS6519	25	250/500	4.0	420	.75	.50	.37	.35
MPS6522	25	200/400	4.0	.....	.90	.60	.45	.42
MPS6523	25	300/600	4.0	420	.97	.65	.49	.45
MPS6533	40	40/120	6.0	260†	.71	.47	.35	.33
MPS6534	40	90/270	6.0	260†	.81	.54	.40	.38
MPS6535	30	30/—	6.0	260†	.60	.40	.30	.27
MPS-A55	50	100/....	.....	50	.59	.39	.29	.27
MPS-A56	80	100/....	.....	50	.66	.44	.33	.31
MPS-A65	30	50,000/..	.....	100	.57	.38	.29	.27
MPS-A66	30	75,000/..	.....	100	.63	.42	.32	.29
MPSL-51	100	40/250	.....	60	.61	.42	.38	.34

MOTOROLA SEMICONDUCTOR DATA MANUAL



908-page bound volume is a collection of data-sheet information for over 2600 types of transistors, rectifiers, zener diodes and integrated circuits. Has 18 different device catagories, cross-reference data, articles explaining solid-state parameters. Special selection guides. 7½x10".
23 D 7124 F. Shpg. wt., 5 lbs.....3.50

Motorola Field Effect Transistors



HOW TO ORDER

When you are ordering, please specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For Example:
49 D 26 2N3822-MOT Designates Motorola Type 2N3822

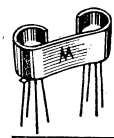
GENERAL-PURPOSE AMPLIFIERS AND SWITCHES

Wide selection of MOS and Junction-type Field-Effect-Transistors for a variety of industrial applications.

N-CHANNEL JUNCTION & *P-CHANNEL JUNCTION FET'S

†100 Hz, NF 25 dB max. ‡1½" leads. #I_{DGO}

Mfr's Type No.	Case No.	BV_{GSS} (V) min	I_{DSS} (mA) min/max	I_{GSS} nA (max)	$r_{ds(on)}$ ohms (typ) *(max)	$\lvert y_{fs}\rvert$ µS min/max	EACH 1-99	EACH 100-999
2N3822	20	−50	2.0/10	−0.1	.....	3000/5000	2.77	1.85
2N3823	20	−30	4.0/20	−0.5	.....	3500/6500	2.55	1.70
2N3824	20	−50	.....	−0.1	250*	.....	2.40	1.60
2N4220	20	−30	0.5/3.0	−0.1	500	1000/4000	2.25	1.50
2N4220A†	20	−30	0.5/3.0	−0.1	500	1000/4000	2.47	1.65
2N4221	20	−30	2.0/6.0	−0.1	400	2000/5000	2.17	1.45
2N4221A†	20	−30	2.0/6.0	0.1	400	2000/5000	2.40	1.60
2N4222	20	−30	5.0/15	0.1	300	2500/6000	2.17	1.45
2N4222A†	20	−30	5.0/15	0.1	300	2500/6000	2.40	1.60
2N4223	20	−30	3.0/18	−0.25	.....	3000/7000	2.25	1.50
2N4224	20	−30	2.0/20	0.50	.....	2000/7000	2.10	1.40
2N5265*	20	60	0.5/1.0	2.0	.....	900/2700	5.25	3.50
2N5266*	20	60	0.8/1.6	20	.....	1000/3000	4.27	2.85
2N5267*	20	60	1.5/3.0	2.0	.....	1500/3500	3.97	2.65
2N5268*	20	60	2.5/5.0	2.0	.....	2000/4000	3.75	2.50
2N5269*	20	60	4.0/8.0	2.0	.....	2200/4500	3.97	2.65
2N5270*	20	60	7.0/14	2.0	.....	2500/5000	4.27	2.85
2N5358	20	40	0.5/1.0	0.1	.....	1000/3000	4.50	3.00
2N5359	20	40	0.8/1.6	0.1	.....	1200/3600	3.90	2.60
2N5360	20	40	1.5/3.0	0.1	.....	1400/4200	3.45	2.30
2N5361	20	40	2.5/5.0	0.1	.....	1500/4500	3.00	2.00
2N5362	20	40	4.0/8.0	0.1	.....	2000/5000	3.45	2.30
2N5363	20	40	7.0/14	0.1	.....	2500/6000	3.90	2.60
2N5364	20	40	9.0/18	0.1	.....	2700/6500	4.50	3.00
2N5457	29	25	1.0/5.0	1.0	.....	1000/5000	.90	.60
2N5458	29	25	2.0/9.0	1.0	.....	1500/5500	.82	.55
2N5469	29	25	4.0/16	1.0	.....	2000/6000	.90	.60
2N5460*	29	40	1.0/5.0	5.0	.....	1000/4000	1.00	.67
2N5461*	29	40	2.0/9.0	5.0	.....	1500/5000	.75	.50
2N5462*	29	40	4.0/16	5.0	.....	2000/6000	1.00	.67
2N5463*	29	60	1.0/5.0	5.0	.....	1000/4000	1.50	1.00
2N5464*	29	60	2.0/9.0	5.0	.....	1500/5000	1.20	.80
2N5465*	29	60	4.0/16	5.0	.....	2000/6000	1.50	1.00
2N5471*	20	40	0.02/0.06	0.1	.....	60/180	8.25	5.50
2N5472*	20	40	0.05/0.12	0.1	.....	90/225	6.00	4.00
2N5473*	20	40	0.10/0.25	0.1	.....	120/300	4.50	3.00
2N5474*	20	40	0.20/0.50	0.1	.....	160/400	3.75	2.50
2N5475*	20	40	0.40/1.0	0.1	.....	200/500	2.70	1.80
2N5476*	20	40	0.80/2.0	0.1	.....	260/650	3.75	2.50
2N5556	20	30	0.5/2.5	0.1	.....	1500/6500	12.00	9.50
2N5557	20	30	2.0/5.0	0.1	.....	1500/6500	10.00	8.00
2N5558	20	30	4.0/10	0.1	.....	1500/6500	9.50	7.50
MFE2006	22	30	30/...	0.2	30	.....	4.75	3.20
MFE2007	22	25	8.0/...	2.0	40	.....	4.20	2.80
MFE2008	22	25	20/...	2.0	30	.....	5.25	3.50
MFE2009	22	25	50/...	2.0	20	.....	6.75	4.50
MFE2010	22	25	15/...	3.0	25	.....	5.25	3.50
MFE2011	22	25	40/...	3.0	15	.....	7.50	5.00
MFE2012	22	25	100/...	3.0	10	.....	9.75	6.50
MFE4007	20	40	0.5/1.0	2.0	.....	900/2700	4.50	3.00
MFE4008	20	40	0.8/1.6	2.0	.....	1000/3000	3.52	2.35
MFE4009	20	40	1.5/3.0	2.0	.....	1500/3500	3.22	2.15
MFE4010	20	40	2.5/5.0	2.0	.....	2000/4000	3.00	2.00
MFE4011	20	40	4.0/8.0	2.0	.....	2200/4500	3.22	2.15
MFE4012	20	40	7.0/14	2.0	.....	2500/5000	3.52	2.35
MPF109	29	25	0.5/24	1.0	.....	.....	1.00	.70
MPF161	29	40	0.5/14	10	.....	800/6000	.75	.50
3N124	20	−50	0.2/2.0	−0.25	.....	500/2000	3.37	2.25
3N126	20	−50	3.0/9.0	−0.25	.....	1200/3600	3.37	2.25
MFE2093	20	−50	0.1/0.7	−0.1	2500	250/500	2.10	1.40
MFE2094	20	−50	0.4/1.4	−0.1	1600	350/700	1.00	1.40
MFE2095	20	−50	1.0/3.0	−0.1	1300	400/800	2.10	1.40
MFE2097	79‡	−50	15/30	−1.0	.....	10000/20000	7.35	4.90
MFE2098	79‡	−50	40/100	−1.0	.....	14000/25000	7.35	4.90
MFE2133	79‡	−30	25/...	1.0	60*	12000/.....	6.35	4.25



MATCHED PAIR N-CHANNEL JUNCTION FET'S

Consists of two specially-matched MFE2003 device types for critical use in differential amplifier service. Each matched pair is packaged in a metal clip for pair identity. Basic MFE2003 type/date code. Y_{fs}=1500 µmhos min and 6500 µmhos max.

Mfr's Type No.	$\Delta(V_{GS1}-V_{GS2})$ / ΔT max (µV/°C)	$(V_{GS1}-V_{GS2})$ max (mV)	$(I_{G1}-I_{G2})$ max (nA)	Y_{fs2}/Y_{fs2} min	EACH 1-99	EACH 100-999
MMF1	10	5.0 @ 300µAdc	10	0.98	23.25	15.50
MMF2	10	5.0 @ 750µAdc	10	0.98	23.25	15.50
MMF3	25	5.0 @ 300µAdc	10	0.95	15.75	10.50
MMF4	25	5.0 @ 750µAdc	10	0.95	15.75	10.50
MMF5	50	5.0 @ 300µAdc	10	0.95	12.75	8.50
MMF6	50	5.0 @ 750µAdc	10	0.95	12.75	8.50

CHOPPERS-CASE 26

Mfr's Type No.	V_{CEO} Volts	P_D @ T_A 25°C	h_{FE} @ I_C min/max	h_{FE} @ I_C mA	f_T min MHz	EACH 1-99	EACH 100-999
2N2944	10	500	80/180	1.0	10	2.76	1.84
2N2945	20	500	40/160	1.0	5.0	2.52	1.68
2N2945A	25	500	70/...	1.0	1.0	3.00	2.00
2N2946	35	500	30/130	1.0	3.0	2.88	1.92
2N2946A	35	500	50/...	1.0	5.0	3.65	2.45
2N3677	30	400	40/...	1.0	5.0	2.76	1.84
2N3840	50	400	50/...	1.0	6.0	4.80	3.20
2N3910	50	500	40/160	1.0	4.0	3.93	2.62
2N3911	40	500	60/240	1.0	8.0	4.05	2.70
2N3912	30	500	90/...	1.0	10	4.25	2.85
2N3977	10	400	40/...	5.0	1.0	3.30	2.20
2N3978	20	400	30/...	5.0	1.0	3.00	2.00
2N4006	10	400	40/...	1.0	20	3.90	2.60
2N4007	20	400	30/...	1.0	15	4.80	3.20
2N4008	35	400	20/...	1.0	15	6.45	4.30
2N4009	10	400	40/...	1.0	20	9.50	6.35
2N4010	20	400	30/...	1.0	15	11.45	7.65
2N4011	35	400	20/...	1.0	15	15.00	10.00
2N5229	10	500	50/...	0.1	8.0	2.49	1.66
2N5230	20	500	50/...	0.1	8.0	3.00	2.00
2N5231	30	500	50/...	0.1	8.0	3.75	2.50

CHOPPERS AND SWITCHES

Mfr's Type No.	Case No.	$V_{(BR)GSS}$ BV_{GSS} Volts min	I_{DSS} mA min/max	$r_{ds(on)}$ ohms max	I_{GSS} nA max	EACH 1-99	EACH 100-999
2N4091	22	40	30/...	30	..	5.25	3.45
2N4092	22	40	15/...	50	..	4.00	2.65
2N4093	22	40	8.0/...	80	..	3.45	2.30
2N4391	22	40	50/150	30	0.1	6.45	4.30
2N4392	22	40	25/75	60	0.1	4.95	3.30
2N4393	22	40	5.0/30	100	0.1	5.70	3.80
2N5555	29	25	15/..	150	1.0	1.20	.80
NFE2004	22	30	8.0/..	80	0.2	3.00	2.00
MFE2005	22	30	15/..	50	0.2	3.60	2.40

CHOPPERS AND SWITCHES (Enhancement Type) *MOS P Channel.

Mfr's Type No.	Case No.	$V_{(BR)DSS}$ BV_{DSX} BV_{DSS} (V) min	I_{DSS} mA min/max	I_{GSS} pA max	$r_{ds(on)}$ ohms max	EACH 1-99	EACH 100-999
2N4351	20	25	.../10 nA	10	300	5.25	3.50
2N4352*	20	25	.../10 nA	10	600	5.25	3.50
3N155*	20	35	.../1.0 nA	1000	600	6.30	4.20
3N155A*	20	35	...0.25 nA	1000	300	7.75	5.50
3N156*	20	35	.../1.0 nA	1000	600	6.30	4.20
3N156A*	20	35	.../0.25 nA	1000	300	7.75	5.50
MFE3002	20	15	.../10 nA	100	100	4.50	3.00
MFE3003*	20	15	.../10 nA	100	200	4.50	3.00

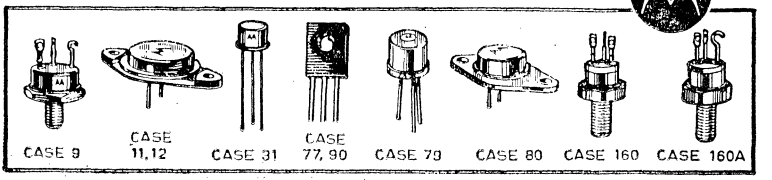
MOS N AND *P CHANNEL AMPLIFIERS AND SWITCHES

Mfr's Type No.	Case No.	$V_{(BR)DSS}$ BV_{DSX} min/max (V) min	I_{DSS} mA min/max	I_{GSS} pA max	Y_{fs} µmhos min/max	EACH 1-99	EACH 100-999
2N3796	22	25	0.5/3.0	1.0	900/1800	3.75	2.50
2N3797	22	20	2.0/6.0	1.0	1500/3000	3.75	2.50
3N157*	20	35	.../10 nA	10	1000/4000	6.30	4.20
3N157A*	20	50	.../10 nA	10	1000/4000	7.75	5.50
3N158*	20	35	.../10 nA	10	1000/4000	6.30	4.20
3N158A*	20	50	.../10 nA	10	1000/4000	7.75	5.50
MFE3001	20	20	0.5/6.0	10	700/3500	2.55	1.70

Specify Department No. 49 D 26, Mfr's Type No. and Name for Semiconductors

Motorola Silicon Power Transistors

Motorola NPN-PNP silicon power transistors are designed to give exceptionally high performance in a variety of industrial, commercial and military uses. Wide selection of devices for high-temperature, high-level switching and amplifier purposes. Low leakage currents, high DC gain (beta) and low $V_{CE(sat)}$. Complementary NPN-PNP devices assure greater circuit efficiency and design flexibility.



*NPN SILICON POWER TRANSISTORS

Tc is 25° C. †NPN Plastic type.

Type No.	Case	V_{CEO} (V)	ft MHz min	Pd (W)	hFE @ Ic		EACH	
					min/max	(A)	1-99	100-999
2N3439	80	350	.....	5.0	40/160	0.02	3.70	2.55
2N3440	80	300	.....	5.0	40/160	0.02	1.80	1.22
MJ420	31	250	30	2.5	25/250	0.03	1.80	1.20
MJ421	31	325	30	2.5	25/250	0.03	1.85	1.25
MJ2251	80	225	10	10	25/200	0.05	1.87	1.25
MJ2252	80	300	10	10	25/200	0.05	2.02	1.35
MJ400	80	325	15	6.67	30/300	0.05	1.65	1.10
MJ3201	80	225	15	15	30/200	0.05	1.72	1.15
MJ3202	80	300	15	15	30/200	0.05	1.87	1.25
MJE340†	77	300	15	20.8	30/240	0.05	1.06	.71
MJE344	77	200	15	20.8	30/300	0.05	1.07	.67
2N3738	80	225	10	20	40/200	0.1	2.25	1.50
2N3739	80	300	10	20	40/200	0.1	2.45	1.65
2N4237	31	40	3.0	5.0	30/150	0.25	2.25	1.50
2N4238	31	60	3.0	5.0	30/150	0.25	2.75	1.85
2N4239	31	80	3.0	5.0	30/150	0.25	3.05	2.05
MJ440	31	40	3.0	6.0	25/150	0.25	1.55	1.05
MJ3029	11	250	.....	125	30/...	0.4	6.00	4.44
2N4910	80	40	3.0	25	20/100	0.5	1.55	1.05
2N4911	80	60	3.0	25	10/100	0.5	1.80	1.20
2N4912	80	80	3.0	25	20/100	0.5	2.10	1.40
2N4921†	77	40	3.0	30	20/100	0.5	1.33	.89
2N4922†	77	60	3.0	30	20/100	0.5	1.48	.99
2N4923†	77	80	3.0	30	20/100	0.5	1.80	1.20
MJ413	11	325	2.5	125	20/80	0.5	6.50	4.82
MJ2249	80	325	10	20	25/200	0.5	2.02	1.35
MJ2250	80	80	10	20	25/200	0.5	2.15	1.45
MJ3101	80	40	10	20	25/200	0.5	1.95	1.30
2N3766	80	60	15	20	40/160	0.5	2.10	1.40
2N3767	80	80	15	20	40/160	0.5	2.30	1.55
MJ423	11	325	2.5	125	30/90	1.0	8.00	5.93
MJ480	11	40	4.0	87.5	30/200	1.0	1.93	1.29
MJ481	11	60	4.0	87.5	30/200	1.0	2.45	1.64
MJE520†	77	30	.....	1.0	40/...	1.0	1.33	.89
MJE521†	77	40	.....	1.0	40/...	1.0	1.68	1.12
2N3713	11	60	2.5	150	25/90	1.0	4.40	2.95
2N3714	11	80	2.5	150	25/90	1.0	4.70	3.15
2N3715	11	60	2.5	150	50/100	1.0	4.85	3.25
2N3716	11	80	2.5	150	50/100	1.0	6.75	4.50
2N5067	11	40	4.0	87.5	20/80	1.0	1.80	1.20
2N5068	11	60	4.0	87.5	20/80	1.0	2.25	1.50
2N5069	11	80	4.0	8.75	20/80	1.0	2.85	1.90
2N5334	79	60	60	6.0	30/150	1.0	6.30	4.20
2N5335	79	80	60	6.0	30/150	1.0	7.20	4.80
2N5190	79	40	2.0	40	25/100	1.5	1.57	1.05
2N5191	79	60	2.0	40	25/100	1.5	1.92	1.28
2N5192	79	80	2.0	40	20/80	1.5	2.50	1.67
MJE205	90	50	.....	65	25/100	2.0	1.92	1.25
2N1724	9	80	10	115	20/90	2.0	27.75	18.50
2N4231	80	40	4.0	35	50/150	2.0	2.10	1.40
2N4232	80	60	4.0	35	50/150	2.0	2.40	1.60
2N4233	80	80	4.0	35	50/150	2.0	3.20	2.15
2N5336	79	80	30	6.0	30/120	2.0	12.75	8.50
2N5337	79	80	30	6.0	60/240	2.0	14.40	9.60
2N5338	79	100	30	6.0	30/120	2.0	15.30	10.20
2N5339	79	100	30	6.0	60/240	2.0	17.85	11.90
2N5346	160	80	30	60	30/120	2.0	36.00	24.00
2N5347	160	80	30	60	60/240	2.0	41.20	26.75
2N5348	160	100	30	60	30/120	2.0	45.80	30.50
2N5349	160	100	30	60	60/240	2.0	52.50	34.95
2N5427	80	80	30	40	30/120	2.0	13.40	8.95
2N5428	80	80	30	40	60/240	2.0	15.20	10.15
2N5429	80	100	30	40	30/120	2.0	16.40	10.95
2N5430	80	100	30	40	60/240	2.0	18.75	12.50
2N5477	160A	80	30	60	30/120	2.0	33.00	22.00
2N5478	160A	80	30	60	60/240	2.0	37.10	24.75
2N5479	160A	100	30	60	30/120	2.0	42.50	28.30
2N5480	160A	100	30	60	60/240	2.0	49.40	32.95
2N4913	11	40	4.0	87.5	25/100	2.5	2.40	1.60
2N4914	11	60	4.0	87.5	25/100	2.5	2.60	1.75
2N4915	11	80	4.0	87.5	25/100	2.5	4.20	2.80
MJ2840	11	60	4.0	150	20/100	3.0	4.50	3.00
MJ3030	11	325	.....	125	3.75/...	3.0	9.00	6.67
MJE2801	90	60	.....	90	25/100	3.0	2.24	1.49

HOW TO ORDER

When ordering, please specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For Example:
49 D 26 2N3439-MOT Designates Motorola Type 2N3439

NPN SILICON POWER TRANSISTORS

Tc is 25° C.

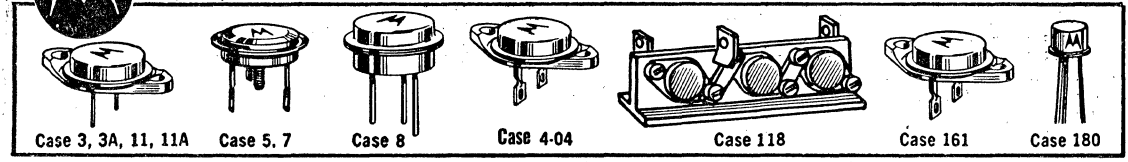
Type No.	Case	V_{CEO} (V)	ft MHz min	Pd (W)	hFE @ Ic		EACH	
					min/max	(A)	1-99	100-999
2N3232	11	60	1.0	115	15/75	3.0	3.75	2.50
2N3445	11	60	10	115	20/60	3.0	9.00	6.00
2N3446	11	80	10	115	20/60	3.0	13.50	9.00
MJ2841	11	80	4.0	150	20/100	4.0	6.35	4.25
MJE3055	90	60	2.2	90	20/70	4.0	1.41	1.00
2N3055	11	60	1.0	115	20/70	4.0	2.05	1.45
2N3235	11	55	1.0	115	20/70	4.0	3.75	2.50
2N3447	11	60	10	115	40/120	5.0	14.40	9.60
2N3448	11	80	10	115	40/120	5.0	18.00	12.00
MJ802	11	90	.....	200	25/100	7.5	13.65	9.10
MJ2801	11	40	1.0	120	15/60	8.0	2.85	1.90
2N3772	11	60	0.8	150	15/60	10	3.75	2.50
2N3771	11	40	0.8	150	15/60	15	3.75	2.50

PNP SILICON POWER TRANSISTORS

*Solid header. #TO-3, 50-mil pin dia.

Type No.	Case	V_{CEO} (V)	ft MHz min	Pd (W)	hFE @ Ic		EACH	
					min/max	(A)	1-99	100-999
MJ2253	80	60	3.0	25	20/100	0.25	2.65	1.76
MJ2254	80	80	3.0	25	20/100	0.25	2.90	1.95
MJ3701	80	40	3.0	25	20/100	0.25	2.00	1.35
2N3740	80	60	4.0	25	30/100	0.25	2.90	1.95
2N3741	80	80	4.0	25	30/100	0.25	3.15	2.10
2N4234*	31	40	3.0	6.0	30/150	0.25	3.00	2.00
2N4235*	31	60	3.0	6.0	30/150	0.25	3.60	2.39
2N4236*	31	80	3.0	6.0	30/150	0.25	4.00	2.66
2N4898	80	40	3.0	25	20/100	0.5	1.95	1.30
2N4899	80	60	3.0	25	20/100	0.5	2.60	1.75
2N4900	80	80	3.0	25	20/100	0.5	2.90	1.95
2N4918	77	40	3.0	30	20/100	0.5	1.65	1.11
2N4919	77	60	3.0	30	20/100	0.5	1.90	1.27
2N4920	77	80	3.0	30	20/100	0.5	2.25	1.50
2N5344	80	250	60	40	25/100	0.5	18.00	12.00
2N5345	80	300	60	40	25/100	0.5	22.50	15.00
MJ490	11	40	4.0	87.5	30/200	1.0	2.10	1.40
MJ491	11	60	4.0	87.5	30/200	1.0	2.80	1.88
MJE370	77	30	.....	25	25/...	1.0	1.65	1.10
MJE371	77	40	.....	25	30/...	1.0	1.96	1.31
2N3026	11	60	60	25	50/180	1.0	49.50	33.00
2N3719*	31	40	60	6.0	25/180	1.0	9.75	6.50
2N3720*	31	60	60	6.0	25/180	1.0	10.85	7.25
2N3789	11	60	4.0	150	25/90	1.0	7.50	5.00
2N3790	11	80	4.0	150	25/90	1.0	8.90	5.95
2N3791	11	60	4.0	150	50/150	1.0	8.75	5.85
2N3792	11	80	4.0	150	50/150	1.0	9.50	6.35
2N4901	11	40	4.0	87.5	20/80	1.0	2.75	1.84
2N4902	11	60	4.0	87.5	20/80	1.0	3.30	2.21
2N4903	11	80	4.0	87.5	20/80	1.0	4.25	2.84
2N5193	77	40	2.0	40	25/100	1.5	2.00	1.33
2N5194	77	60	2.0	40	25/100	1.5	2.25	1.50
2N5195	77	80	2.0	40	20/80	1.5	2.90	1.95
MJE105	90	50	.....	65	25/100	2.0	2.33	1.55
2N4904	11	40	4.0	87.5	25/100	2.5	3.35	2.25
2N4905	11	60	4.0	87.5	25/100	2.5	4.45	2.98
2N4906	11	80	4.0	87.5	25/100	2.5	5.60	3.75
MJ431	11	325	2.5	125	15/35	2.5	37.50	27.78
MJ2840	11	60	.....	150	20/100	3.0	4.50	3.00
MJE2901	90	60	.....	90	25/100	3.0	2.95	1.95
MJ2267	11	40	3.0	150	20/100	4.0	4.95	3.30
MJ2268	11	55	3.0	150	20/100	4.0	5.45	3.65
MJ2941	11	80	4.0	150	20/100	4.0	10.85	7.25
MJE2955	90	60	2.0	90	20/70	4.0	2.90	1.95
MJ4502	12	90	.....	200	25/100	7.5	20.70	13.80
MJ2901	11	60	.....	90	15/60	8.0	3.75	2.50
MJ450#	12	40	2.0	150	20/...	10	9.50	6.35
2N5303	12	80	2.0	200	15/60	10	18.00	12.00
2N4398#	12	40	4.0	200	15/60	15	11.25	7.50
2N4399#	12	60	4.0	200	15/60	15	13.50	9.05
2N5301	12	40	2.0	200	15/60	15	6.90	4.60
2N5302	12	60	2.0	200	15/60	15	7.65	5.10

Motorola Germanium PNP Power Transistors



Germanium PNP power transistors for high level switching and amplifier use in industrial and commercial devices. Case 3 has .42" pin length; case 3A, .61"; case 11, .44"; case 11A, .32". Case 5 has solder terminals; case 7 has straight leads. *BV_{CER} volts. †BV_{CEO} volts.

HOW TO ORDER

Specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. Example: 49 D 26 MP3730-MOT Designates Motorola Type MP3730.

Type No.	Case	P_D (W)	BV_{CES} (V)	EACH 1-99	EACH 100-999
MP3730	11	56	200	1.58	1.05
MP3731	11	56	320	2.10	1.40
2N307	11	106	35	1.12	.75
2N307A	11	106	35	1.87	1.25
2N176	11	90	30	1.20	.87
2N178	11	40	30*	1.10	.80
2N242	11	106	45*	1.65	1.10
2N297A	11	85	50	1.60	1.17
2N554	11	40	16*	.60	.40
2N555	11	40	30*	.75	.50
2N665	11	35	40†	4.40	2.95
2N669	11	90	30	1.42	.95
2N2138	11	70	45	2.10	1.40
2N2139	11	70	60	2.25	1.50
2N2140	11	70	75	3.90	2.60
2N2141	11	70	90	7.85	5.25
2N2142	11	70	30	2.30	1.55
2N2143	11	70	45	2.45	1.65
2N2144	11	70	60	3.75	2.50
2N2145	11	70	75	4.50	3.00
2N350A	11	90	40	1.65	1.10
2N351A	11	90	40	1.70	1.15
2N375	11	106	60	2.20	1.65
2N376A	11	90	40	1.85	1.25
2N618	11	106	60	2.45	1.82
2N1038	180	20	60†	2.85	1.90
2N1039	180	20	60†	3.75	2.50
2N1040	180	20	60†	5.70	3.80
2N1041	180	20	60†	7.50	5.00
2N1359	11	106	40	1.40	1.05
2N1360	11	106	40	1.70	1.25
2N1362	11	106	75	2.85	2.12
2N1363	11	106	75	3.10	2.30
2N1364	11	106	100	4.75	3.53
2N1365	11	106	100	5.00	3.70
MP110	11	106	50	1.67	1.12
MP110B	11A	106	40†	6.00	4.00
MP1613	11	85	90	1.35	1.10
2N379	11	106	40	1.90	1.39
2N459	11	106	70	4.35	2.90
2N1011	11	90	80	1.95	1.45
2N1529	11	106	30	1.45	1.08
2N1530	11	106	45	1.60	1.15
2N1531	11	106	60	2.30	1.70
2N1532	11	106	75	3.00	2.24
2N1532A	11	106	75	3.58	2.65
2N1533	11	106	90	4.35	2.35
2N1534	11	106	30	1.40	1.05
2N1534A	11	106	30	1.95	1.45
2N1535	11	106	45	1.50	1.14
2N1535A	11	106	45	2.10	1.55
2N1536	11	106	60	1.70	1.25
2N1537	11	106	75	3.90	2.90
2N1537A	11	106	75	4.45	3.30
2N1538	11	106	90	5.50	4.05
2N1539	11	106	30	1.50	1.12
2N1540	11	106	45	1.58	1.18
2N1540A	11	106	45	2.10	1.62
2N1541	11	106	60	1.85	1.38
2N1541A	11	106	60	2.35	1.75
2N1542	11	106	75	2.35	1.75
2N1542A	11	106	75	3.04	2.25
2N1543	11	106	90	3.60	2.65
2N1544	11	106	30	1.65	1.24
2N1544A	11	106	30	2.22	1.64
2N1545	11	106	45	1.85	1.35
2N1545A	11	106	45	2.35	1.75
2N1546	11	106	60	2.30	1.70
2N1546A	11	106	60	2.95	2.20
2N1547	11	106	75	2.75	2.05
2N1547A	11	106	75	3.45	2.55
2N1548	11A	106	90	4.00	2.95

Type No.	Case	P_D (W)	BV_{CES} (V)	EACH 1-99	EACH 100-999
2N2527	11	85	120	9.30	6.20
2N2528	11	85	160	14.85	9.90
2N3611	11	77	30	1.15	.78
2N3612	11	77	45	1.30	.88
2N3613	11	77	30	1.25	.85
2N3614	11	77	45	1.40	.94
2N3615	11	77	60	1.65	1.10
2N3616	11	77	75	2.10	1.39
2N3617	11	77	60	1.88	1.25
2N3618	11	77	75	2.37	1.58
MP525	11	106	35*	1.00	.75
MP2060	11	85	30	1.05	.75
MP2061	11	85	45	1.15	.85
MP2062	11	85	60	1.35	1.00
MP2063	11	85	75	1.65	1.25
2N174	5	150	.....	3.60	2.67
2N174A	5	150	.....	3.80	2.79
2N277	5	170	25†	2.25	1.66
2N278	5	170	30†	2.80	2.07
2N441	5	150	40	1.26	.84
2N442	5	150	45	1.66	1.11
2N443	5	150	50	1.90	1.39
2N456A	11	50	20†	1.80	1.20
2N457A	11	50	30†	2.20	1.45
2N458A	11	50	40†	2.65	1.75
2N1022	11	85	50†	3.60	2.40
2N1073	11A	85	40*	2.40	1.78
2N1073B	11A	85	120*	4.50	3.30
2N1099	5	170	55†	3.90	2.87
2N1100	5	150	.....	4.50	3.34
2N1358	5	150	40†	4.15	3.06
2N1412	5	150	80	4.50	3.34
2N1970	5	170	50†	2.35	1.73
2N2076	5	170	70	3.60	2.67
2N2076A	5	170	70	4.75	3.17
2N2077	5	170	50	2.85	2.12
2N2078	5	170	40	1.90	1.39
2N2079	5	170	80	7.20	5.34
2N2080	5	170	70	5.10	3.78
2N2081	5	170	50	3.15	2.32
2N2152	5	170	45	3.60	2.40
2N2152A	5	170	45	4.35	2.90
2N2153	5	170	60	5.55	3.70
2N2154	5	170	75	10.10	6.75
2N2155	5	170	90	15.35	10.25
2N2156	5	170	45	4.10	2.75
2N2157	5	170	60	6.35	4.25
2N2157A	5	170	60	7.10	4.75
2N2158	5	170	75	10.85	7.25
2N2158A	5	170	75	11.60	7.75
2N2159	5	170	90	16.25	10.85
2N2212	4-04	102	60†	8.60	5.75
2N2288	11A	70	40*	2.65	1.78
2N2289	11A	70	80*	4.00	2.65
2N2290	11A	70	120*	4.95	3.30
2N2291	11A	70	40*	2.75	1.85
2N2292	11A	70	80*	6.00	4.00
2N2293	11A	70	120*	11.85	7.90
2N2490	5	70	60	1.88	1.39
2N2492	5	70	70	3.38	2.50
2N2493	5	170	85	6.00	4.45
2N5324	11	56	150†	4.50	3.00
2N5325	11	56	200†	6.00	4.00
MP600	11A	85	50†	1.85	1.25
MP601	11A	85	60†	2.25	1.50
MP602	11A	85	70†	3.00	2.00
MP603	11A	85	80†	3.65	2.45
2N5155	11A	106	120†	4.10	2.75
MP2000A	11A	106	30†	1.75	1.15
MP2100A	11A	106	60†	2.15	1.45
MP2200A	11A	106	80†	2.75	1.85

Type No.	Case	P_D (W)	BV_{CES} (V)	EACH 1-99	EACH 100-999
MP2300A	11A	106	100†	3.30	2.20
MP2400A	11A	106	120†	3.90	2.60
2N1550	11A	106	45	3.05	2.05
2N1551	11A	106	60	4.85	3.25
2N1552	11A	106	75	5.55	3.70
2N1553	11A	106	30	1.85	1.35
2N1554	11A	106	45	2.30	1.70
2N1554A	11A	106	45	2.85	2.10
2N1555	11A	106	60	2.75	2.05
2N1555A	11A	106	60	3.45	2.55
2N1556	11A	106	75	4.00	2.95
2N1556A	11A	106	75	4.65	3.45
2N1557	11A	106	30	2.10	1.58
2N1557A	11A	106	30	2.70	2.00
2N1558	11A	106	45	2.80	2.06
2N1558A	11A	106	45	3.40	2.50
2N1559	11A	106	60	3.25	2.40
2N1559A	11A	106	60	3.90	2.90
2N1560	11A	106	75	4.45	3.30
2N1560A	11A	106	75	5.00	3.70
2N2832	11A	85	50†	4.50	3.00
2N2833	11A	85	75†	4.85	3.25
2N2834	11A	85	100†	5.25	3.50
2N2912	8	75	5.0†	8.10	5.40
MP1612	11A	85	50†	3.55	2.65
MP1612A	11A	85	75†	3.90	2.90
MP1612B	11A	85	100†	4.20	3.10
MP500	7	170	45	5.70	3.80
MP500A	7	170	45	7.10	4.75
MP502	7	170	75	12.00	8.00
MP504	7	170	45	6.60	4.40
MP504A	7	170	45	8.15	5.45
MP505	7	170	60	10.20	6.80
MP505A	7	170	60	12.75	8.50
MP506	7	170	75	13.85	9.25
MP506A	7	170	75	16.85	11.25
2N1751	3A	106	60†	14.25	9.50
2N1162	8	106	35	4.45	3.30
2N1164	3	106	60	6.35	4.70
2N1164A	3	106	60	6.95	5.15
2N1165	3	106	60	6.35	4.70
2N1166	3	106	75	7.55	5.60
2N1166A	3	106	75	8.10	6.00
2N1167	3	106	75	7.55	5.60
2N1651	3A	100	30†	4.85	3.25
2N1652	3A	100	60†	10.10	6.75
2N1653	3A	100	80†	14.60	9.75
2N2285	161	100	30†	4.85	3.25
2N2286	161	100	60†	10.10	6.75
2N2287	161	100	80†	14.60	9.75
2N2357	161	170	30†	7.10	4.75
2N2358	161	170	60†	14.25	9.50
2N2359	161	170	80†	17.60	11.75
2N4276	3A	170	20†	3.50	2.35
2N4048	7	170	30†	5.60	3.75
2N4049	7	170	45†	7.50	5.00
2N4050	7	170	60†	9.30	6.20
2N4051	7	170	30†	6.45	4.30
2N5435	3A	120	60†	10.85	7.25
2N5436	3A	120	90†	15.35	10.25
2N5437	3A	120	120†	18.00	12.00
2N5438	3A	120	60†	14.60	9.75
2N5439	3A	120	90†	18.35	12.25
2N5440	3A	120	120†	22.50	15.00
MP900	118	250	60†	110.00	100.00
MP901	118	250	90†	121.00	110.00
MP902	118	250	120†	132.00	120.00
MP800	118	250	60†	51.00	46.00
MP801	118	250	45†	42.00	37.75

When Ordering, Specify Dept. No., Mfr's Type No. and Name

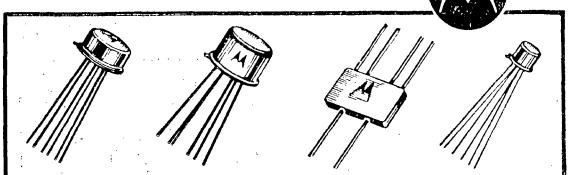
Motorola TWINS—Dual Transistors

HOW TO ORDER

When ordering, specify Dept. No. 49 D 26, followed by Mfr's Type No. and Name. For Example.

49 D 26 2N2060-MOT Designates Motorola Type 2N2060

Each compact TWINS transistor holds two separate units in the space normally occupied by one. Provide uniform performance with better parameter uniformity over wide temperature swings.



CASE 32 CASE 32A, 32C CASE 33, 33A CASE 35

NPN DIFFERENTIAL AMPLIFIERS

Type No.	Case	Amb. Pwr. Diss. (mW max.) One Side	Amb. Pwr. Diss. (mW max.) Both Sides	V_{CB} V (max)	h_{FE} @ 25°C min/max	V_{BE1}/V_{BE2} mV (max)	EACH 1-99	EACH 100-999
2N2060	32A	500	600	60	30/90	5	21.00	14.00
2N2060A	32A	500	600	60	30/90	3	36.00	24.00
2N2223	32A	500	600	60	25/150	15	10.05	6.70
2N2223A	32A	500	600	60	25/150	5	15.00	10.00
2N2453	32C	.....	300	60	80/...	3	24.00	16.00
2N2453A	32C	.....	300	80	80/...	3	32.50	21.60
2N2480	32A	500	600	60	20/—	10	12.75	8.50
2N2480A	32A	500	600	60	35/—	5	15.35	10.25
2N2639	32A	300	600	45	50/300	5	22.50	15.00
2N2640	32A	300	600	45	50/300	10	17.25	11.50
2N2642	32A	300	600	45	100/300	5	25.50	17.00
2N2643	32A	300	600	45	100/300	10	22.20	14.80
2N2652	32A	.....	600	100	35/...	3	18.00	12.00
2N2652A	32A	.....	600	100	35/...	3	21.00	14.00
2N2720	32A	.....	600	80	30/120	5	21.75	14.50
2N2721	32A	.....	600	80	30/120	10	17.25	11.50
2N2722	32A	.....	600	45	100/...	5	26.25	17.50
2N2903	32C	.....	300	60	60/...	10	15.00	10.00
2N2903A	32C	.....	300	60	60/...	5	18.00	12.00
2N2915	32A	300	600	45	100/300	3	10.50	7.00
2N2916	32A	300	600	45	225/—	3	12.00	8.00
2N2917	32A	300	600	45	100/—	5	7.50	5.00
2N2918	32A	300	600	45	225/—	5	9.75	6.50
2N2919	32A	300	600	60	100/—	3	11.25	7.50
2N2920	32A	300	600	60	225/—	3	14.25	9.50
2N2974	35	250	300	60	100/—	3	27.75	18.50
2N2975	35	250	300	45	225/—	3	30.75	20.50
2N2976	35	250	300	45	100/—	5	22.50	15.00
2N2977	35	250	300	45	225/—	5	25.50	17.00
2N2978	35	250	300	60	100/—	3	29.25	19.50
2N2979	35	250	300	60	225/—	3	32.25	21.50
2N3043	33	250	350	45	100/300	5	39.00	26.00
2N3044	33	250	350	45	100/300	10	33.00	22.00
2N3046	33	250	350	45	50/200	5	36.00	24.00
2N3047	33	250	350	45	50/200	10	30.00	20.00
2N3409	32	500	600	60	30/120	10	13.50	9.00
2N3410	32	500	600	60	30/120	10	15.00	10.00
2N3423	32A	.....	450	30	20/200	10	18.00	12.00
2N3424	32A	.....	450	30	20/200	5	24.00	16.00
2N3515	33	.....	350	80	50/200	5	27.00	18.00
2N3518	33	.....	350	100	50/200	3	33.00	22.00
MD708A	32	300	400	40	40/200	5	6.75	4.50
MD708AF	33	300	400	40	40/200	5	15.75	10.50
MD708B	32	300	400	40	40/200	10	4.80	3.20
MD708BF	33	300	400	40	40/200	10	12.30	8.20
MD918A	32	300	400	30	50/—	5	15.75	10.50
MD918AF	33	300	400	30	50/—	5	24.75	16.50
MD918B	32	300	400	30	50/—	10	13.20	8.80
MD918BF	33	300	400	30	50/—	10	20.25	13.50
MD1120	32	500	600	60	30/120	10	19.10	12.75
MD1121	32	500	600	60	30/120	10	24.80	16.55
MD2369A	32	500	600	40	40/140	5	16.50	11.00
MD2369AF	33	500	600	40	40/140	5	25.50	17.00
MD2369B	32	500	600	40	40/140	10	13.95	9.30
MD2369BF	33	500	600	40	40/140	10	21.00	14.00
MD8001	32A	.....	600	.....	100/—	15	2.10	1.40
MD8002	32A	.....	600	.....	100/—	15	2.25	1.50
MD8003	32A	.....	600	.....	100/—	15	2.50	1.65

PNP DIFFERENTIAL AMPLIFIERS

2N2802	32A	250	500	25	20/120	5	20.00	13.40
2N2803	32A	250	500	25	20/120	10	12.00	8.50
2N2805	32A	250	500	25	40/120	5	20.50	13.60
2N2806	32A	250	500	25	40/120	10	17.25	11.50
2N3049	33	250	350	25	30/120	5	34.50	23.00
2N3050	33	250	350	25	30/120	10	24.00	16.00
2N3802	35	250	360	60	150/450	5	21.00	14.00
2N3803	35	250	360	60	300/900	5	22.50	15.00
2N3804	35	250	360	60	150/450	3	26.25	17.50
2N3805	35	250	360	60	300/900	3	27.75	18.50
2N3808	32	500	600	50	150/450	5	21.00	14.00
2N3809	32	500	600	60	300/900	5	22.50	15.00
2N3810	32	500	600	60	150/450	3	26.25	17.50
2N3811	32	500	600	60	300/900	3	27.75	18.50
2N3814	33A	.....	350	60	150/450	5	28.50	19.00
2N3815	33A	.....	350	60	300/900	5	30.00	20.00

PNP DIFFERENTIAL AMPLIFIERS (Cont'd)

Type No.	Case	Amb. Pwr. Diss. mW (max) One Side	Amb. Pwr. Diss. mW (max) Both Sides	V_{CB} V (max)	h_{FE} @ 25° C min/max	V_{BE1}/V_{BE2} mV (max)	EACH 1-99	EACH 100-999
2N3816	33A	.....	350	60	150/450	3	38.25	25.50
2N3817	33A	.....	350	60	300/900	3	39.75	26.50
2N4937	32	.....	600	50	40/120	5	7.15	4.75
2N4938	32	.....	600	50	40/120	5	5.70	3.80
2N4940	33	.....	350	50	40/120	3	15.75	10.50
2N4941	33	.....	350	50	40/120	5	12.30	8.20
MD1123	32	.....	600	60	50/200	10	27.60	18.40
MD1123F	33	.....	350	60	50/200	10	49.70	33.15
MD1124	32	.....	600	60	50/200	5	36.00	24.00
MD1124F	33	.....	350	60	50/200	5	64.80	43.20
MD1125	32	.....	600	60	50/200	5	53.60	35.75
MD1125F	33	.....	350	60	50/200	5	83.15	55.45
MD3251A	32	500	600	50	100/300	3	23.25	15.50
MD3251AF	33	500	600	50	100/300	3	30.75	20.50
MD5000	32	.....	400	20	20/50	5	11.25	7.50
MD5000A	32	.....	400	20	20/50	5	23.25	15.50
MD5000B	32	.....	400	20	20/50	10	15.75	10.50

NPN DUAL TRANSISTORS

Type No.	Case	Amb. Pwr. Diss. One Side mW	Amb. Pwr. Diss. Both Sides mW	V_{CEO} V	h_{FE} @ I_C min/max	mA	EACH 1-99	EACH 100-999
2N2641	32A	300	600	45	50/300	0.01	7.20	4.80
2N2644	32A	300	600	45	100/300	0.01	8.25	5.50
2N2913	32A	300	600	45	60/240	0.01	3.00	2.00
2N2914	32A	300	600	45	150/600	0.01	3.40	2.25
2N3045	33	250	350	45	100/300	0.01	14.25	9.50
2N3048	33	250	350	45	50/200	0.01	12.75	8.50
2N3425	32A	.....	450	15	20/200	3	5.25	3.50
MD708	32	300	400	15	40/200	10	4.35	2.90
MD708F	33	300	400	15	40/200	10	8.85	5.90
MD918	32	300	400	15	40/200	10	8.25	5.50
MD918F	33	300	400	15	40/200	10	12.75	8.50
MD2218	32	500	600	30	40/120	150	6.75	4.50
MD2218F	33	500	600	30	40/120	150	11.25	7.50
MD2219	32	500	600	30	100/300	150	7.95	5.30
MD2219F	33	500	600	30	100/300	150	12.45	8.30
MD2219A	32	500	600	40	100/300	150	13.20	8.80
MD2219AF	33	500	600	40	100/300	150	17.70	11.80
MD2369	32	500	600	15	40/140	10	9.00	6.00
MD2369F	33	500	600	15	40/140	10	13.50	9.00
MD3725	32C	.....	600	40	50/150	100	10.10	6.75
MD3725F	33	.....	350	40	50/150	100	18.35	12.25
MD4957	32C	.....	400	30	20/150	2	26.25	17.50

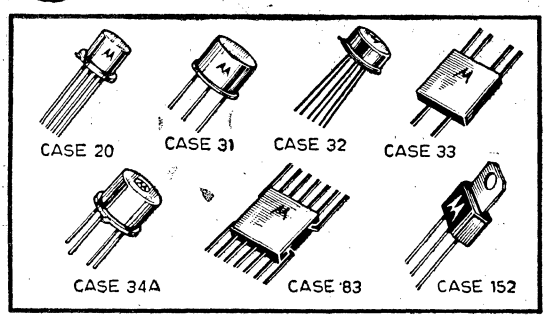
PNP DUAL TRANSISTORS

2N2804	32A	250	500	20	20/120	0.1	7.00	4.70
2N2807	32A	250	500	20	40/120	0.1	6.00	4.00
2N3800	35	250	360	60	150/450	0.1	14.25	9.50
2N3801	35	250	360	60	300/900	0.1	15.75	10.50
2N3806	32	500	600	60	150/450	0.1	14.25	9.50
2N3807	32	500	600	60	300/900	0.1	15.75	10.50
2N3812	33	.....	350	60	150/450	0.1	18.75	12.50
2N3813	33	.....	350	60	300/900	0.1	20.25	13.50
2N4939	32	.....	600	40	50/250	1.0	3.40	2.25
2N4942	33	.....	350	40	50/250	1.0	8.85	5.90
MD982	32	.....	600	50	35/—	10	27.60	18.40
MD982F	33	.....	350	50	35/—	10	49.70	33.15
MD984	32	.....	600	20	25/—	10	20.65	13.75
MD990	32	.....	600	35	50/300	150	34.75	23.15
MD2905	32	500	600	40	100/300	150	7.95	5.30
MD2905F	33	500	600	40	100/300	150	12.45	8.30
MD3133	32	.....	600	35	40/120	150	7.35	4.90
MD3133F	33	.....	350	35	40/120	150	11.10	7.40
MD3134	32	.....	600	35	100/300	150	7.80	5.20
MD3134F	33	.....	350	35	100/300	150	11.70	7.80
MD3250	32	500	600	40	50/150	1.0	9.75	6.50
MD3251	32	500	600	40	100/300	1.0	11.60	7.75
MD3251F	33	500	600	40	100/300	1.0	19.10	12.75
MD3467	32C	.....	600	40	20/—	500	11.25	7.50
MD3467F	33	.....	600	40	20/—	500	18.75	12.50
MD3762	32C	.....	600	40	20/—	1000	12.00	8.00
MD3762F	33	.....	350	40	20/—	1000	20.25	13.50

Maximum Ratings are with T_j at 200°C, Except as Noted

Motorola Semiconductors

NPN-PNP TRANSISTORS



HOW TO ORDER

When ordering, specify Dept. No. 49 D 26, followed by Mf'rs Type No. and Name.

For example: 49 D 26 2N3838-MOT

Designates Motorola Type 2N3838

MULTIPLE DEVICES

Complementary epitaxial star transistors for high-speed switching circuits, DC to UHF applications and space saving considerations. Complementary pairs NPN/PNP. Two-in-one transistors for space reduction. Maximum T_J=200° C.

Type No.	Case	P_D @ T_A=25°C Both Sides mW	V_{CE} Volts	EACH 1-99	EACH 100-999
2N3838	33	350	40	27.75	18.50
MD985	32	600	30	9.00	6.00
MD985F	33	350	30	13.50	9.00
MD986	32	600	15	18.90	12.60
MD986F	33	350	15	30.15	20.10
MD6001	32	600	30	10.80	7.20
MD6002	32	600	30	13.50	9.00
MD6100	32	600	45	14.85	9.90

DARLINGTON AMPLIFIER TRANSISTORS—NPN

Darlington amplifier transistors are compound-connected for extremely high DC current gain. Maximum T_J=200° C.

Type No.	Case No.	P_D @ T_A=25° C Both Sides mW	V_{CE} Volts	EACH 1-99	EACH 100-999
2N998	20	500	60	13.50	9.00
2N999	20	500	60	14.85	9.90
2N2723	20	500	60	15.00	10.00
2N2724	20	500	60	16.50	11.00
2N2725	20	500	45	21.00	14.00
2N2785	20	500	40	11.25	7.50

DARLINGTON AMPLIFIER TRANSISTORS—PNP

Type No.	Case No.	P_D @ T_A=25° C Both Sides mW	V_{CE} Volts	EACH 1-99	EACH 100-999
2N4974	34A	2500	30	9.00	6.00
2N4975	34A	2500	30	7.50	5.00

NPN QUAD TRANSISTORS (Case 83)

For high-speed switching where space reduction is required. V_{CEO} Volts=40. P_D @ T_A=25° C.; 500 mW, 4 devices.

Type No.	h_{FE} @ I_C min/max	mA	$V_{CE(sat)}$ @ I_C/I_B Volts (max)	mA	EACH 1-99	EACH 100-999
MQ3725	50/150	100	0.26	100/10	40.10	26.75

PNP QUAD TRANSISTORS (Case 83)

2N5146	20/...	1000	1.0	1000/100	47.60	31.75
MQ3467	20/...	500	0.5	500/50	44.25	29.50
MQ3762	20/...	1000	1.0	1000/100	47.60	31.75

DIFFERENTIAL AMPLIFIERS (Case 83)

Type No.	V_{CB} Volts	P_D @ T_A=25°C. 4 Devices mW	h_{FE} min/max	h_{FE1}/h_{FE2} min/max	EACH 1-99	EACH 100-999
MQ3799	60	500	300/900	0.9/1.0	42.75	28.50
MQ3799A	60	500	300/900	0.9/1.0	79.50	53.00

NPN UNIWATT TRANSISTORS (Case 152)

Uniwatt plastic-encapsulated transistors are designed for applications requiring higher power dissipation. Package is slightly larger than the small-signal case, and the collector is mounted on a metal tab that extends out of the plastic. Tab can be attached to a heat sink to conduct heat from the junction. Power dissipation range for Uniwatt transistors is 5 to 8 watts; without heat sink dissipation is 1 watt @ T_A=25° C.

Type No.	V_{CEO} Volts	P_D @ T_C=25°C Watts	f_T @ I_C MHz min	mA	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS-U01	30	8.0	50	50	1.15	.77	.58	.54
MPS-U02	40	6.0	150	20	.99	.66	.49	.46
MPS-U03	120	5.0	100	50	1.41	.94	.70	.66
MPS-U04	180	5.0	100	50	1.62	1.08	.81	.76
MPS-U05	60	5.0	50	250	1.16	.77	.58	.54
MPS-U06	80	5.0	50	250	1.34	.89	.67	.62

PNP UNIWATT TRANSISTORS (Case 152)

Type No.	V_{CEO} Volts	P_D @ T_C=25°C Watts	f_T @ I_C MHz min	mA	EACH 1-99	EACH 100-999	EACH 1000-4999	EACH 5000-9999
MPS-U51	30	8.0	50	50	1.33	.89	.67	.62
MPS-U52	40	6.0	150	20	1.15	.77	.58	.54
MPS-U55	60	5.0	50	250	1.34	.89	.67	.62
MPS-U56	80	5.0	50	250	1.50	1.00	.75	.70

GERMANIUM PNP MILLIWATT TRANSISTORS (Case 31)

Milliwatt power transistors suitable for audio, switching and control uses requiring moderate power levels and current gains to 500—at frequencies to 3 MHz. ‡"Meg-A-Life," tested to military standards. *Military type available, prices slightly higher.

Type No.	I_C mA max	BV_{CES} BV_{CER}* BV_{CEO}‡ R=10kΩ Volts	P_D mW	EACH 1-99	EACH 999-1000
2N398	100	105‡	50	1.20	.80
2N331	200	12V_{EB}	75	1.88	1.25
2N398A	200	105‡	150	1.28	.85
2N508A	200	25*	200	.90	.60
2N1191	200	25*	200	1.40	.95
2N1192	200	25*	200	1.40	.95
2N1193	200	25*	200	1.87	1.25
2N1194	200	25*	200	2.03	1.35
2N2042	200	105‡	200	2.85	1.90
2N2043	200	105‡	200	3.20	2.15
2N653	250	25*	200	2.50	1.65
2N654	250	25*	200	2.60	1.75
2N655	250	25*	200	2.80	1.85
2N1008	300	20‡	200	1.10	.75
2N1008A	300	40‡	200	1.20	.80
2N1008B	300	60‡	200	1.30	.85
2N381	400	25*	225	1.28	.85
2N382	400	25*	225	1.73	1.15

Type No.	I_C mA max	BV_{CES} BV_{CER}* BV_{CEO}‡ R=10kΩ Volts	P_D mW	EACH 1-99	EACH 999-1000
2N383	400	25*	225	2.18	1.45
2N460	400	.....	225	2.25	1.50
2N461	400	.....	225	2.25	1.50
2N1707	400	25	200	.83	.55
2N2171	400	25*	225	1.95	1.30
2N464	500	40*	200	1.88	1.25
2N465	500	30*	200	1.88	1.25
2N466	500	20*	200	2.10	1.40
2N467	500	15*	200	2.55	1.70
2N650	500	30*	200	2.03	1.35
2N651	500	30*	200	2.03	1.35
2N652	500	30*	200	2.30	1.55
2N1185	500	30*	200	3.60	2.40
2N1186	500	45*	200	3.80	2.55
2N1187	500	45*	200	3.80	2.55
2N1188	500	45*	200	4.70	3.15
2N1189	500	30*	200	2.25	1.50
2N3427	500	30*	200	1.95	1.30

Type No.	I_C mA max	BV_{CES} BV_{CER}* BV_{CEO}‡ R=10kΩ Volts	P_D mW	EACH 1-99	EACH 999-1000
2N3428	500	30*	200	2.25	1.50
2N320	500	20‡	225	.75	.50
2N321	500	20‡	225	.83	.55
2N322	500	18‡	225	.53	.35
2N323	500	18‡	225	.75	.50
2N324	500	18‡	225	.75	.50
2N508	500	18‡	225	.75	.50
2N524	500	30‡	225	1.20	.80
2N525	500	30‡	225	1.20	.80
2N526	500	30‡	225	1.20	.80
2N527	500	30‡	225	1.43	.95
2N1175	500	25‡	225	1.12	.75
2N1413	500	25	225	.83	.55
2N1414	500	25	225	.90	.60
2N1415	500	25	225	1.05	.70
2N1924	500	40‡	225	1.80	1.20
2N1925	500	40‡	225	2.03	1.35
2N1926	500	40‡	225	2.40	1.60

Specify Dept. No., Manufacturer's Type No. and Name on Semiconductor Orders

Motorola Varactors

VARACTOR DIODES

EPICAP TUNING DIODES

For tuning and control applications; including electronic tuning, automatic frequency control, antenna switching and phase shifting.

CASE 51 (DO-7). P_D° @ 25° C, 400 mW (max.). Tuning Ratio, C_4/C_{60}.

Type No.	BV_R I_R,10μA V(min)	C_T(nom) V_R, 4 V f, 1 MHz	Q(min) V_R, 4 V f,50MHz	Tuning Ratio min/typ	EACH 1-99	EACH 100-999
1N5139	60	6.8	350	2.7/2.9		
1N5140	60	10.0	300	2.8/3.0	No Suffix	
1N5141	60	12.0	300	2.8/3.0	(±10% tolerance)	
1N5142	60	15.0	250	2.8/3.0	5.85	3.90
1N5143	60	18.0	250	2.8/3.0		
1N5144	60	22.0	200	3.2/3.4		
1N5145	60	27.0	200	3.2/3.4	A Suffix	
1N5146	60	33.0	200	3.2/3.4	(±5% tolerance)	
1N5147	60	39.0	200	3.2/3.4	6.45	4.30
1N5148	60	47.0	200	3.2/3.4		

CASE 51 (DO-7). P_D, 400 mW (max.). Tuning Ratio, C_4/C_{25}.

MV830	30	15.0	30	1.8/2.0	1.35	.90
MV831	30	18.0	25	1.8/2.0	1.35	.90
MV832	30	22.0	25	1.8/2.1	1.35	.90
MV833	30	27.0	25	1.8/2.1	1.35	.90
MV834	30	33.0	20	1.9/2.12	1.35	.90
MV835	30	39.0	20	1.9/2.12	1.35	.90
MV836	30	47.0	15	1.9/2.12	1.35	.90
MV837	30	56.0	15	1.9/2.12	1.35	.90
MV838	30	68.0	15	2.0/2.18	1.35	.90
MV839	30	82.0	10	2.0/2.18	1.35	.90
MV840	30	100.0	10	2.0/2.18	1.35	.90

CASE 51 (DO-7). P_D @ 25° C, 400 mW (max.). Ratio, C_2/C_{20}.

MV1620	20	6.8	300	2.0/3.2	1.42	.95
MV1622	20	8.2	300	2.0/3.2	1.42	.95
MV1624	20	10.0	300	2.0/3.2	1.42	.95
MV1626	20	12.0	300	2.0/3.2	1.42	.95
MV1628	20	15.0	250	2.0/3.2	1.42	.95
MV1630	20	18.0	250	2.0/3.2	1.42	.95
MV1632	20	20.0	250	2.0/3.2	1.42	.95
MV1634	20	22.0	250	2.0/3.2	1.42	.95
MV1636	20	27.0	200	2.0/3.2	1.42	.95
MV1638	20	33.0	200	2.0/3.2	1.42	.95
MV1640	20	39.0	200	2.0/3.2	1.42	.95
MV1642	20	47.0	200	2.0/3.2	1.42	.95
MV1644	20	56.0	150	2.0/3.2	1.42	.95
MV1646	20	68.0	150	2.0/3.2	1.42	.95
MV1650	20	100.0	150	2.0/3.2	1.42	.95

CASE 146. P_D, 400 mW. *Q @ f=20 MHz. Ratio, C_2/C_{20}. †C_2/C_{15}.

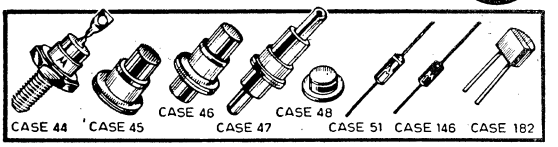
MV1652	20	120	250*	2.6	3.60	2.40
MV1654	20	150	250*	2.6	3.60	2.40
MV1656	20	180	200*	2.6	3.60	2.40
MV1658	20	200	200*	2.6	3.60	2.40
MV1660	20	220	150*	2.6	3.60	2.40
MV1662	15	250	150*	2.3†	3.60	2.40
MV1664	15	270	100*	2.3†	3.60	2.40
MV1666	15	330	100*	2.3†	3.60	2.40

CASE 45. P_D, 5.0 W. *Q @ f=100 MHz. Ratio C_4/C_{60}.

MV1858D	60	1.0	350*	2.38/3.2	12.00	8.00
MV1860D	60	2.2	350*	2.51/3.3	12.00	8.00
MV1862D	60	3.3	300*	2.58/3.4	12.00	8.00
MV1863D	60	4.7	300*	2.58/3.4	12.00	8.00
MV1864D	60	6.8	300*	2.70/3.5	12.00	8.00
MV1865D	60	8.2	300*	2.70/3.5	12.00	8.00
MV1866D	60	10.0	250*	2.80/3.6	12.00	8.00
MV1868D	60	12.0	200*	2.80/3.6	12.00	8.00
MV1870D	60	15.0	200*	2.80/3.6	12.00	8.00

CASE 51. P_D @ 25° C, 400 mW. Ratio, C_2/C_{30}. For C_T Nom. ±5% or ±2%, add suffix B or C respectively. Suffix A indicates C_T Nom. ±10%.

1N5441A	30	6.8	450	2.5/...		
1N5442A	30	8.2	450	2.5/...		
1N5443A	30	10.0	400	2.6/3.1	A Suffix	
1N5444A	30	12.0	400	.....	(±10% tolerance)	
1N5445A	30	15.0	400	.....	3.75	2.50
1N5446A	30	18.0	350	.....		
1N5447A	30	20.0	350	.....		
1N5448A	30	22.0	350	2.6/3.2	B Suffix	
1N5449A	30	27.0	350	.....	(±5% tolerance)	
1N5450A	30	33.0	350	.....	4.50	3.00
1N5451A	30	39.0	300	.....		
1N5452A	30	47.0	250	.....		
1N5453A	30	56.0	200	2.6/3.3	C Suffix	
1N5454A	30	68.0	175	2.7/3.3	(±2% tolerance)	
1N5455A	30	82.0	175	.....	5.70	3.80
1N5456A	30	100.0	175	.....		
1N5461A	30	6.8	600	2.7/3.1		



EPICAP TUNING DIODES CASE 51 (Cont'd)

Type No.	BV_R I_R, 10μA V(min)	C_T(nom) V_R, 4 V f, 1 MHz	Q(min) V_R, 4 V f,50MHz	Tuning Ratio min/typ	EACH 1-99	EACH 100-999
1N5462A	30	8.2	600	2.8/3.1		
1N5463A	30	10.0	550	.....	A Suffix	
1N5464A	30	12.0	550	.....	(±10% tolerance)	
1N5465A	30	15.0	550	.....	6.75	4.50
1N5466A	30	18.0	500	2.9/3.1		
1N5467A	30	20.0	500	2.9/3.1		
1N5468A	30	22.0	500	2.9/3.2	B Suffix	
1N5469A	30	27.0	500	.....	(±5% tolerance)	
1N5470A	30	33.0	500	.....	8.70	5.80
1N5471A	30	39.0	450	.....		
1N5472A	30	47.0	400	.....		
1N5473A	30	56.0	300	2.9/3.3	C Suffix	
1N5474A	30	68.0	250	.....	(±2% tolerance)	
1N5475A	30	82.0	225	.....	12.00	8.00
1N5476A	30	100.0	200	.....		

CASE 182. P_D @ 25° C, 280 mW (max). Tuning Ratio, C_2/C_{30}.

MV2101	30	6.8	450	2.5/2.7	.90	.60
MV2102	30	8.2	450	2.5/2.8	.90	.60
MV2103	30	10.0	400	2.5/2.9	.90	.60
MV2104	30	12.0	400	2.5/2.9	.90	.60
MV2105	30	15.0	400	2.5/2.9	.90	.60
MV2106	30	18.0	350	2.5/2.9	.90	.60
MV2107	30	22.0	350	2.5/2.9	.90	.60
MV2108	30	27.0	300	2.5/3.0	.90	.60
MV2109	30	33.0	200	2.5/3.0	.90	.60
MV2110	30	39.0	150	2.5/3.0	.90	.60
MV2111	30	47.0	150	2.5/3.0	.90	.60
MV2112	30	56.0	150	2.6/3.0	.90	.60
MV2113	30	68.0	150	2.6/3.0	.90	.60
MV2114	30	82.0	100	2.6/3.0	.90	.60
MV2115	30	100.0	100	2.6/3.0	.90	.60

CASE 51. P_D @ 25° C, 400 mW. Tuning Ratio, C_1/C_{10}. f=1.0 MHz.

Type No.	BV_R V (min)	C_T(nom) V_R=1.0V	Q(min) V_R=2.0V	Tuning min/max	EACH 1-99	EACH 100-999
MV1401	12	550	200	14/...	8.95	5.95

CASE 51. P_D @ 25° C, 400 mW. Tuning Ratio, C_2/C_{10}. f=1.0 MHz.

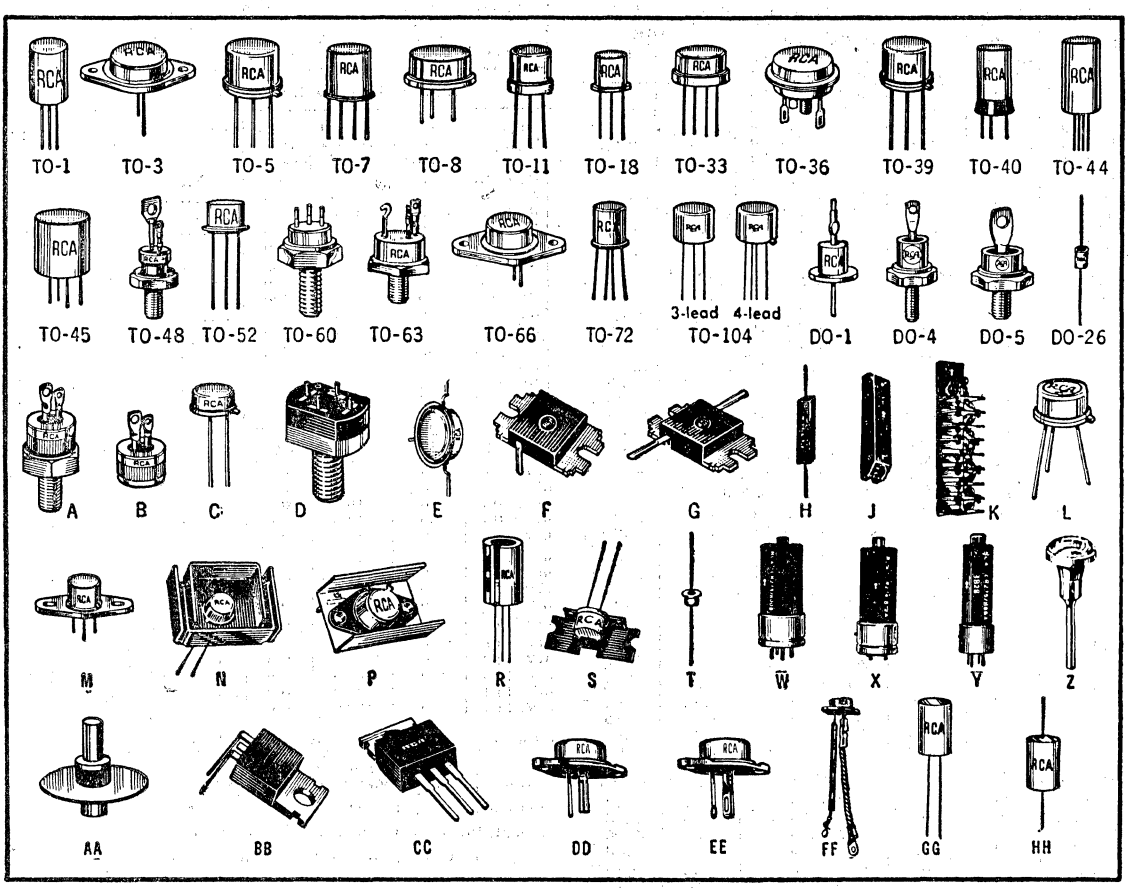
Type	BV_R	V_R=2.0V	V_R=2.0V	Tuning	1-99	100-999
MV1403	12	175	200	10/...	8.95	5.95
MV1404	12	120	200	10/...	8.95	5.95
MV1405	12	250	200	10/...	8.95	5.95

VARACTOR MULTIPLIER DIODES

Step-recovery varactors extend frequency limit (up to 12 GHz) of solid-state transmitters and receivers. T_J=200°C, except *175°C.

Type No.	Case No.	PD @T_C=75°C @T_A=75°C† Watts	BV_R @I_R=10μA Volts min	R_S @V_R=6 V f=50 MHz Ohms typ	C_T @V_R=6 V f=1.0 MHz pF min/max	EACH 1-99	EACH 100-999
IN4387*	44	20	150	0.4	..../35	42.00	28.00
IN4388*	44	10	100	0.25	..../20	42.00	28.00
IN5149	47	10†	80	0.25	5.0/20	27.00	18.00
IN5150	47	14†	80	0.25	5.0/20	42.00	28.00
IN5150A	47	21	80	0.25	10.8/13.2	47.00	31.00
IN5151	48	5.5	75	0.5	5.0/7.5	42.00	28.00
IN5152	46	5.5	75	0.5	5.0/7.5	42.00	28.00
IN5152A	46	8.4	75	0.5	5.4/6.6	47.00	31.00
IN5153	47	5.5	75	0.5	5.0/7.5	42.00	28.00
IN5153A	47	8.4	75	0.5	5.4/6.6	47.00	31.00
IN5154	48	3.5	35	0.9	1.0/3.0	42.00	28.00
IN5155	46	3.5	35	0.9	1.0/3.0	42.00	28.00
IN5155A	46	6.2	35	0.9	1.71/2.09	47.00	31.00
IN5156	48	3.25	20	1.0	0.5/1.0	47.00	31.00
IN5157	46	3.25	20	1.0	0.5/1.0	47.00	31.00
MV1805C	47	18†	80	0.2	20/30	42.00	28.00
MV1809C	47	9.0	75	0.25	9.6/14.4	42.00	28.00
MV1809C1	47	14	75	0.25	10.8/13.2	47.00	31.00
MV1811C	47	6.2	35	0.5	4.0/6.0	42.00	28.00
MV1816B	46	5.3	75	0.6	2.4/3.6	42.00	28.00
MV1816B1	46	8.2	75	0.6	2.7/3.3	47.00	31.00
MV1817B	46	3.6	35	0.8	0.8/1.2	42.00	28.00
MV1817B1	46	5.0	35	0.8	0.9/1.1	47.00	31.00

THE ILLUSTRATIONS AND EXPLANATIONS OF COLUMN HEADINGS ON THIS PAGE REPRESENT ALL RCA SEMICONDUCTOR PAGES, FROM 81 THROUGH 88



EXPLANATION OF COLUMN HEADINGS

C, capacitance, includes junction and case capacitance. C_{iss}, small-signal short-circuit input capacitance. C_{obo}, open circuit output capacitance (common base). **di/dt**, rate of change of forward current. f_{hfb}, small-signal short-circuit forward current transfer cutoff frequency (common base). f_T, frequency at which small-signal forward current transfer ratio (common emitter) extrapolates to unity. g_{fs}, forward transconductance. G_{pe}, small-signal average power gain (common emitter). G_{PE}, large-signal average power gain (common emitter). h_{fe}, small-signal fwd. short-circuit curr. transfer ratio. (common emitter). h_{FE}, static fwd. curr. transfer ratio (common emitter). $I_{FM(surge)}$, fwd. curr. maximum (peak) total value of surge. I_C, collector cutoff current, DC. I_{CBO}, collector cutoff current DC (emitter open). I_D, drain current. $I_{F(AV)}$, forward current, average value. I_{FM}, forward current, maximum (peak) total value. I_{GSS}, gate leakage current. I_{GT}, gate trigger current, DC. I_P, peak-point forward current, I_P/I_V, peak-point forward current to valley-point forward current ratio. $I_{RM(dyn)}$, reverse current, dynamic maximum (peak) total value. I_{TRM}, ON-state current, repetitive maximum (peak) total value. $I_{T(RMS)}$, ON-state current, total RMS value. **NF**, noise figure. P_{GM}, gate power dissipation, maximum (peak) total value. $P_{G(AV)}$, gate power dissipation, DC value, with alternating component. P_{OE}, large-signal output power (common emitter). P_T, total non-reactive power input, DC, to all terminals (transistor dissipation). $P_{T(AV)}$, ON-state dissipation, DC value, with alternating component. r_{GS}, gate leakage resistance. R_{ds}, drain-to-source resistance, t_{off}, turn-off time. t_{on}, turn-on time. t_r, rise time. T_A, ambient temperature. T_C, case temperature. T_{MF}, mounting-flange temperature. $V_{(BO)O}$, Breakover Voltage, DC value, no alternating component. V_{RM}, reverse voltage, maximum (peak). V_{BE}, base-to-emitter voltage, DC. V_{CBO}, collecotr-to-base voltage, DC (emitter open). V_{CBV}, collector-to-base voltage, DC (with specified voltage between emitter and base). V_{CE}, collector-to-emitter voltage, DC. V_{CEO}, collector-to-emitter voltage, DC (base open). V_{CER}, collector-to-emitter voltage, DC (with specified resistor between base and emitter). V_{CEV}, collector-to-emitter voltage, DC (with specified voltage between base and emitter). V_{DROM}, OFF-state voltage, repetitive, maximum (peak) total value. V_{DS}, drain-to-source voltage. V_F, forward voltage drop, DC. V_{PP}, forward voltage point, greater than the peak voltage. $V_{F(RMS)}$, forward voltage drop, total rms value. V_{GT}, gate-trigger voltage, DC value, no alternating component, DC (for triacs, gate to anode No. 1). V_R, reverse voltage, DC, $V_{R(RMS)}$, reverse voltage, total rms value. V_{RM}, reverse voltage-maximum (peak) total value. V_{RSOM}, reverse voltage, non, repetitive, maximum (peak) total value. V_T, ON-state voltage, instantaneous total value.

HOW TO ORDER

When ordering, specify Department Number 49 D 1, followed by Manufacturer's Type Number and Name. For Example:

49 D 1 40231-RCA Designates
Radio Corp. of America, Type 40231

Specify 49 D 1, Mfr's Type No. and Name When Ordering

Audio Frequency Transistors

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

SMALL-SIGNAL TYPES, CLASS A LINEAR

SILICON NPN TYPES—P_T to 5 Watts

*V_{CER}; †at 20 MHz; ‡$V_{CER(sus)}$; §$V_{CEO(sus)}$; **Limited by diss.; ‡‡V_{CEV}; §§Typical.

Type No.	Case	MAXIMUM RATINGS P_T @T_C W	V_{CBO} V	V_{CEO} V	I_C A	CHARACTERISTICS h_{fe} @ I_C min	mA	f_T MHz min.	EACH 1-99	100-999
40231	TO-104	1	18	18	0.1	55	2	60§§	.47	.34
40232	TO-104	1	18	18	0.1	90	2	60§§	.53	.39
40233	TO-104	1	18	18	0.1	90	2	60§§	.60	.44
40234	TO-104	1	18	18	0.1	35	2	60§§	.42	.30
2N718A	TO-18	1.8	75	32	1	35	5	60	1.08	.78
2N720A	TO-18	1.8	120	80	1	45	5	50	1.32	.96
2N2895	TO-18	1.8	120	65	1	50	5	120	1.41	1.02
2N2896	TO-18	1.8	140	90	1	50	5	120	2.06	1.50
2N2897	TO-18	1.8	60	45	1	50	5	100	1.16	.84
40084	TO-18	1.8	60	40§	1	5†	50	100	.99	.72
2N4074	TO-104	2	40	40	0.3	75	10	50	.73	.53
2N5183	TO-104	2	18	18	1	70	10	125	.32	.23
40397	TO-104	2	25	25	0.2	165	10	50	.66	.48
40398	TO-104	2	25	25	0.2	75	10	50	.60	.44
40399	TO-104	2	18	18	0.2	165	10	50	.55	.40
40400	TO-104	2	18	18	0.2	75	10	50	.50	.36
2N3241A	TO-104	2	30	25	**	100	10	175§§	.73	.53
2N3242A	TO-104	2	40	40*	**	125	10	175§§	.83	.60
2N697	TO-5	2	60	40*	0.5	2.5†	50	50	.63	.46
2N699	TO-5	2	120	80‡	1	35	1	50	1.16	.84
40450	R	2	30	25	**	100	10	175§§	.80	.58
40451	R	2	40	40	**	125	10	175§§	.90	.65
40452	R	2	40‡‡	40	0.3	75	10	50	.80	.58
40453	R	2	25‡‡	25	0.2	165	10	50	.73	.53
40454	R	2	25‡‡	25	0.2	75	10	50	.66	.48
40455	R	2	18‡‡	18	0.2	165	10	50	.62	.45
40456	R	2	18‡‡	18	0.2	75	10	50	.57	.41
40458	TO-104	2	60	40	1	75	10	150	.78	.57
40459	R	2	60	40	1	75	10	150	.85	.62
2N1613	TO-5	3	75	50‡	1	30	1	60	.75	.54
2N1711	TO-5	3	75	50‡	1	70	5	70	.94	.69
2N1893	TO-5	3	120	80§	0.5	45	5	50	1.08	.78
2N2102	TO-5	5	120	65§	1	40	1	120	1.13	.82
2N2270	TO-5	5	60	45§	1	30	5	60	.91	.66
2N2405 2N3053/ 40053	TO-5	5	120	90§	1	50	5	120	1.57	1.14
	TO-5	5	60	40§	0.7	5†	50	100	.75	.54

GERMANIUM PNP TYPES—P_T to 165 mW

Type No.	Case	MAX. RATINGS P_T @ T_A mW	V_{CBO} V	I_C mA	CHARACTERISTICS h_{fe} @ I_C @ 1kHz min	mA	f_{hfb} typ MHz	V_{CB} V	EACH 1-99	100-999
2N591	TO-1	85	−32	−40	40	−2	.....	.....	.58	.42
2N2613	TO-1	120	−30	−50	120	−0.5	10	−4.5	.55	.40
2N2614	TO-1	120	−40	−50	100	−1	10	−12	.50	.36
2N2953	TO-1	120	−30	−150	200	−10	10	−12	.50	.36
40263	TO-1	120	−20	−50	100	−1	10	−6	.50	.36
40395	TO-1	120	−20	−50	170	−1	10	−6	.38	.28
40359	TO-1	120	−20	−50	40	−1	10	−6	.32	.23
40490	TO-1	120	−20	−20	170	−1	10	−6	.38	.28
40329	TO-1	125	−25	−100	75	−10	1.5	−6	.47	.34
2N405	TO-40	150	−20	−35	.....	.....	0.65	−6	.48	.35
2N406	TO-1	150	−20	−35	.....	.....	0.65	−6	.41	.30
2N109	TO-40	165	−35	−150	50	−1	.....	.....	.66	.48
2N217	TO-1	165	−35	150	50	−1	.....	.....	.57	.41

AUDIO-FREQUENCY POWER TYPES

SILICON NPN TYPES—P_T to 1.8W. (Class A-AB-B Linear Operation)

§$V_{CEO(sus)}$. ‡$V_{CER(sus)}$. #Pulsed. ##V_{CER}. ††Min. **Limited by dissipation.

Type No.	Case	MAX. RATINGS P_T T_C or T_{MF} W	V_{CEO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	mA	V_{CE} V	f_T typ MHz	EACH 1-99	100-999
40354	TO-104	0.5 T_A	150	0.05	55	10	10	100	1.18	.86
40355	R	1 T_A	150	0.05	typ	10	10	100	1.24	.90
40407	TO-5	1 T_A	50§	0.7	40	1	10	100	.81	.59
40408	TO-5	1 T_A	90§	0.7	40	10	4	100	1.08	.78
2N2895	TO-18	1.8	65§	1	40	150#	10	120††	1.41	1.02
2N2896	TO-18	1.8	90§	1	60	150#	10	120††	2.06	1.50
2N2897	TO-18	1.8	45§	1	50	150#	10	100††	1.16	.84
40084	TO-18	1.8	40	1	50	150#	10	100††	.99	.72

HOW TO ORDER

When ordering, specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name. For Example:

49 D 40231-RCA Designates RCA Type 40231

AUDIO-FREQUENCY POWER TYPES (Cont'd)

SILICON NPN TYPES—P_T to 20 W

Type No.	Case	MAX. RATINGS P_T T_C or T_{MF}	V_{CEO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	mA	V_{CE} V	f_T typ MHz	EACH 1-99	100-999
2N3241A	TO-104	2	25	**	100	10	10	175	.73	.53
2N3242A	TO-104	2	40	**	125	10	10	175	.83	.60
2N697	TO-5	2	40##	0.5	40	150#	10	50††	.63	.46
2N699	TO-5	2	80‡	1	40	150#	10	50††	1.16	.84
2N4074	TO-104	2	40	0.3	50	100	1	80	.73	.53
40397	TO-104	2	25	0.2	100	100	1	80	.66	.48
40398	TO-104	2	25	0.2	50	100	1	80	.60	.44
40399	TO-104	2	18	0.2	100	100	1	80	.55	.40
40400	TO-104	2	18	0.2	50	100	1	80	.50	.36
40450	R	2	25	**	100	10	10	175	.80	.58
40451	R	2	40	**	125	10	10	175	.90	.65
40452	R	2	40	0.3	50	100	1	80	.80	.58
40453	R	2	25	0.2	100	100	1	80	.73	.53
40454	R	2	25	0.2	50	100	1	80	.66	.48
40455	R	2	18	0.2	100	100	1	80	.62	.45
40456	R	2	18	0.2	50	100	1	80	.57	.41
2N1613	TO-5	3	50‡	1	40	150#	10	60††	.75	.54
2N1711	TO-5	3	50‡	1	100	150#	10	70††	.94	.69
2N1893	TO-5	3	80§	0.5	40	150#	10	50††	1.08	.78
2N1479	TO-5	5	40§	1.5	20	200	4	1.3	2.15	1.56
2N1480	TO-5	5	55§	1.5	20	200	4	1.3	2.31	1.68
2N1481	TO-5	5	40‡	1.5	35	200	4	1.3	2.48	1.80
2N1482	TO-5	5	55§	1.5	35	200	4	1.3	3.30	2.40
2N1700	TO-5	5	40§	1	20	100	4	1.3	1.90	1.38
2N2102	TO-5	5	65§	1	40	150#	10	120††	1.13	.82
2N2270	TO-5	5	45§	1	50	150#	10	60††	.91	.66
2N2405	TO-5	5	90§	1	60	150#	10	120††	1.57	1.14
2N3053/ 40053	TO-5	5	40§	0.7	50	150#	10	100††	.75	.54
40309	TO-5	5	18§	0.7	70	50	4	100	.70	.51
40311	TO-5	5	30§	0.7	70	50	4	100	.73	.53
40314	TO-5	5	40§	0.7	70	50	4	100	.78	.57
40315	TO-5	5	35§	0.7	70	50	4	100	.75	.54
40317	TO-5	5	40§	0.7	40	10	4	.....	.78	.57
40320	TO-5	5	40§	0.7	40	10	4	.....	.78	.57
40321	TO-5	5	300	1	25	20	10	.....	1.24	.90
40323	TO-5	5	18§	0.7	70	50	4	100	.70	.51
40326	TO-5	5	40§	0.7	40	10	4	.....	.78	.57
40327	TO-5	5	300‡	1	40	20	10	.....	1.24	.90
40360	TO-5	5	70§	0.7	40	10	4	100	.91	.66
40361	TO 5	5	70‡	0.7	70	50	4	100	1.03	.75
40366	TO-5	5	65§	1	40	150#	10	.....	7.84	5.70
40367	TO-5	5	55§	1.5	35	200	4	.....	7.84	5.70
40539	TO-5	5	55‡	0.7	15	500#	4	100	.66	.48
40611	TO-5	5	25§	0.7	70	50	4	.....	.71	.52
40616	TO-5	5	32§	0.7	70	50	4	.....	.73	.53
40635	TO-5	5	75‡	0.7	50	150	4	.....	.74	.54
40625	N	3.5 T_A	45§	1	100	150	10	.....	.89	.65
40628	N	3.5 T_A	55§	.....	100	150	10	.....	.94	.68
40409	N	3 T_A	90‡	0.7	50	150	4	100	1.14	.83
40389	N	3.5 T_A	40§	0.7	50	150#	10	100††	.91	.66
40390	N	3.5 T_A	250§	1	40	20	10	15††	2.15	1.56
40392	M	7	40§	0.7	50	150#	10	100††	.91	.66
40544	M	7	50‡	0.7	35	50	4	100	.75	.54
40347	TO-5	8.75	40	1.5	20	450	4	1.1	.66	.48
40348	TO-5	8.75	65	1.5	30	300	4	1.1	1.06	.77
40349	TO-5	8.75	140	1.5	25	150	4	1.1	1.56	1.13
40347V1	N	4.4 T_A	40	1.5	20	450	4	1.1	.75	.54
40348V1	N	4.4 T_A	65	1.5	30	300	4	1.1	1.14	.83
40349V1	N	4.4 T_A	140	1.5	25	150	4	1.1	1.64	1.19
2N3439	TO-5	10	350§	1	40	20	10	15††	3.71	2.70
2N3440	TO-5	10	250§	1	40	20	10	15††	1.82	1.32
2N4063	M	10	350§	1	40	20	10	15††	3.80	2.76
2N4064	M	10	250§	1	40	20	10	15††	1.90	1.38
2N5320	TO-5	10	75§	2	30	500	4	50††	2.15	1.56
2N5321	TO-5	10	50§	2	40	500	4	50††	1.57	1.14
40594	TO-5	10	95‡	2	70	300	4	.....	2.23	1.62
40346	TO-5	10	175‡‡	1	25	10	10	10††	1.14	.83
40412	TO-5	10	250‡	1	40	30	20	10††	1.06	.77
40347V2	M	11.7	40	1.5	20	450	4	1.1	.75	.54
40348V2	M	11.7	65	1.5	30	30	4	1.1	1.14	.83

RCA Audio Frequency Transistors

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

EXPLANATION OF COLUMN HEADINGS

See Page 80 for Illustrations of Cases and Information on Column Headings and Symbols Used on These Pages

AUDIO FREQUENCY POWER TYPES (Cont'd)

SILICON NPN TYPES—P_T to 117W (Class A-AB-B Linear Operation)

§$V_{CEO(sus)}$. ‡$V_{CER(sus)}$. #Pulsed. ††Minimum.

Type No.	Case	MAX. RATINGS P_T T_C or T_{MF} W	V_{CEO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	Amps	V_{CE} V	f_T typ MHz	EACH 1-99	100-999
40250VI	P	5.8 T_A	40§	4	25	1.5	4	1.2	1.24	.90
40372	P	5.8 T_A	55§	4	25	0.5	4	1.2	1.24	.90
40373	P	5.8 T_A	140§	3	20	0.5	4	1.2	2.56	1.86
40374	P	5.8 T_A	175§	2	10	1	10	15††	2.56	1.86
40375	P	5.8 T_A	50§	7	50	500 mA	5	60††	5.03	3.66
2N1483	TO-8	25	40§	3	20	750 mA	4	1.2	2.89	2.10
2N1484	TO-8	25	55§	3	20	750 mA	4	1.2	3.63	2.64
2N1485	TO-8	25	40§	3	35	750 mA	4	1.2	4.46	3.24
2N1486	TO-8	25	55§	3	35	750 mA	4	1.2	6.77	4.92
2N1701	TO-8	25	40§	2.5	20	300 mA	4	1.2	2.31	1.68
2N3441	TO-66	25	140§	3	20	500 mA	4	1.2	2.48	1.80
2N3054	TO-66	29	55§	4	25	500 mA#	4	1.2	1.16	.84
40250	TO-66	29	40§	4	25	1.5	4	1.2	1.16	.84
40310	TO-66	29	35§	4	20	1	2	1.2	.99	.72
40312	TO-66	29	60‡	4	20	1	2	1.2	1.03	.75
40316	TO-66	29	40‡	4	20	1	2	1.2	.99	.72
40324	TO-66	29	35§	4	20	1	2	1.2	.99	.72
2N3583	TO-66	35	175§	2	10	1	10	15††	2.48	1.80
2N3584	TO-66	35	250§	2	25	1	10	15††	4.13	3.00
2N3585	TO-66	35	300§	2	25	1	10	15††	6.60	4.80
2N3878	TO-66	35	50§	7	50	0.5	5	60††	4.95	3.60
2N3879	TO-66	35	75§	7	40	0.5	5	60††	6.60	4.80
2N4240	TO-66	35	300§	2	30	0.75	10	15††	2.89	2.10
40313	TO-66	35	300‡	2	40	0.1	10	.....	2.23	1.62
40318	TO-66	35	300‡	2	50	0.5	10	.....	2.10	1.52
40322	TO-66	35	300‡	2	75	0.5	10	.....	2.15	1.56
40328	TO-66	35	300‡	2	20	1	10	.....	2.19	1.60
40364	TO-66	35	60‡	7	35	0.5	5	15	4.79	3.48
2N5293	BB	36	80	4	30	0.5	4	0.8††	.91	.66
2N5294	CC	36	80	4	30	0.5	4	0.8††	.91	.66
2N5295	BB	36	60	4	30	1	4	0.8††	.91	.66
2N5296	CC	36	60	4	30	1	4	0.8††	.91	.66
2N5297	BB	36	80	4	20	1.5	4	0.8††	1.04	.76
2N5298	CC	36	80	4	20	1.5	4	0.8††	1.04	.76
40613	BB	36	25§	4	20	1	4	.....	.73	.53
40618	BB	36	30§	4	20	1	4	.....	.74	.54
40621	BB	36	32§	4	25	1.5	4	.....	.86	.62
40622	BB	36	40§	4	25	1.5	4	.....	.88	.64
40629	BB	36	35‡	4	20	1	4	.....	.74	.54
40630	BB	36	40‡	4	20	1.5	4	.....	.86	.62
40631	BB	36	45‡	4	20	2	4	.....	.97	.71
2N5490	CC	50	60	7	20	2	4	0.8††	1.07	.78
2N5491	BB	50	60	7	20	2	4	0.8††	1.07	.78
2N5492	CC	50	75	7	20	2.5	4	0.8††	1.19	.86
2N5493	BB	50	75	7	20	2.5	4	0.8††	1.19	.86
2N5494	CC	50	60	7	20	3	4	0.8††	1.19	.86
2N5495	BB	50	60	7	20	3	4	0.8††	1.19	.86
2N5496	CC	50	90	7	20	3.5	4	0.8††	1.29	.94
2N5497	BB	50	90	7	20	3.5	4	0.8††	1.29	.94
40624	BB	50	45‡	6	20	2.5	4	.....	1.14	.83
40627	BB	50	55§	6	20	2.5	4	.....	1.20	.83
40632	BB	50	60‡	6	20	3	4	.....	1.24	.90
2N1487	TO-3	75	40§	6	15	1.5	4	1	4.54	3.30
2N1488	TO-3	75	55§	6	15	1.5	4	1	4.95	3.60
2N1489	TO-3	75	40§	6	25	1.5	4	1	7.43	5.40
2N1490	TO-3	75	55§	6	25	1.5	4	1	8.25	6.00
2N1702	TO-3	75	40§	5	15	0.8	4	1	4.54	3.30
40369	TO-3	75	55§	6	25	1.5	4	1	13.05	10.80
2N5034	F	83	40§	6	20	2.5#	4	0.8††	1.34	.98
2N5036	F	83	50§	8	20	3#	4	0.8††	1.42	1.04
40514	F	83	45‡	6	20	2.5#	4	0.8††	1.26	.92
2N5035	G	83	40§	6	20	2.5#	4	0.8††	1.32	.96
2N5037	G	83	50§	8	20	2.5#	4	0.8††	1.41	1.02
40513	G	83	45‡	6	20	3#	4	0.8††	1.24	.90
40542	F	83	50‡	6	20	2.5#	4	0.8††	1.31	.95
40543	F	83	60‡	8	20	3#	4	0.8††	1.37	1.00
40633	F	83	75‡	8	20	4	4	.....	1.27	.92
2N5239	TO-3	100	330	5	20	2#	10	5††	8.25	6.00
2N5240	TO-3	100	375	5	20	2#	10	5††	11.55	8.00
2N4347	TO-3	100	140	5	20	2	4	0.8	2.97	2.16
2N3055	TO-3	115	100	15	20	4	4	0.8††	1.82	1.32
40363	TO-3	115	70‡	15	20	4	4	0.7	1.82	1.32
40636	TO-3	115	95‡	15	20	4	4	.....	2.31	1.68
2N3442	TO-3	117	160	10	20	3	4	0.8	4.54	3.30

AUDIO FREQUENCY POWER TYPES (Cont'd)

SILICON NPN—P_T to 150W (Class A-AB-B Linear Operation)

Type No.	Case	MAX. RATINGS P_T T_C or T_{MF} W	V_{CBO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	A	V_{CE} V	f_T typ MHz	EACH 1-99	100-999
40251	TO-3	117	50	15	15	8	4	1	1.90	1.38
40325	TO-3	117	35	15	12	8	4	1	1.90	1.38
2N4348	TO-3	120	140	10	15	5	4	0.7	4.13	3.00
2N3265	TO-63	125	150	25	25	15#	3	20††	76.85	63.50
2N3266	TO-63	125	120	25	20	15#	3	20††	50.75	42.00
2N2015	TO-36	150	100	10	15	5	4	1	9.08	6.60
2N2016	TO-36	150	130	10	15	5	4	1	9.90	7.20
2N2338	TO-36	150	60	7.5	15	3	4	1	6.60	4.80
2N3771	TO-3	150	50	15	15	15#	4	0.8††	4.13	3.00
2N3772	TO-3	150	100	10	15	10#	4	0.8††	4.13	3.00
2N3773	TO-3	150	160	16	15	8#	4	0.7	7.43	5.40
40411	TO-3	150	.....	30	35	4	4	0.8	4.29	3.12

SILICON PNP TYPES—P_T to 10W

40319	TO-5	5	—40§	—0.7	35	—50 mA	—4	100	1.16	.84
40362	TO-5	5	—70‡	—0.7	35	—50 mA	—4	100	1.24	.90
40537	TO-5	5	—55‡	—0.7	50	—50 mA	—4	100	1.24	.90
40538	TO-5	5	—55‡	—0.7	15	—500 mA#	—4	100	1.36	.94
40406	TO-5	1T_A	—50§	—0.7	30	—0.1 mA	—10	100	1.19	.87
40410	N	3 T_A	—90‡	—0.7	50	—150 mA#	—4	100	1.32	.96
40391	N	3.5 T_A	—60	—1	50	—150 mA#	—10	60††	1.24	.90
2N4037	TO-5	7	—60	—1	50	—150 mA#	—10	60††	1.16	.84
2N4314	TO-5	7	—90	—1	50	—150 mA#	—10	60††	1.24	.90
40394	M	7	—60	—1	50	—150 mA#	—10	60††	1.24	.90
40634	TO-5	7	—75‡	—0.7	50	—150 mA	—4	.....	1.29	.94
2N5322	TO-5	10	—100	—2	30	—500 mA#	—4	50††	2.15	1.56
2N5323	TO-5	10	—75	—2	40	—500 mA#	—4	50††	1.57	1.14
2N5415	TO-5	10	—350	—1	30	—50 mA	—10	15††	3.30	2.40
2N5416	TO-5	10	—200§	—1	30	—50 mA	—10	15††	4.95	3.60
40595	TO-5	10	—95‡	—2	70	—300 mA	—4	.....	2.23	1.62

GERMANIUM NPN TYPES—P_T (T_A) to 100 mW

(Class A-AB-B Linear; TO-1 Case)

Type No.	MAX. RATINGS P_T T_A mW	V_{CBO} V	I_C mA	CHARACTERISTICS h_{FE} @ I_C min.	mA	V_{CE} V	G_{PE} typ dB	I_{CBO} max. μA	EACH 1-99	100-999
2N647	100	25	100	50	50	1	54	14	1.08	.78
2N649	100	20	100	50	50	1	54	14	.86	.63

GERMANIUM PNP-NPN TYPE—P_T (T_C) to 300 mW

(Complementary Symmetry Power Type; TO-1 Case)

Type No.	MAX. RATINGS P_T T_C mW	V_{CBO} V	I_C A	CHARACTERISTICS $V_{CE(sat)}$ max. V	I_C mA	h_{FE} @ I_C min.	mA	I_{CBO} max μA	EACH 1-99	100-999
40396	300	—18	—0.5	—0.5	—250	30	—250	—14	.83	.60
	300	—18	—0.5	—0.5	—250	30	—250	—14		

GERMANIUM PNP POWER TYPES

(Class A-AB-B Linear Operation)

P_T(T_C) to 12.5 W. §§Typ. ##V_{CER}.

Type No.	Case	MAX. RATINGS P_T T_{MF} or T_C	V_{CBO} V	V_{CEO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	A	f_T typ MHz	EACH 1-99	100-999
2N407	TO-40	0.15T_A	—20	—18	—0.7	65	—0.05	.....	.54	.39
2N408	TO-1	0.15T_A	—20	—18	—0.7	65	—0.05	.....	.48	.35
2N270	TO-7	0.25T_A	—25	.....	—0.15	70§§	—0.15	1	.76	.55
2N1183	TO-8	7.5	—45	—20	—3	20	—0.4	.....	1.82	1.32
2N1183A	TO-8	7.5	—60	—30	—3	20	—0.4	.....	2.31	1.68
2N1183B	TO-8	7.5	—80	—40	—3	20	—0.4	.....	2.89	2.10
2N1184	TO-8	7.5	—45	—20	—3	40	—0.4	.....	2.48	1.80
2N1184A	TO-8	7.5	—60	—30	—3	40	—0.4	.....	2.81	2.04
2N1184B	TO-8	7.5	—80	—40	—3	40	—0.4	.....	4.13	3.00
2N176	TO-3	10	—40	.....	—3	63	—0.5	.....	1.31	.95
2N351	TO-3	10	—40	.....	—3	65	—0.7	.....	1.73	1.26
2N376	TO-3	10	—40	.....	—3	78	—0.7	.....	1.88	1.37
2N2147	TO-3	12.5	—75	—50	—5	100	—1	4	1.57	1.14
2N2148	TO-3	12.5	—60	—40	—5	60	—1	3	1.08	.78
40022	TO-3	12.5	—32	—32##	—5	38	—1	0.3	.83	.60

Allied maintains huge stocks of RCA Semiconductors, with new types added as soon as released by RCA.

When Ordering, Specify Dept. No., Mfr's Type No. and Name

Audio and Radio Frequency Transistors

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

GERMANIUM PNP POWER TYPES (Cont'd)

(Class A-AB-B Linear Operation)

$P_T(T_C)$ to 30 W. ##V_{CER}.

Type No.	Case	MAX. RATINGS P_T T_{MF} or T_C	V_{CBO} V	V_{CEO} V	I_C A	CHARACTERISTICS h_{FE} @ I_C min	A	f_T typ MHz	EACH 1-99	100-999
40050	TO-3	12.5	−40	−40	−5	50	−1	0.5	.99	.72
40051	TO-3	12.5	−50	−50	−5	50	−1	0.5	1.21	.88
40254	TO-3	12.5	−32	−32##	−5	30	−1	0.3	.78	.57
40421	TO-3	12.5	−75	−50	−5	62	−1	4	1.28	.93
40462	TO-3	12.5	−40	−40	−5	50	−1	0.6	1.16	.84
40612	TO-3	12.5	.....	−25##	−5	30	−1	.....	.71	.52
40623	TO-3	12.5	.....	−45##	−5	50	−1	.....	.86	.62
40626	TO-3	12.5	.....	−55##	−5	50	−1	.....	.89	.65
2N2869/ 2N301	TO-3	30	−60	−50	−10	50	−1	0.45	1.52	1.11
2N2870/ 2N301A	TO-3	30	−80	−50	−10	50	−1	0.45	3.15	2.29
2N1905	TO-3	30	−100	−50	−6	50	−1	4	4.13	3.00
2N1906	TO-3	30	−130	−60	−6	75	−1	5	6.60	4.80

AUDIO FREQUENCY HIGH-VOLTAGE TYPES

GERMANIUM PNP TYPES—V_{CBO}(peak) to −320 Volts

Type No.	Case	MAX. RATINGS V_{CBO} (peak) V	P_T (T_{MF} @ 55° C) W	I_C A	CHARACTERISTICS $V_{CE(sat)}$ max V	I_C A	$T_{A(opr)}$ max °C	EACH 1-99	100-999
2N3732	TO-3	−100	3	−3	−2	−0.7	85	1.07	.78
2N3730	TO-3	−200	10	−3	−2	−0.7	85	1.24	.90
40440	TO-3	−200	5	−10	−0.75	−6	85	1.32	.96
2N3731	TO-3	−320	5	−10	−1.5	−6	85	1.62	1.18
2N4346	TO-3	−320	5	−10	−0.75	−6	85	2.31	1.68
40439	TO-3	−320	5	−10	−1.5	−6	85	1.98	1.44

SILICON NPN TYPES—V_{CBO} to 375 V ($^sV_{CEO}$)

#Pulsed. **Limited by dissipation. §§Typical.

Type No.	Case	MAX. RATINGS V_{CBO} V	P_T T_C or T_{MF} W	I_C A	CHARACTERISTICS h_{FE} @ I_C min	mA	C_{obo} max. pF	f_T min. MHz	EACH 1-99	100-999
2N2102	TO-5	120	5	1	10	0.01	15	120	1.13	.82
2N2405	TO-5	120	5	1	35	10	15	120	1.57	1.14
2N3264	E	120	84	25	20	15A#	.....	20	50.75	42.00
2N3266	TO-63	120	125	25	20	15A#	.....	20	50.75	42.00
2N3878	TO-66	120	35	7	50	500	175	60	4.95	3.60
2N3879	TO-66	120	35	7	40	500	175	60	6.60	4.80
2N4390	TO-104	120x	0.5 T_A	**	20	20	C_{eb}=6	50	.75	.54
2N5184	TO-104	120x	0.5 T_A	0.05	10	50	C_{eb}=	50	.45	.33
2N5185	R	120x	1 T_A	0.05	10	50	3.5	50	.52	.38
40375	P	120	5 8 T_A	7	50	500	175	60	5.03	3.66
2N2016	TO-36	130	150	10	15	5A	400	1§§	9.90	7.20
2N4347	TO-3	140	100	5	20	2A	.....	0.8§§	2.97	2.16
2N4348	TO-3	140	120	10	15	5A	.....	0.7§§	4.13	3.00
2N3263	E	150	84	25	25	15A#	.....	20	79.75	66.00
2N3265	TO-63	150	125	25	25	15A#	.....	20	76.85	63.50
2N4068	TO-104	150	0.5 T_A	0.2	30	30	3.5	50	1.34	.97
2N4069	R	150	1 T_A	0.2	30	30	3.5	50	1.40	1.02
40354	TO-104	150x	0.5 T_A	0.05	55§§	10	.....	50	1.18	.86
40355	R	150x	1 T_A	0.05	55§§	10	.....	50	1.24	.90
2N3441	TO-66	160	29	3	20	500	.....	1.2§§	2.48	1.80
2N3442	TO-3	160	117	10	20	3A	.....	0.8§§	4.54	3.30
2N3773	TO-3	160	150	16	15	8A#	.....	0.7§§	7.43	5.40
40349	TO-5	160	5	1.5	25	150	.....	1§§	1.56	1.13
40373	P	160	29	3	20	500	.....	1.2§§	2.56	1.86
40349V1	N	160	4.4 T_A	1.5	25	150	.....	1§§	1.64	1.19
40349V2	M	160	11.7	1.5	25	150	.....	1§§	1.64	1.19
40346	TO-5	175	10	1	25	10	.....	10	1.14	.83
2N3583	TO-66	250	35	2	40	100	120	15	2.48	1.80
40374	P	250	35	2	40	100	120	15	2.56	1.86
2N3440	TO-5	300	10	1	40	20	10	15	1.82	1.32
2N4064	M	300	10	1	40	20	10	15	1.90	1.38
40390	N	300	3.5 T_A	1	40	20	10	15	2.15	1.56
2N5239	TO-3	330	100	5	20	2A#	150	5	8.25	6.00
2N3584	TO-66	375	35	2	25	1A	120	15	4.13	3.00
2N5240	TO-3	375	100	5	20	2A#	10	15	11.55	8.00

HOW TO ORDER

When ordering, specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name. For Example:
49 D 1 40050-RCA Designates RCA Type 40050

SILICON NPN TYPES (Cont'd)—V_{CEO} to 500 V ($^sV_{CEO}$)

Type No.	Case	MAX. RATINGS V_{CBO} V	P_T T_C or T_{MF} W	I_C A	CHARACTERISTICS h_{FE} @ I_C min	mA	C_{obo} max. pF	f_T min. MHz	EACH 1-99	100-999
2N3439	TO-5	450	10	1	40	20	10	15	3.71	2.70
2N4063	M	450	10	1	40	20	10	15	3.80	2.76
40385	TO-5	450	10	1	40	20	.....	.....	9.50	6.90
2N3585	TO-66	500	35	2	40	100	120	15	6.60	4.80
2N4240	TO-66	500	35	2	30	750	120	15	2.89	2.10

RADIO FREQUENCY TRANSISTORS

MOS(FET) SILICON TYPES

+Single insulated gate. ++Dual insulated gate. cMixer Conversion gain. #Pulsed. ††Minimum. •Conversion transconductance. °Maximum. TO-72 Case.

Type No.	Use	Characteristics G_{ps} typ dB	g_{fs} typ μmho	I_{GSS} max nA	C_{rss} typ pF	Max. Ratings V_{DS} V	I_D mA #	P_T mW	EACH 1-99	100-999
3N128+	RF Amp.	16	5K††	0.05	0.13	20	50	400	1.45	1.06
3N138+	Chop./Mult.	.....	6K	0.1	0.25	35	50	400	3.30	2.40
3N139+	RF Amp.	18	3K††	1	0.2	35	50	400	2.89	2.10
3N140++	RF Amp.	18c	10K		.03°	20	50	150	1.62	1.18
3N141++	Mixer	24	10K		.03°	20	50	150	1.55	1.13
3N142+	RF Amp	13.5c	4K††	1	0.12	20	50	400	1.08	.78
3N143+	Mixer	20	5K††	1	0.12	20	50	100	1.39	1.01
3N152+	RF Amp	20	5K††	1	0.12	20	50	400	1.78	1.30
3N153+	Chop./Mult.	.....	10K	1	0.34	20	50	400	1.58	1.15
3N154+	RF Amp	20	5K††	0.05	0.12	20	50	400	1.62	1.18
3N159++	RF Amp	16	7K	.....	.03°	20	30	400	2.18	1.58
40467A+	RF Amp	16	7.5K††	1	0.12	20	50	400	1.24	.90
40468A+	RF Amp	17	7.5K††	.....	0.12	20	25	375	.75	.54
40559A+	Mixer	21c	2.8K•††	.....	0.15	20	25	375	.70	.51
40600A++	RF Amp	20	10K††	.....	.03°	20	50	400	1.24	.90
40601++	Mixer	14c	2.7K††	.....	.03°	20	50	400	1.16	.84
40602++	IF Amp	28	10K††	.....	.03°	20	50	400	.83	.60
40603++	RF Amp	.....	10K††	.....	.03°	20	50	400	1.04	.76
40604++	Mixer	23c	10K•††	.....	.03°	20	50	400	.98	.71

SMALL-SIGNAL RADIO-FREQUENCY TYPES

SILICON NPN—f_T(min) to 750 MHz. (Class A-B-C Linear Operation)

§§Typical. ††Min. **Limited by dissipation.

Type No.	Case	CHARACTERISTICS f_T min MHz	NF max dB	NF oper. freq. MHz	TYP. OPER. GPE @ dB	GPE oper. freq. MHz	MAX. RATINGS V_{CBO} V	I_C mA	EACH 1-99	100-999
40354	TO-104	50	.....	.....	.....	.....	V_{CEO}=	50	1.18	.86
40355	R	50	.....	.....	.....	.....	150V	50	1.24	.90
2N2270	TO-5	60	6	.001	.....	.....	60	1A	.91	.66
2N2897	TO-18	100	.....	.....	.....	.....	60	1A	1.16	.84
2N3053 /40053	TO-5	100	.....	.....	.....	.....	60	700	.75	.54
40084	TO-18	100	8	.001	.....	.....	60	1A	.99	.72
2N2102	TO-5	120	6	.001	.....	.....	120	1A	1.13	.82
2N2405	TO-5	120	6	.001	.....	.....	120	1A	1.57	1.14
2N2895	TO-18	120	8	.001	.....	.....	120	1A	1.41	1.02
2N2896	TO-18	120	.....	.....	.....	.....	140	1A	2.06	1.50
40637	TO-52	300§§	300	.....	.....	.....	.....	100	.83	.60
2N5188	TO-39	250	.....	.....	.....	.....	60	**	.55	.40
2N5189	L	250	.....	.....	.....	.....	60	**	.65	.47
40405	TO-52	300	.....	.....	6	240	.....	500	1.65	1.20
40519	TO-52	300	.....	.....	5.5	240	.....	500	1.41	1.02
2N917	TO-72	500	3.5§§	60	11.5	200	30	**	1.27	.92
2N918	TO-72	600	6	60	21	200	30	50	1.41	1.02
2N5180	TO-104	650	4.5	200	12††	200	30	**	.48	.35

TABLE CONTINUED ON PAGE 84

Allied maintains large up-to-date stocks of RCA semiconductors ready for immediate delivery. Your order will be handled promptly and shipped at the lowest OEM prices in effect at the time. Write, wire, or phone for fast, complete price and delivery information.

RCA Radio Frequency Transistors

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

EXPLANATION OF COLUMN HEADINGS

See Page 80 for Illustrations of Cases and Information on Column Headings and Symbols Used on This Page

HOW TO ORDER

When ordering, specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name. For Example:
49 D 1 2N2708-RCA Designates RCA Type 2N2708

SMALL-SIGNAL RADIO FREQUENCY TYPES (Cont'd)

SILICON NPN—f_T(min) to 1200 MHz (Class A-B-C Linear Operation)

§§Typical. ††Min. **limited by dissipation. ᶜMixer conversion gain, RF through IF frequency range.

Type No.	Case	CHARACTERISTICS f_T min MHz	NF max dB	NF oper. freq. MHz	TYP. OPER. GPE @ dB	TYP. OPER. GPE oper. freq. MHz	MAX. RATINGS V_{CBO} V	MAX. RATINGS I_C mA	EACH 1-99	EACH 100-999
2N2708	TO-72	700	7.5	200	15††	200	35	**	2.31	1.68
2N3478	TO-104	750	5§§	470	12	470	30	**	1.90	1.38
2N4259	TO-104	750	5	450	11.5	450	40	**	1.90	1.38
40238	TO-104	800§§	.....	.....	45.3	45	45	50	.43	.32
40242	TO-104	.....	2.5§§	100	38.3	100	45	50	.57	.41
40243	TO-104	.....	.....	100	37.6ᶜ	100	45	50	.47	.34
40244	TO-104	.....	.....	.....	Oscillator		45	50	.38	.28
40245	TO-104	.....	.....	.....	51.4	10.7	45	50	.40	.29
40246	TO-104	.....	.....	.....	51.4	10.7	45	50	.38	.28
40235	TO-104	1000§§	3.5§§	216	29.1	216	45	50	.57	.41
40236	TO-104	1000§§	.....	.....	19ᶜ	216	45	50	.48	.35
40237	TO-104	1000§§	.....	.....	Oscillator		45	50	.38	.28
2N3932	TO-104	750	5§§	450	11.5††	200	30	**	1.40	1.02
2N3933	TO-104	750	5§§	450	14††	200	40	**	1.62	1.18
2N3600	TO-72	850	4.5	200	17††	200	30	**	3.80	2.76
2N2857	TO-72	1000	4.5	450	12.5††	450	30	40	4.46	3.24
2N5179	TO-72	1000	4.5	200	15††	200	20	50	.81	.59
2N3839	TO-72	1000	3.4	450	12.5††	450	30	40	13.80	11.40
40517	TO-72	1000	3.4	450	12.5	450	30	40	15.10	12.50
40518	High reliability version of 40517								20.30	16.80
2N5109	TO-39	1200	3§§	200	11††	200	40	400	3.47	2.52
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

GERMANIUM PNP TYPES—f_{hfb} (typ) to 140 MHz

Type No.	Case	CHARACTERISTICS f_T typ f_{hfb} MHz	TYP. OPER. GPE @ dB	TYP. OPER. Oper. freq. MHz	MAX. RATINGS V_{CBO} V	MAX. RATINGS I_C mA	MAX. RATINGS P_T mW	EACH 1-99	EACH 100-999
2N409	TO-40	14	37.8	0.455	−13	−15	80	.55	.40
2N410	TO-1	14	37.8	0.455	−13	−15	80	.48	.35
2N411	TO-40	16.5	32	1	−13	−15	80	.60	.44
2N412	TO-1	16.5	32	1	−13	−15	80	.53	.39
40488	TO-1	30	Oscillator		−12	−10	80	.22	.16
40489	TO-1	30	56	0.455	−50	−10	80	.28	.20
40487	TO-1	40	53ᶜ	1.5	−50	−10	80	.30	.22
2N274	TO-44	†30	17	12.5	−40	−10	120	1.24	.90
2N1224	TO-33	†30	17	12.5	−40	−10	120	1.24	.90
2N1226	TO-33	†30	17	12.5	−60	−10	120	1.49	1.08
2N1395	TO-33	†30	17	12.5	−40	−10	120	1.82	1.31
2N1524	TO-1	†33	54.4	0.455	−24	−10	80	.47	.34
2N1526	TO-1	†33	48.9	1.5	−24	−10	80	.48	.35
2N1638	TO-1	†40	61.5	0.262	−34	−10	80	.50	.36
2N1639	TO-1	†45	37ᶜ	1.5	−34	−10	80	.53	.39
2N1631	TO-40	†45	47.7	1.5	−34	−10	80	.65	.47
2N1632	TO-1	†45	47.7	1.5	−34	−10	80	.58	.42
2N1637	TO-1	†45	47.7	1.5	−34	−10	80	.57	.41
2N372	TO-7	132	26.2	10	−24	−10	80	1.06	.77
2N370	TO-7	132	17	20	−24	−10	80	1.08	.78
2N1180	TO-45	†100	36	10.7	−30	−10	80	.80	.58
2N384	TO-44	†100	15	50	−40	−10	120	1.65	1.20
2N1225	TO-33	†100	15	50	−40	−10	120	1.41	1.02
2N1396	TO-33	†100	15	50	−40	−10	120	1.93	1.40
2N1023	TO-44	†120	18	50	−40	−10	120	2.72	1.98
2N1397	TO-33	†120	18	50	−40	−10	120	2.15	1.56
2N1177	TO-45	†140	14	100	−30	−10	80	1.01	.74
2N1179	TO-45	†140	17	100	−30	−10	80	.99	.72
2N1178	TO-45	†140	Osc.	120	−30	−10	80	.99	.72
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

RADIO FREQUENCY POWER TYPES

SILICON NPN TYPES—P_{OE} to 30 W

Featuring "overlay"—for linear and Class C operation. ##V_{CER}. ˣV_{CEO}. ††Minimum. ᵒV_{CEX}.

Type No.	Case	Characteristics P_{OE} @ oper. min W	Characteristics P_{OE} @ oper. freq. MHz	Characteristics GPE dB	Characteristics f_T typ MHz	Max. Ratings P_T T_C W	Max. Ratings V_{CEV} V	EACH 1-99	EACH 100-999
2N1491	TO-5	0.5	70	12	380	3	30	1.82	1.32
40080	TO-5	0.1	27	17	350	0.5T_A	30ˣ	1.08	.78
40405	TO-52	0.2	172	10	850	1	40	1.65	1.20
40081	TO-5	0.4	27	7	350	2	60	1.41	1.02
2N1493	TO-5	0.5	70	12	380	3	100	7.01	5.10
2N3118	TO-5	1	50	10	250††	4	85ᵒ	4.95	3.60
2N4427	TO-39	1	175	10	800	3.5	40##	2.15	1.56
40280	TO-39	1	175	9	550	7	36	4.62	3.36
2N3866	TO-39	1	400	10	800	5	30ˣ	2.97	2.16
2N5108	TO-39	1	1000	5	1200††	3.5	30ˣ	12.90	10.70
2N5470	AA	1 (amp)ᵒ 0.3 (osc)ᵒ	2 GHz	.....	.....	3.5	55##	87.00	72.00
2N5090	TO-60	1.2	400	7.8	500††	5	30ˣ	11.40	8.30
40290	TO-39	2	135	6	500	7	90	2.48	1.80
2N3553	TO-39	2.5	175	10	500	7	65	4.37	3.18
2N4012	TO-60	2.5	1002	4	500	11.6	65	14.20	11.75
40082	TO-39	3	27	9	200	5	60	4.04	2.94
40446	N	3	27	.....	.....	10	60	4.29	3.12
2N3375	TO-60	3	400	5	400††	11.6	65	10.80	8.95
40581	TO-39	3.5	27	10	.....	5	60	4.87	3.54
40582	N	3.5	27	10	.....	10	60	5.12	3.72
40281	TO-60	4	175	6	400	11.6	36	10.60	8.75
2N4440	TO-60	5	400	5	500	11.6	65	11.90	9.85
40292	TO-60	6	135	5	300	23.2	90	10.45	8.65
2N2631	TO-39	7.5	50	9	200	8.75	80	3.47	2.52
2N2876	TO-60	10	50	7	200	17.5	80	12.75	10.55
2N3733	TO-60	10	400	4	400	23	65	15.80	13.10
2N4932	TO-60	12	88	5.4	.....	70	50	29.00	24.00
40282	TO-60	12	175	5	350	23.2	36	11.45	9.50
2N3632	TO-60	13.5	175	6	400	23	65	12.75	10.55
2N3229	TO-60	15	50	9	200	17.5	105	17.10	14.15
2N5102	TO-60	15	136	4	.....	70	100	21.75	18.00
2N5016	TO-60	15	400	5	600	30	65	43.50	36.00
2N4933	TO-60	20	88	7.6	.....	70	70	29.00	24.00
2N5071	TO-60	24	76	9	.....	70	65	29.00	24.00
2N5070	TO-60	25(PEP)	30	13	.....	70	65	29.00	24.00
40340	TO-60	25	50	7	125	70	60	29.00	24.00
40341	TO-60	30	50	10	125	70	70	29.00	24.00
40608	TO-39	.....	.....	11VG	700††	3.5	40##	2.48	1.80
40606	TO-60	Premium high reliability type for critical applications in industrial equipment						38.30	31.70

When Ordering, Specify Dept. No., Mfr's Type No. and Name

Silicon Rectifiers and Stacks

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

HOW TO ORDER

When ordering, please specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name.

For Example: 49 D 1 1N3754—RCA Designates Radio Corp. of America Type 1N3754

EXPLANATION OF COLUMN HEADINGS

See Page 80 for Illustrations of Cases and Information on Column Headings and Symbols Used on This Page

DIFFUSED JUNCTION SILICON RECTIFIERS

WIRE LEAD TYPES—$I_{F(AV)}$ to 2 Amps

For consumer, commercial, industrial and military low power use.

Type No.	Case	MAX. RATINGS $I_{F(AV)}$ @ °C		I_{FM} (rep) A	I_{FM} (surge) A	V_{RM} V	CHAR. $I_{RM(dyn)}$ max mA	EACH 1-99	EACH 100-999
		A							
1N3754	GG	0.125	65	1.3	30	100	0.3	.32	.23
1N3755	GG	0.125	65	1.3	30	200	0.3	.33	.24
1N3756	GG	0.125	65	1.3	30	400	0.3	.35	.26
40265	GG	0.125	65	1.3	30	400	0.4	.35	.25
1N3563	HH	0.3	75	4	35	1000	0.2	.94	.69
1N3196	HH	0.4	75	5	35	800	0.2	.74	.54
1N3256	HH	0.4	75	5	35	800	0.2	.78	.57
1N3193	HH	0.5	75	6	35	200	0.2	.35	.26
1N3194	HH	0.5	75	6	35	400	0.2	.38	.28
1N3195	HH	0.5	75	6	35	600	0.2	.53	.39
1N3253	HH	0.5	75	6	35	200	0.2	.38	.28
1N3254	HH	0.5	75	6	35	400	0.2	.42	.30
1N3255	HH	0.5	75	6	35	600	0.2	.56	.41
40495	HH	0.5	65	5	25	400	0.4	.30	.22
1N5214	HH	0.6	75	5	50	800	0.2	.81	.59
1N5218	HH	0.6	75	5	50	800	0.2	.85	.62
1N444B	DO-1	0.65	50	3.5	15 for resistive or inductive load	500	1.75μA	.92	.67
1N445B	DO-1	0.65	50	for		600	2μA	1.12	.82
1N440B	DO-1	0.75 for resistive or inductive load	50	resis-		100	0.3μA	.53	.38
1N441B	DO-1		50	tive		200	0.75μA	.60	.43
1N442B	DO-1		50	or ind.		300	1μA	.66	.51
1N443B	DO-1		50	load		400	1.5μA	.79	.58
1N536	DO-1		50	.....		50	5μA	.36	.27
1N537	DO-1		50	.....		100	5μA	.40	.29
1N538	DO-1		50	.....		200	5μA	.45	.32
1N539	DO-1		50	.....		300	5μA	.50	.36
1N540	DO-1		50	.....		400	5μA	.56	.41
1N547	DO-1		50	.....		600	5μA	.79	.57
1N1095	DO-1		50	.....		500	5μA	.61	.48
1N1763A	DO-1	0.75	75	5	35	400	0.1	.42	.30
1N1764A	DO-1	0.75	75	5	35	500	0.1	.52	.38
1N2858A	DO-1	0.75	75	5	35	50	0.1	.33	.24
1N2859A	DO-1	0.75	75	5	35	100	0.1	.37	.27
1N2860A	DO-1	0.75	75	5	35	200	0.1	.40	.29
1N2861A	DO-1	0.75	75	5	35	300	0.1	.42	.30
1N2862A	DO-1	0.75	75	5	35	400	0.1	.48	.35
1N2863A	DO-1	0.75	75	5	35	500	0.1	.58	.42
1N2864A	DO-1	0.75	75	5	35	600	0.1	.70	.51
1N5211	HH	0.75	75	6	50	200	0.2	.38	.28
1N5212	HH	0.75	75	6	50	400	0.2	.42	.30
1N5213	HH	0.75	75	6	50	600	0.2	.56	.41
1N5215	HH	0.75	75	6	50	200	0.2	.42	.30
1N5216	HH	0.75	75	6	50	400	0.2	.45	.33
1N5217	HH	0.75	75	6	50	600	0.2	.60	.44
40642	DO-26	1	45	6.5	70	550	.....	.99	.72
40643	DO-26	1	45	6	10	450	.....	.94	.68
40644	DO-26	1	45	0.3	20	550	.....	.84	.61
40266	DO-1	2	105	10	35	100	10	.29	.21
40267	DO-1	2	105	10	35	200	10	.33	.24

STUD MOUNTED TYPES—$I_{F(AV)}$ to 40 Amps

For industrial and military applications.

Type No.	Case	MAX. RATINGS $I_{F(AV)}$ @ °C		I_{FM} (rep) A	I_{FM} (surge) A	V_{RM} V	CHAR. $I_{RM(dyn)}$ max mA	EACH 1-99	EACH 100-999
		A							
1N1612	DO-4	5	135	15	150	50	1	1.08	.78
1N1613	DO-4	5	135	15	150	100	1	1.24	.90
1N1614	DO-4	5	135	15	150	200	1	1.90	1.38
1N1615	DO-4	5	135	15	150	400	1	3.71	2.70
1N1616	DO-4	5	135	15	150	600	1	5.36	3.90
1N1341B	DO-4	6	150	25	160	50	0.45	1.16	.84
1N1342B	DO-4	6	150	25	160	100	0.45	1.32	.96
1N1344B	DO-4	6	150	25	160	200	0.45	2.15	1.56
1N1345B	DO-4	6	150	25	160	300	0.45	3.05	2.22
1N1346B	DO-4	6	150	25	160	400	0.45	3.96	2.88
1N1347B	DO-4	6	150	25	160	500	0.45	4.79	3.48
1N1348B	DO-4	6	150	25	160	600	0.45	5.78	4.20
40108	DO-4	10	150	40	140	50	2	.99	.72
40109	DO-4	10	150	40	140	100	2	1.16	.84
40110	DO-4	10	150	40	140	200	1.5	1.57	1.14
40111	DO-4	10	150	40	140	300	1.5	2.15	1.56
40112	DO-4	10	150	40	140	400	1	2.48	1.80
40114	DO-4	10	150	40	140	600	0.75	3.71	2.70
40115	DO-4	10	150	40	140	800	0.65	6.60	4.80
1N1199A	DO-4	12	150	50	240	50	3	1.24	.90
1N1200A	DO-4	12	150	50	240	100	2.5	1.41	1.02
1N1202A	DO-4	12	150	50	240	200	2	2.48	1.80
1N1203A	DO-4	12	150	50	240	300	1.75	3.47	2.52
1N1204A	DO-4	12	150	50	240	400	1.5	4.46	3.24
1N1205A	DO-4	12	150	50	240	500	1.25	5.36	3.90
1N1206A	DO-4	12	150	50	240	600	1	6.19	4.50
40259	DO-4	12	150	50	250	600	0.6	12.40	10.25
40208	DO-5	18	150	72	250	50	3	.99	.72
40209	DO-5	18	150	72	250	100	3	1.32	.96
40210	DO-5	18	150	72	250	200	2.5	1.78	1.30
40212	DO-5	18	150	72	250	400	2	2.89	2.10
40213	DO-5	18	150	72	250	500	1.75	3.63	2.64
40214	DO-5	18	150	72	250	600	1.5	4.21	3.06
1N1195A	DO-5	20	150	90	350	300	3.2	3.88	2.82
1N1196A	DO-5	20	150	90	350	400	2.5	4.95	3.60
1N1197A	DO-5	20	150	90	350	500	2.2	5.94	4.32
1N1198A	DO-5	20	150	90	350	600	1.5	7.01	5.10
1N1183A	DO-5	40	150	195	800	50	2.5	2.15	1.56
1N1184A	DO-5	40	150	195	800	100	2.5	2.48	1.80
1N1186A	DO-5	40	150	195	800	200	2.5	3.55	.258
1N1187A	DO-5	40	150	195	800	300	2.5	4.95	3.60
1N1188A	DO-5	40	150	195	800	400	2.2	6.19	4.50
1N1189A	DO-5	40	150	195	800	500	2	7.43	5.40
1N1190A	DO-5	40	150	195	800	600	1.8	8.65	6.30

See the Semiconductor Directory, pages 6 thru 38, for quantity prices of 1000-Up

HIGH-VOLTAGE SILICON RECTIFIER STACKS

For industrial and military applications. $V_{RM(rep)}$ to 12,000 V. $V_{RM(nonrep)}$, 60-125°C.

Type No.	Case	MAX. RATINGS V_{RM} (rep) V	V_{RM} (non-rep) V	V_R (rms) V	$I_{F(AV)}$ T_A = 60°C A	I_{FM} (surge) A	CHAR. I_{RM} (dyn) A	EACH 1-29	EACH 30-Up
CR201	H	1900	2280	1345	0.4	10	0.1	3.10	2.96
CR102	J	2530	3035	1790	0.925	20	0.3	7.20	6.85
CR103	J	3165	3800	2240	0.825	20	0.3	8.15	7.75
CR203	H	3165	3800	2400	0.4	10	0.1	4.80	4.56
CR104	J	4430	5315	3130	0.7	20	0.3	9.60	9.10
CR204	H	4800	5760	3395	0.4	10	0.1	5.75	5.47
CR105	J	5065	6080	3580	0.7	20	0.3	10.55	10.05
CR106	J	6330	7595	4475	0.65	20	0.3	12.00	11.40
CR107	J	7595	9115	5370	0.6	20	0.3	12.95	12.30
CR208	H	8000	9600	5655	0.4	10	0.1	8.40	8.00
CR108	J	8230	9875	5820	0.6	20	0.3	13.90	13.20
CR109	J	9495	11395	6710	0.6	20	0.3	15.35	14.60
CR110	J	10130	12155	7160	0.6	20	0.3	16.30	15.50
CR212	H	12000	14400	8485	0.4	10	0.1	12.00	11.40

RCA Silicon Rectifiers and Thyristors

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

HOW TO ORDER

When ordering, specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name For Example:
49 D 1 CR273/8008-RCA Designates RCA Type CR273/8008

EXPLANATION OF COLUMN HEADINGS

See Page 80 for Illustrations of Cases and Information on Column Headings and Symbols Used on This Page

PLUG-IN SILICON RECTIFIERS

High-voltage diffused-junction types that are direct replacements for designated mercury-vapor and gas rectifier tubes. Hermetically sealed, need no warmup time.

Type No.	Case	Replace Types	EACH 1-99	EACH 100-999
CR273/8008	W	8008	60.00	60.00
CR274/872A	X	872, 872A	60.00	60.00
CR275/866A/3B28/3B25	Y	866, 866A, 3B28, 3B25	13.10	13.10

SILICON RECTIFIER BRIDGES

For wide industrial and military applications. Single-phase full-wave types. $I_{F(AV)}$ to 70 A.

Type No.	Case	$I_{F(AV)}$ A	$V_{out(AV)}$ V	$V_{R(rms)}$ V	EACH 1-29	EACH 30-Up
CR401	K	18	200	222	28.00	26.60
CR402	K	18	400	444	32.00	30.40
CR403	K	18	800	888	44.00	41.80
CR404	K	34	200	222	30.00	28.50
CR405	K	34	400	444	36.00	34.20
CR406	K	34	800	888	54.00	51.30
CR407	K	70	200	222	40.00	38.00
CR408	K	70	400	444	48.00	45.60
CR409	K	70	800	888	64.00	60.80

Three-phase full-wave types. $I_{F(AV)}$ to 92 A.

CR501	K	24	300	222	40.00	38.00
CR502	K	24	600	444	48.00	45.60
CR503	K	46	300	222	50.00	47.50
CR504	K	46	600	444	62.00	58.90
CR505	K	92	300	222	64.00	60.80
CR506	K	92	600	444	84.00	79.80

THYRISTORS—SILICON TRIACS

*At T_A. †V_{GM} @ T_C, 25° C, max. V. #Gate Trigger Cap., 0.1 μF min. V_{DROM} @ T_j=100° C gate open, except §90° C. V_{GT} and I_{GT} @ T_C=25° C. ΔIntegral trigger types. ‡TO-5, two 1" leads.

Type No.	Case	MAX. RATINGS On-State Current $I_{T(rms)}$ A	@ T_C	V_{DROM} V	Gate Power P_{GM} W	$P_{G(AV)}$ W	CHAR. V_{GT} max V	I_{GT} max mA	EACH 1-99	EACH 100-999
40525	Modified TO-5, three 1" leads	2.5	60° C	100§	10	0.15	2.2	3	1.57	1.14
40526		2.5	60° C	200§	10	0.15	2.2	3	1.62	1.18
40527		2.5	60° C	400§	10	0.15	2.2	3	2.31	1.68
40528		2.5	70° C	100	10	0.15	2.2	10	1.57	1.14
40529		2.5	70° C	200	10	0.15	2.2	10	1.62	1.18
40530		2.5	70° C	400	10	0.15	2.2	10	2.31	1.68
40531	N	2.5	60° C*	Same data as 40525					1.73	1.26
40532	N	2.5	60° C*	Same data as 40526					1.78	1.30
40533	N	2.5	60° C*	Same data as 40527					2.48	1.80
40534	N	2.5	70° C*	Same data as 40528					1.73	1.26
40535	N	2.5	70° C*	Same data as 40529					1.78	1.30
40536	N	2.5	70° C*	Same data as 40530					2.48	1.80
40429	TO-66	6	75° C	200	20	0.2	2.2	25	2.06	1.50
40430	TO-66	6	75° C	400	20	0.2	2.5	25	2.39	1.74
40502	P	6	75° C*	Same data as 40429					2.23	1.62
40503	P	6	75° C*	Same data as 40430					2.56	1.86
40485	‡	6	75° C	200	20	0.2	2.2	25	2.06	1.50
40486	‡	6	75° C	400	20	0.2	2.2	25	2.39	1.74
40509	N	6	75° C*	Same data as 40485					2.23	1.62
40510	N	6	75° C*	Same data as 40486					2.56	1.86
40431Δ	‡	6	75° C	200	20	0.2	40†	0.1#	2.56	1.86
40432Δ	‡	6	75° C	400	20	0.2	40†	0.1#	2.97	2.16
40511Δ	N	6	75° C*	Same data as 40431					2.72	1.98
40512Δ	N	6	75° C*	Same data as 40432					3.14	2.28
40638	S	6	58° C	200	16	0.2	2.2	40	2.15	1.56
40639	S	6	58° C	400	16	0.2	2.2	40	2.48	1.80
40664	‡	6	75° C	450	16	0.2	4	50	1.95	1.42
40667	CC	6	75° C	450	16	0.2	4	50	2.05	1.49
40668	CC	8	80° C	200	16	0.2	2.5	25	1.62	1.18
40669	CC	8	80° C	400	16	0.2	2.5	25	1.82	1.32
2N5567	B	10	85° C	200	16	0.5	2.5	25	3.38	2.46
2N5568	B	10	85° C	400	16	0.5	2.5	25	4.41	3.20
2N5569	A	10	85° C	200	16	0.5	2.5	25	3.88	2.82
2N5570	A	10	85° C	400	16	0.5	2.5	25	4.90	3.56

THYRISTORS—SILICON TRIACS (Cont'd)

Type No.	Case	MAX. RATINGS On-State Current $I_{T(rms)}$ A	@ T_C	V_{DROM} V	Gate Power P_{GM} W	$P_{G(AV)}$ W	CHAR. V_{GT} max V	I_{GT} max mA	EACH 1-99	EACH 100-999
2N5571	B	15	80° C	200	16	0.5	2.5	50	3.47	2.52
2N5572	B	15	80° C	400	16	0.5	2.5	50	4.65	3.38
2N5573	A	15	80° C	200	16	0.5	2.5	50	3.96	2.88
2N5574	A	15	80° C	400	16	0.5	2.5	50	5.15	3.74
40575	TO-66	15	70° C	200	20	0.45	2.5	80	2.48	1.80
40576	TO-66	15	70° C	400	20	0.45	2.5	80	3.29	2.38
40660	B	30	65° C	200	40	0.75	2.5	50	5.78	4.20
40661	B	30	65° C	400	40	0.75	2.5	50	8.22	5.98
40662	A	30	65° C	200	40	0.75	2.5	50	6.27	4.56
40663	A	30	65° C	400	40	0.75	2.5	50	8.71	6.34
40671	B	30	65° C	600	40	0.75	.....	....	11.14	8.10
40672	A	30	65° C	600	40	0.75	.....	....	10.37	8.58
2N5441	B	40	70° C	200	40	0.75	2.5	50	8.17	5.94
2N5442	B	40	70° C	400	40	0.75	2.5	50	11.47	8.34
2N5443	B	40	65° C	600	40	0.75	2.5	50	13.63	11.28
2N5444	A	40	65° C	200	40	0.75	2.5	50	8.66	6.30
2N5445	A	40	65° C	400	40	0.75	2.5	50	10.51	8.70
2N5446	A	40	65° C	600	40	0.75	2.5	50	14.21	11.76

THYRISTORS—SILICON DIACS

Bidirectional trigger diodes for triggering triacs.

Type No.	Case	MAX. RATINGS I_{FM} A	Device Dissip. to T_C=75°C	CHAR. at T_C=25°C $V_{(BO)O}$ min.	Break-down V Sym. max.	$I_{(BO)M}$ max.	EACH 1-99	EACH 100-999
1N5411	DO-26	2	0.5 W	29	±3	50 μA	.61	.44

THYRISTORS—SCR'S

For industrial and military applications. $I_{T(rms)}$ to 16 amps. V_{GT} @ T_C, 25° C. I_{GT} @ T_C, 25° C. $V_{(BO)O}$ @ T_C, 100° C; except †, T_C, 125° C. *T_A. ◇Three leads.

Type No.	Case	MAX. RATINGS I_T rms A	Av. A	@ T_C °C	V_{RSOM} V	CHARACTERISTICS $V_{(BO)O}$ min V	V_{GT} max VDC	I_{GT} max mADC	EACH 1-99	EACH 100-999
2N3528	TO-8	2	1.3	25*	330	200	2	15	1.58	1.14
2N3529	TO-8	2	1.3	25*	660	400	2	15	1.96	1.43
2N4102	TO-8	2	1.3	25*	700	600	2	15	2.64	1.92
2N3228	TO-66	5	3.2	75	330	200	2	15	1.62	1.18
2N3525	TO-66	5	3.2	75	660	400	2	15	2.31	1.68
2N4101	TO-66	5	3.2	75	700	600	2	15	3.05	2.22
40504	P	5	3.2	75*	330	200	2	15	1.78	1.30
40505	P	5	3.2	75*	660	400	2	15	2.48	1.80
40506	P	5	3.2	75*	700	600	2	15	3.22	2.34
40553	TO-66	5	3.2	60	330	200	3.5	40	2.75	2.00
40554	TO-66	5	3.2	60	660	400	3.5	40	4.44	3.22
40555	TO-66	5	3.2	60	700	600	3.5	40	4.76	3.47
40640	TO-66	5	3.2	60	.....	500	4	30	3.53	2.57
40641	TO-66	5	3.2	60	.....	400	4	30	3.53	2.57
40378	C	7	4.5	60	330	200	2	15	1.47	1.07
40379	C	7	4.5	60	660	400	2	15	1.85	1.34
40507	N	7	4.5	60*	330	200	2	15	1.63	1.19
40508	N	7	4.5	60*	660	400	2	15	2.01	1.46
40654	C◇	7	.....	60	200	250	1.5	15	1.62	1.18
40655	C◇	7	.....	60	400	500	1.5	15	2.03	1.48
40656	S	.....	.....	.....	200	250	1.5	15	1.70	1.24
40657	S	.....	.....	.....	400	500	1.5	15	2.11	1.54
40658	N	.....	.....	.....	200	250	1.5	15	1.86	1.36
40659	N	.....	.....	.....	400	500	1.5	15	2.19	1.60
2N3668	TO-3	12.5	8	80	150	100	2	40	2.39	1.74
2N3669	TO-3	12.5	8	80	330	200	2	40	2.81	2.04
2N3670	TO-3	12.5	8	80	660	400	2	40	3.80	2.76
2N4103	TO-3	12.5	8	80	700	600	2	40	5.12	3.72
2N1842A	TO-48	16	10	80	35	25†	3.7 V @ T_C= −65° C	4.5 mA @ T_C= 125° C	2.20	1.60
2N1846A	TO-48	16	10	80	300	200†			4.46	3.75
2N1847A	TO-48	16	10	80	350	250†			5.10	3.70
2N1848A	TO-48	16	10	80	400	300†			5.51	4.00
2N1849A	TO-48	16	10	80	500	400†			6.54	4.75
2N1850A	TO-48	16	10	80	600	500†			7.56	5.50

When Ordering, Specify Dept. No., Mfr's Type No. and Name

Thyristors, Diodes, Switching Transistors RCA

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

HOW TO ORDER

When ordering, please specify Department No. 49 D 1, followed by the Manufacturer's Type No. and Name.
49 D 1 2N684—RCA Designates Radio Corp. of America Type 2N684

THYRISTORS—SCR'S (Cont'd)

$I_{T(rms)}$ to 35A. V_{GT} @ T_C, 25° C. I_{GT} @ T_C, 25° C. $V_{(BO)O}$ @ T_C, 100° C; except †, T_C, 125° C.

Type No.	Case	MAX. RATINGS rms A	Av. A	@ T_C °C	V_{RSOM} V	CHARACTERISTICS $V_{(BO)O}$ min V	V_{GT} max VDC	I_{GT} max. mADC	EACH 1-99	100-999
2N684	TO-48	25	16	65	225	150†			4.19	3.05
2N685	TO-48	25	16	65	300	200†			4.81	3.50
2N686	TO-48	25	16	65	350	250†	3V @ T_C= −65° C	25mA @ T_C= 125° C	5.36	3.90
2N687	TO-48	25	16	65	400	300†			4.20	3.50
2N688	TO-48	25	16	65	500	400†			6.74	4.90
2N689	TO-48	25	16	65	600	500†			8.05	5.85
2N690	TO-48	25	16	65	720	600†			8.67	6.30
2N3870	B	35	22	65	150	100	2	40	3.88	2.82
2N3871	B	35	22	65	330	200	2	40	4.54	3.30
2N3872	B	35	22	65	660	400	2	40	6.11	4.44
2N3873	B	35	22	65	700	600	2	40	8.22	5.98
2N3896	A	35	22	65	150	100	2	40	4.37	3.18
2N3897	A	35	22	65	330	200	2	40	5.03	3.66
2N3898	A	35	22	65	660	400	2	40	6.60	4.80
2N3899	A	35	22	65	700	600	2	40	8.75	6.36

THYRISTORS—PULSE TYPE SCR

TO-18 case. For industrial and military use.

Type No.	MAX. RATINGS I_{TRM} A	Sinusoidal rep rate p/s	Sinusoidal base width μS	V_{RSOM} V	di/dt A/μS	$P_{T(AV)}$ T_C= 65° C W	CHAR. $V_{(BO)O}$ T_C= 125° C V	V_T @ 400A/ 2 μS pt V	EACH 1-99	100-999
40216	900	800	16	720	400	30	600	14	42.20	34.90

GERMANIUM TUNNEL DIODES (Case T)

Small-signal. $I_{P(typ)}$ to 100 mA. * includes 0.8 pF case cap.

Type No.	CHARACTERISTICS I_P min mA	I_P max mA	C* max pF	I_P/I_V min	V_{pp} min mV	V_{pp} max mV	tr typ ps	EACH 1-99	100-999
40561	4.5	5.5	25	6:1	430	590	1800	4.54	3.30
40566	4.75	5.25	15	8:1	490	560	1200	7.43	5.40
40571	4.75	5.25	8	8:1	490	560	600	8.60	6.24
40562	9	11	25	6:1	440	600	900	4.54	3.30
40567	9.5	10.5	15	8:1	510	580	600	6.52	4.74
40572	9.5	10.5	8	8:1	510	580	300	7.01	5.10
40563	18	22	30	6:1	460	620	600	4.54	3.30
40568	19	21	20	8:1	530	600	400	7.01	5.10
40573	19	21	10	8:1	530	600	200	8.15	5.94
40564	45	55	40	6:1	530	640	350	4.54	3.30
40569	47.5	52.5	25	8:1	550	620	200	7.43	5.40
40574	47.5	52.5	12	8:1	550	620	100	10.75	7.80
40565	90	110	40	6:1	540	650	150	4.54	3.30
40570	95	105	25	8:1	550	630	100	10.75	7.80

GERMANIUM COMPENSATING DIODES

For temperature and voltage variations. 2-lead TO-1 case.

Type No.	Case	MAX. RATINGS I_{FM} (peak) mA	$I_{F(AV)}$ mA	V_{RM} V	CHAR. V_F @ T_A=25° C mV @ mA		EACH 1-99	100-999
1N2326	GG	200	100	−1	280 max.	100	.55	.40

GERMANIUM DAMPER DIODES

For TV horizontal deflection systems.

Type No.	Case	MAX. RATINGS V_{RM} peak V	V_R cont. V	I_{FM} peak A	CHAR. $V_{F(AV)}$ V	I_R μA	EACH 1-99	100-999
40442	TO-3	200	40	10	0.77	150	.83	.60
1N4785	TO-3	320	60	10	0.77	150	1.08	.78

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COMPUTER SWITCHING AND PULSE TRANSISTORS

SILICON PNP TYPES—LOW LEVEL/MEDIUM SPEED

Type No.	Case	CHARACTERISTICS f_T min MHz	V_{CE} (sat) max V	C_{obo} max pF	h_{FE} @ I_C min	mA	MAX. RATINGS V_{CBO} V	I_C A	EACH 1-99	100-999
2N5322	TO-5	50	−0.7	.....	30	−500	−100	−2	2.15	1.56
2N5323	TO-5	50	−1.2	.....	40	−500	−75	−2	1.57	1.14
2N4036	TO-5	60	−0.65	30	40	−150	−90	−1	1.32	.96
2N4037	TO-5	60	−1.4	30	50	−150	−60	−1	1.16	.84
2N4314	TO-5	60	−1.4	30	50	−150	−90	−1	1.24	.90
40391	N	60	−1.4	30	50	−150	−60	−1	1.24	.90
40394	M	60	−1.4	30	50	−150	−60	−1	1.24	.90

SILICON NPN TYPES LOW LEVEL/HIGH SPEED

All have TO-18 case, except 2N3119, TO-5; 2N5186, 2N5187 and 2N3261, TO-52. #Pulsed. **Limited by dissipation.

Type No.	CHARACTERISTICS f_T min MHz	$V_{CE(sat)}$ max V	C_{obo} max pF	h_{FE} @ I_C min	mA	t_{on} max ns	MAX. RATINGS V_{CBO} V	I_C A	EACH 1-99	100-999
2N706	200	0.6	6	20	10#	....	25	....	.55	.40
2N706A	200	0.6	5	20	10	40	25	50	.73	.53
2N3119	250	0.5	6	50	100#	40	100	0.5	5.36	3.90
2N834	350	0.25	4	25	10	35	40	0.2	1.98	1.44
2N3011	400	0.2	4	30	10#	15	30	0.2	.99	.72
2N5186	400	0.3	3	25	10	25	10	0.3	.40	.29
2N5187	400	0.25	3.5	30	10	18	25	0.5	.45	.33
2N2369A	500	0.2	4	20	100#	12	40	0.2	1.65	1.20
2N709	600	0.3	3	20	10#	15	15	**	1.32	.96
2N2475	600	0.4	3	30	20	20	15	**	1.62	1.18
2N3261	600	0.35	3.5	40	10	13	40	0.5	1.32	.96

SILICON NPN TYPES—HIGH VOLTAGE

#Pulsed.

Type No.	Case	CHARACTERISTICS f_T min. MHz	V_{CE} (sat) max. V	C_{obo} max. pF	h_{FE} @ I_C min	mA	MAX. RATINGS V_{CBO} V	P_T T_A W	EACH 1-99	100-999
2N2476	TO-5	250	0.75	10	20	150	60	0.6	1.16	.84
2N2477	TO-5	250	0.65	10	40	150	60	0.6	1.32	.96
2N3512	TO-5	250	0.4	10	10	500#	60	0.8	1.08	.78
2N5188	TO-39	250	0.5	10	20	500#	60	0.8	.55	.40
2N5189	L	250	1	12	35	500	60	1	.65	.47
2N5162	L	250	0.8	12	20	1A#	75	1	1.62	1.18
2N3262	TO-52	600	0.35	3.5	30	100	40	0.3	7.43	5.40

GERMANIUM PNP TYPES—HIGH VOLTAGE (Case TO-5)

Type No.	CHARACTERISTICS f_T min kHz	h_{FE} min	I_C mA	V_{CE} V	h_{FE} @ I_C min	mA	MAX. V_{CBO} V	P_A T_A mW	EACH 1-99	100-999
2N398	20	20	−5	−0.35	.....	.....	−105	50	.83	.60
2N398A	40	20	−5	−0.35	20	1	−105	150	.91	.66
2N398B	.....	20	−5	−0.25	40	1	−105	250	1.16	.84

GERMANIUM PNP TYPES—LOW AND MEDIUM SPEED

CASE TO-5 ##f_T min. *Minimum.

Type No.	CHARACTERISTICS f_{hfb} min MHz	$V_{CE(sat)}$ max V	C_{obo} max pF	h_{FE} @ I_C min	mA	MAX. RATINGS V_{CBO} V	I_C mA	EACH 1-99	100-999
2N1303	3	−0.2	20	20	−10	−30	−300	.42	.30
2N404	4	−0.15	20	30	−12	−25	−100	.42	.30
2N404A	4	−0.15	20	30	−12	−40	−150	.55	.40
2N581	4	−0.2*	20	20	−20	−18	−100	.50	.36
2N1305	5	−0.2	20	40	−10	−30	−300	.48	.35
2N414	8	.....	11	.....	.....	−30	−200	.42	.30
2N1307	10	−0.2	20	60	−10	−30	−300	.58	.42
2N582	14	−0.2	20	40	−24	−25	−100	.66	.48
2N1309	15	−0.2	20	80	−10	−30	−300	.91	.66
2N1683	50##	.....	12	50	−10	−13	−100	1.90	1.38

Transistors and Mounting Hardware

SEE THE SEMICONDUCTOR DIRECTORY (PAGES 6-38) FOR QUANTITY PRICES OF 1000-UP

COMPUTER SWITCHING AND PULSE TRANSISTORS

GERMANIUM NPN TYPES LOW AND MED. SPEED (Case TO-5)—

Type No.	CHARACTERISTICS					MAX. RATINGS		EACH	
	f_{hfb} min. MHz	$V_{CE(sat)}$ max. V	C_{obo} max. pF	h_{FE} @ I_C min.	I_C mA	V_{CBO} V	I_C mA	1-99	100-999
2N585	3	0.2	25	20	20	25	200	.99	.72
2N1302	3	0.2	20	20	10	25	300	.42	.30
2N1605	4	0.15	20	40	20	25	100	.62	.45
2N1605A	4	0.15	20	40	20	40	100	1.09	.76
2N388	5	.....	20	60	30	25	200	.47	.34
2N388A	5	.....	20	60	30	40	200	.88	.64
2N1304	5	0.2	20	40	10	25	300	.50	.36
2N1306	10	0.2	20	60	10	25	300	.62	.45
2N1308	15	0.2	20	80	10	25	300	.91	.66

POWER SWITCHING AND PULSE TRANSISTORS

SILICON NPN TYPES—HIGH CURRENT

*High power. †High speed. #Pulsed. ‡$V_{CER(sus)}$. §T_A. ††Max. ♦V_{CBV}.

Type No.	Case	MAX. RATINGS			CHARACTERISTICS			EACH	
		P_T T_C W	V_{CEO} (sus) V	I_C A	h_{FE} @ I_C min.	A	V_{CE} (sat) V	1-99	100-999
2N5038†	TO-3	140	90	20	20	12	1	29.00	24.00
2N5039†	TO-3	140	75	20	20	10	1	21.75	18.00
2N5575*	EE	300	50	80	10	60	2#	36.25	30.00
2N5576*	DD	300	50	80	10	60	2#	36.25	30.00
2N5577*	FF	300	50	80	10	60	2#	40.60	33.60
2N5578*	EE	300	70	60	10	40	1.5#	43.50	36.00
2N5579*	DD	300	70	60	10	40	1.5#	43.50	36.00
2N5580#	FF	300	70	60	10	40	1.5#	47.85	39.60

SILICON PNP TYPES—LOW SPEED

40406	TO-5	1§	−50	−0.7	30	−0.1	.....	1.19	.87
40410	N	3§	−90‡	−0.7	50	−150	1.4††	1.32	.96
40391	N	3.5§	−40	−1	50	−150#	1.4††	1.24	.90
40319	TO-5	5	−40	−0.7	35	−50	1.4††	1.16	.84
40362	TO-5	5	−70‡	−0.7	35	−50	1.4††	1.24	.90
40394	N	7	−40	−1	50	−150#	1.4††	1.24	.90

GERMANIUM PNP TYPES—LOW SPEED

2N586	TO-7	0.25§	−25	−0.25	30	−0.25	−0.5	1.73	1.26
2N1183	TO-8	7.5	−20	−3	20	−0.4	−2	1.82	1.32
2N1183A	TO-8	7.5	−30	−3	20	−0.4	−2	2.31	1.68
2N1183B	TO-8	7.5	−40	−3	20	−0.4	−2	2.89	2.10
2N1184	TO-8	7.5	−20	−3	40	−0.4	−2	2.48	1.80
2N1184A	TO-8	7.5	−30	−3	40	−0.4	−2	2.81	2.04
2N1184B	TO-8	7.5	−40	−3	40	−0.4	−2	4.13	3.00
2N1905	TO-3	30	−100♦	−6	50	−1	−2	4.13	3.00
2N1906	TO-3	30	−130♦	−6	75	−1	−2	6.60	4.80

HOW TO ORDER

When ordering, please specify Department No., 49 D 1, followed by the Manufacturer's Type No. and Name.

For Example:

49 D 1 2N585-RCA Designates
Radio Corp. of America Type 2N585

POWER SWITCHING AND PULSE TRANSISTORS (Cont'd)

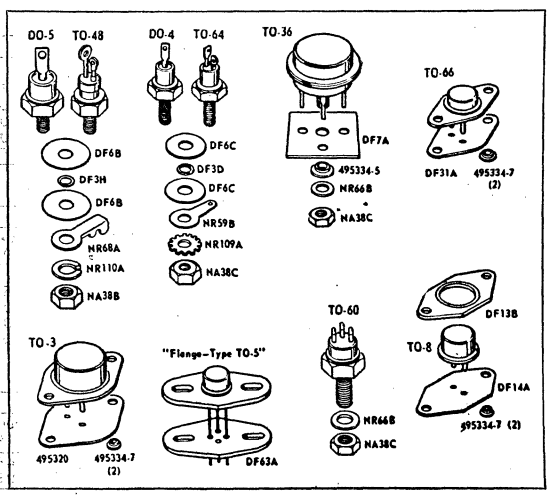
SILICON NPN TYPES—HIGH VOLTAGE

§$V_{CEO(sus)}$. ‡$V_{CER(sus)}$. §§Typ. #Pulsed.

Type No.	Case	MAX. RATINGS		CHARACTERISTICS				EACH	
		V_{CEO} (sus) V	P_T T_C W	f_T min MHz	h_{FE} @ I_C min	mA	$V_{CE(sat)}$ max V	1-99	100-999
2N4347	TO-3	120§	100	0.8§§	20	2A	1	2.97	2.16
2N4348	TO-3	120§	120	0.7§§	15	5A	1	4.13	3.00
2N4390	TO-104	120	0.5T_A	50	20	20	0.3	.75	.54
2N3441	TO-66	140§	25	1.2§§	20	500	1	2.48	1.80
2N3442	TO-3	140§	117	0.8§§	20	3A	1	4.54	3.30
2N3773	TO-3	140§	150	0.7§§	15	8A#	1.4	7.43	5.40
40349	TO-5	140§	8.75	1.1§§	25	150	0.5	1.56	1.13
40349V1	N	140§	4.4T_A	1.1§§	25	150	0.5	1.64	1.19
40373	P	140§	5.8T_A	1.2§§	20	500	1	2.56	1.86
2N4068	TO-104	150	0.5T_A	50	30	30	3	1.34	.97
40354	TO-104	150	0.5T_A	50	55§§	10	5	1.18	.86
40355	R	150	1T_A	50	55§§	10	5	1.24	.90
2N3583	TO-66	175§	35	15	10	1A	.....	2.48	1.80
40346	TO-5	175‡	10	10	25	10	0.5	1.14	.83
40346V1	N	175‡	4T_A	10	25	10	0.5	1.23	.89
40346V2	M	175‡	10	10	25	10	0.5	1.23	.89
40374	P	175§	5.8T_A	15	10	1A	.....	2.56	1.86
2N5415	TO-5	−200§§	10	15	30	−50	−2.5	3.30	2.40
2N5239	TO-3	225§§	100	5	20	2A#	2.5	8.25	6.00
2N3440	TO-5	250§	10	15	40	20	0.5	1.82	1.32
2N3584	TO-66	250§	35	15	25	1A	0.75	4.13	3.00
2N4064	M	250§	10	15	40	20	0.5	1.90	1.38
40390	N	250§	3.5T_A	15	40	20	0.5	2.15	1.56
40412	TO-5	250‡	10	10	40	30	.....	1.06	.77
40412V2	M	250‡	10	10	40	30	.....	1.14	.83
2N3585	TO-66	300§	35	15	25	1A	0.75	6.60	4.80
2N4240	TO-66	300§	35	15	30	750	1	2.89	2.10
2N5240	TO-3	300§§	100	5	20	2A#	2.5	11.55	8.00
2N5416	TO-5	−300§§	10	15	30	−50	−2	4.95	3.60
2N3439	TO-5	350§	10	15	40	20	0.5	3.71	2.70
2N4063	M	350§	10	15	40	20	0.5	3.80	2.76

MOUNTING HARDWARE FOR SEMICONDUCTOR DEVICES

For use as follows: DF63A mounts flange type TO-5. DF31A, two 495334-7 mount TO-66. Two DF6B, DF3H, NR68A, NR110A, NA38B mount DO-5 or TO-48. Two DF6C, DF3D, NR59B, NR109A, NA38C, mount DO-4 and TO-64. DF7A, 495334-5, NR66B. NA38C mount TO-36. NR66B, NA38C mount TO-60. 495320, two 595334-7 mount TO-3. DF138, DF14A, two 495334-7 mount TO-8. SA2100, heat sink clip for TO-1 or TO-18. Provide secure mounting of cases.



Stock No.	Part No.	Description	No. Parts in Std. Pkg.	PER PKG.
47 D 6724	NA38C	Nut	25	.56
47 D 6725	NR109A	Lock Washer	25	.41
47 D 6726	DF6C	Insulator—Mica	50	1.00
47 D 6727	DF3D	Insulator—Teflon	25	1.21
47 D 6728	NR59B	Connector	25	.88
47 D 6729	NA38B	Nut	25	.77
47 D 6749	NR110A	Lock Washer	25	.45
47 D 6730	NR68A	Connector	25	2.15
47 D 6770	DF3H	Insulator—Teflon	25	1.33
47 D 6732	DF6B	Insulator—Mica	50	1.27
47 D 6733	SA2100	Heat Sink Clip	100	1.13
47 D 6734	495320	Insulator—Mica	100	2.40
47 D 6735	495334-7	Washer—Nylon	100	1.65
47 D 6736	DF63A	Insulator—Mica	100	1.70
47 D 6737	DF13B	Mounting Clamp	25	1.63
47 D 6738	DF14A	Insulator—Mica	100	1.95
47 D 6739	NR66B	Washer	25	.37
47 D 6741	495334-5	Bushing—Delrin	25	2.57
47 D 6742	DF7A	Insulator—Mica	25	1.38
47 D 6748	DF31A	Insulator—Mica	100	1.77

ALLIED STOCKS OVER 8000 SEMICONDUCTOR TYPES WITH NEW TYPES CONSTANTLY BEING ADDED

Make Allied Your Headquarters for Semiconductor Products

Sprague Semiconductors

SILICON SEPT NPN PLANAR EPITAXIAL HI-SPEED

Type No.	Case TO-	Pd (W)	BV_{CBO} V	h_{FE}@ I_C-150mA	V_{CESAT} (max)	f_T MHz	C_{ob} (pF)	EACH 1-99	EACH 100-999
2N2218A	5	0.8	75	40-120	0.3	250	8	1.90	1.25
2N2219	5	0.8	60	100-300	0.4	250	8	.97	.65
2N2845	18	0.36	60	30-120	0.4	250	8	4.95	3.30
2N2848	5	0.8	60	40-140	0.4	250	8	5.85	3.90
TN53	5	0.8	75	50	0.5	100	8	.85	.57
TN59	5	0.8	40	100	0.4	100	8	.65	.45
TN60	18	0.5	40	100	0.4	100	8	.65	.45
TN61	5	0.8	40	50	0.4	100	8	.60	.40

SILICON SEPT PLANAR SWITCHES, AMPLIFIERS, CHOPPERS

Type No.	S	Case TO-	BV_{CBO} V	BV_{EBO} V	h_{FE} @ I_C min	h_{FE} @ I_C max	h_{FE} @ I_C mA	V_{OFF} (mV)	r_S ohms	EACH 1-99	EACH 100-999
2N2944	PNP	46	15	15	80	450	1	6	20	5.50	3.68
2N2946	PNP	46	40	40	30	150	1	2	45	5.50	3.68
2N3217	PNP	46	15	15	40	....	1	1.25	20	2.55	1.70
2N3218	PNP	46	25	25	30	....	1	1.5	35	2.25	1.50
2N3219	PNP	46	40	40	20	....	1	2.5	45	2.55	1.70
2N2330	NPN	5	30	5	50	....	10	0.75	.....	4.35	2.90
2N2331	NPN	18	30	5	50	....	10	0.75	.....	4.35	2.90

SILICON SEPT PLANAR LOW-LEVEL LOW-NOISE AMPLIFIERS

Type No.	S	Case TO-	BV_{CBO} V	BV_{EBO} V	h_{FE} @ I_C Min.	h_{FE} @ I_C μA	NF dB	C_{ob} pF	EACH 1-99	EACH 100-999
2N4383	NPN	5	40	5	100	10	2	8	1.05	.70
2N4384	NPN	18	40	5	100	10	2	8	1.05	.70

GERMANIUM MADT PNP FOR UHF APPLICATIONS

*Min.-Max. †Conversion Gain. ‡Power output, mW.

Type No.	Case TO-	BV_{CBO} V	f_{Max} (min) (MHz)	PG @ f dB (min.)	PG @ f MHz	NF (max) (dB)	EACH 1-99	EACH 100-999
2N2360	12	20	980	14-19*	200	5.5	3.95	2.75
2N2361	12	20	.....	14†	200-44	12	3.30	2.20
2N2362	12	20	.....	1.5‡	257	.....	2.10	1.55
2N2398	12	20	1200	16-22*	200	4.5	3.90	2.95

SILICON SEPT PNP PLANAR EPITAXIAL TRANSISTORS

Type No.	Case TO-	Pd W	BV_{CBO} V	h_{FE} @ I_C-150 mA	$V_{CE(sat)}$	f_T MHz	C_{ob} pF	EACH 1-99	EACH 100-999
TQ-59	5	3	40	100	.2	100	8	.99	.68
TQ-60	18	1.8	40	100	.2	100	8	.99	.68
TQ-61	5	3	40	50	.2	100	8	.86	.58

SMALL-SIGNAL AUDIO AMPLIFIERS (NPN, *PNP)

Type No.	$V_{(BR)CEO}$ V	h_{FE} min./max.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000-24,999
2N2711	18	30/90	.23	.15	.12	.10
2N2712	18	75/225	.24	.16	.13	.11
2N2923	25	90/180	.25	.17	.14	.11
2N2924	25	150/300	.27	.18	.15	.12
2N2925	25	235/470	.33	.22	.18	.15
2N2926	18	35/470	.24	.16	.13	.10
2N3391	25	250/500	.39	.26	.21	.17
2N3391A	25	250/500	.45	.30	.24	.20
2N3392	25	150/300	.25	.17	.14	.11
2N3393	25	90/180	.25	.17	.14	.11
2N3394	25	55/110	.25	.17	.14	.11
2N3395	25	150/500	.33	.22	.18	.15
2N3396	25	90/500	.25	.17	.14	.11
2N3397	25	55/500	.24	.16	.13	.10
2N3398	25	55/800	.24	.16	.13	.10
2N3721	18	60/660	.24	.16	.13	.10
2N5172	25	100/500	.19	.12	.10	.09
2N3900	18	250/500	.36	.24	.19	.16
2N3900A	18	250/500	.39	.26	.21	.17
TZ-81	30	100/500	.42	.28	.22	.18
TZ-82	30	40/500	.38	.25	.20	.16
TZ-581*	30	100/500	.51	.34	.27	.22
TZ-582*	30	40/500	.45	.30	.24	.20

LARGE SIGNAL AMPLIFIERS AND SWITCHES (NPN, *PNP)

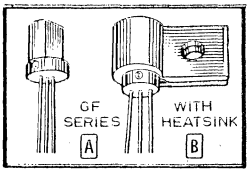
Type No.	Fig.	$V_{(BR)CEO}$ V	h_{FE} min./max.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000 24,999
2N2713	A	18	30/90	.38	.26	.21	.17
2N2714	A	18	75/225	.36	.24	.19	.16

HOW TO ORDER

When ordering, specify Dept. No., 49 D 30, followed by the Manufacturer's Type No. and Name. For Example:

49 D 30 2N2218A-SPR

Designates Sprague 2N2218A



LARGE SIGNAL AMPLIFIERS AND SWITCHES (Cont'd)

Type No.	Fig.	$V_{(BR)CEO}$ V	h_{FE} min./max.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000-24,999
2N3402	B	25	75/225	.33	.22	.18	.14
2N3403	B	25	180/540	.35	.23	.19	.15
2N3404	B	50	75/225	.50	.33	.26	.21
2N3405	B	50	180/540	.60	.40	.32	.26
2N4425	A	40	180/540	.43	.29	.23	.19
2N3414	A	25	75/225	.28	.19	.16	.12
2N3415	A	25	180/540	.30	.20	.17	.13
2N3416	A	50	75/225	.45	.30	.24	.19
2N3417	A	50	180/540	.55	.37	.30	.24
2N4424	A	40	180/540	.39	.26	.21	.17
TP3638*	A	25	30/—	.42	.28	.22	.18
TP3638*	A	25	100/—	.45	.30	.24	.20
D29A4*	A	25	30/90	.42	.28	.21	.17
D29A5*	A	25	75/225	.45	.30	.23	.19
2N3973	A	30	35/100	.33	.26	.22	.17
2N3974	A	30	55/200	.35	.29	.23	.19
2N3975	A	30	35/100	.38	.26	.21	.17
2N3976	A	30	55/200	.41	.27	.23	.18

HIGH-VOLTAGE INDICATOR DRIVERS (NPN)

2N3877	70	20/250	.45	.30	.24	.19
2N3877A	85	20/250	.49	.33	26	.21

HIGH-FREQUENCY AMPLIFIER/OSCILLATORS (NPN)

Type No.	h_{FE} min./max.	$V_{(BR)CEO}$ V	f_t MHz min.	EACH 1-99	EACH 100-999	EACH 1000-9999	EACH 10,000-24,999
2N3854A	35/70	30	100	.32	.21	.18	.14
2N3855A	60/120	30	130	.34	.23	.19	.15
2N3856A	100/200	30	140	.36	.24	.20	.16
2N3854	35/70	18	100	.29	.20	.17	.13
2N3855	60/120	18	130	.32	.21	.18	.14
2N3856	100/200	18	140	.34	.23	.19	.15
2N3843A	20/40	30	60	.43	.29	.24	.19
2N3844A	35/70	30	90	.45	.30	.25	.20
2N3845A	60/120	30	126	.47	.32	.26	.21
2N3843	20/40	30	60	.41	.27	.23	.18
2N3844	35/70	30	90	.43	.29	.24	.19
2N3845	60/120	30	126	.45	.30	.25	.20
2N3858	60/120	30	90	.25	.17	.14	.11
2N3859	100/200	30	90	.27	.18	.15	.12
2N3860	150/300	30	90	.32	.21	.17	.13
2N3858A	60/120	60	90	.33	.22	.18	.14
2N3859A	100/200	60	90	.36	.24	.19	.15

DIFFERENTIAL AMPLIFIERS (NPN/NPN, *PNP/PNP)

Type No.	$V_{(BR)CBO}$ V	$V_{(BR)CEO}$ V	H_{FE} @100µA min.	h_{FE1}/h_{FE2} @ 100 µA	EACH 1-99	EACH 100-999	EACH 1000-9999
TD-100	60	30	120	0.9/1.0	2.25	1.50	1.20
TD-101	60	30	120	0.9/1.0	1.50	1.00	.80
TD-400*	40	30	120	0.9/1.0	3.00	2.00	1.60
TD-401*	40	30	120	0.9/1.0	1.95	1.30	1.05

DUAL TRANSISTORS

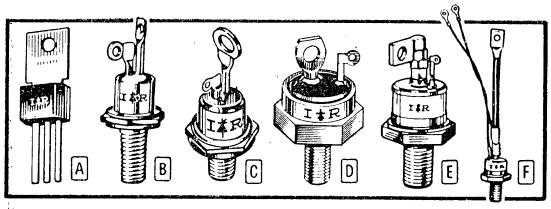
Type No.	Structure	$V_{(BR)CBO}$ V	$V_{(BR)CEO}$ V	EACH 1-99	EACH 100-999	EACH 1000-9999
TD-102	NPN/NPN	60	30	1.35	.90	.72
TD-402	PNP/PNP	40	30	1.80	1.20	.95
TD-602	NPN/PNP	40	30	1.50	1.00	.80
TD-2219	NPN/NPN	60	30	2.25	1.50	1.20
TD-2905	PNP/PNP	60	40	2.55	1.70	1.35

COMPLEMENTARY PAIRS (NPN/PNP)

Type No.	$V_{(BR)CBO}$ V	$V_{(BR)CEO}$ V	Features	EACH 1-99	EACH 100-999	EACH 1000-9999
TD-600	40	30	h_{FE1}/h_{FE2} 0.9/1.0	2.70	1.80	1.45
TD-601	40	30	V_{off} =2mV @ I_B 2 mA	1.65	1.10	.88

Silicon Controlled Rectifiers

AVAILABLE IN 2 TO 70 AMPS AVERAGE RATINGS



HOW TO ORDER

When ordering, specify Department Number 49 D 24, followed by the Manufacturer's Type No. and Name.

For Example: 49 D 24 IR106Y1 IR Designates International Rectifier Type IR106Y1

EXPLANATION OF COLUMN HEADINGS

V_{RM}—repetitive peak reverse voltage.
$V_{RM(non\text{-}rep.)}$—non-repetitive peak reverse voltage.
$V_{(BO)}$—minimum peak breakover voltage.
V_{RSM}—maximum non-repetitive peak reverse voltage.
V_{GT}—maximum gate voltage to trigger.
V_{FM}—peak forward voltage drop. V_Z—zener voltage.
$I_{T(RMS)}$—maximum RMS on-state current.
I_{TSM}—maximum peak one-cycle non-repetitive surge current.
I^2T—maximum I^2T for fusing.
I_{GT}—maximum gate current to trigger.
I_{OM}—average rectified output current.
I_{FM}—maximum peak one-cycle non-recurrent surge current.
I_{RM}—DC reverse current. I_{ZT}—zener test current.
T_J—junction operating temperature range.
Z_{ZT}—zener impedance.
I_{DRM}—maximum off-state leakage current

A 2 AMPS PLASTIC (4.0 AMPS RMS)

Type No.	V_{RM} (V)	$V_{(BO)}$ (V)	Max. Req'd. Gate Signal at 25° C	EACH 1-99	EACH 100-999
IR106Y1	30	30	1 V @ 200 μA	.94	.63
IR106F1	50	50	1 V @ 200 μA	1.10	.73
IR106A1	100	100	1 V @ 200 μA	1.18	.79
IR106B1	200	200	1 V @ 200 μA	1.34	.89
IR106C1	300	300	1 V @ 200 μA	1.70	1.15

B 3 AMPS AVERAGE (4.7 AMPS RMS)

Type No.	IR No.	Case Type	V_{RRM} and $V_{(BO)}$	Max. Req'd. Gate Signal at 25° C	EACH 1-99	EACH 100-999
2N1600	3RC5A	TO-64	50 V	3 V @ 10 mA	5.10	3.40
2N1601	3RC10A	TO-64	100 V	3 V @ 10 mA	5.70	3.95
2N1602	3RC20A	TO-64	200 V	3 V @ 10 mA	9.45	6.30
2N1603	3RC30A	TO-64	300 V	3 V @ 10 mA	13.50	9.00
2N1604	3RC40A	TO-64	400 V	3 V @ 10 mA	16.80	10.80

C 10 AMPS AVERAGE (16 AMPS RMS)

2N1845	10RC15	TO-48	150 V	2.5 V @ 90 mA	5.65	3.30
2N1846	10RC20	TO-48	200 V	2.5 V @ 90 mA	5.78	3.55
2N1848	10RC30	TO-48	300 V	2.5 V @ 90 mA	6.07	4.05
2N1849	10RC40	TO-48	400 V	2.5 V @ 90 mA	7.42	4.95

B 4.7 AMPS AVERAGE (7.4 AMPS RMS)

Type No.	Case Type	$V_{RRM}/V_{(BO)}$ (V)	V_{RSM} (V)	Max. Req'd. Gate Signal at 25° C	EACH 1-99	EACH 100-999
2N1770	TO-64	25	35	1.35 V @ 15 mA	3.02	2.43
2N1770A	TO-64	25	35	1.35 V @ 15 mA	6.15	4.10
2N1771	TO-64	50	75	1.35 V @ 15 mA	3.47	2.79
2N1771A	TO-64	50	75	1.35 V @ 15 mA	6.97	4.65
2N1772	TO-64	100	150	1.35 V @ 15 mA	5.72	3.80
2N1772A	TO-64	100	150	1.35 V @ 15 mA	8.95	5.95
2N1773	TO-64	150	225	1.35 V @ 15 mA	6.92	4.60
2N1773A	TO-64	150	225	1.35 V @ 15 mA	11.05	7.35
2N1774	TO-64	200	300	1.35 V @ 15 mA	8.12	5.40
2N1774A	TO-64	200	300	1.35 V @ 15 mA	13.45	8.95
2N1775	TO-64	250	350	1.35 V @ 15 mA	9.32	6.20
2N1775A	TO-64	250	350	1.35 V @ 15 mA	15.50	10.45
2N1776	TO-64	300	400	1.35 V @ 15 mA	10.60	7.05
2N1776A	TO-64	300	400	1.35 V @ 15 mA	18.35	12.20
2N1777	TO-64	400	500	1.35 V @ 15 mA	12.40	8.25
2N1777A	TO-64	400	500	1.35 V @ 15 mA	23.60	15.50
2N1778	TO-64	500	600	1.35 V @ 15 mA	18.15	12.05
2N2619	TO-64	600	720	1.35 V @ 15 mA	21.30	14.20

C 16 AMPS AVERAGE (25 AMPS RMS)

2N681	TO-48	25	35	2.0 V @ 40 mA	3.00	2.00
2N682	TO-48	50	75	2.0 V @ 40 mA	3.60	2.40
2N683	TO-48	100	150	2.0 V @ 40 mA	4.72	3.15
2N684	TO-48	150	225	2.0 V @ 40 mA	5.47	3.65
2N685	TO-48	200	300	2.0 V @ 40 mA	5.92	3.95
2N686	TO-48	250	350	2.0 V @ 40 mA	6.30	4.20
2N687	TO-48	300	400	2.0 V @ 40 mA	6.75	4.50
2N688	TO-48	400	500	2.0 V @ 40 mA	8.25	5.50
2N689	TO-48	500	600	2.0 V @ 40 mA	10.12	6.75
2N690	TO-48	600	720	2.0 V @ 40 mA	12.00	8.00
2N691	TO-48	700	840	2.0 V @ 40 mA	19.27	12.85
2N692	TO-48	800	960	2.0 V @ 40 mA	25.00	18.50

C 22.3 AMPS AVERAGE (35 AMPS RMS)

Type No.	Case Type	$V_{RRM}/V_{(BO)}$ (V)	V_{RSM} (V)	Max. Req'd. Gate Signal at 25° C	EACH 1-99	EACH 100-999
16RC10A	TO-48	100	150	2 V @ 40 mA	8.00	5.30
16RC20A	TO-48	200	300	2 V @ 40 mA	11.05	7.35
16RC40A	TO-48	400	500	2 V @ 40 mA	17.05	11.35
16RC60A	TO-48	600	720	2 V @ 40 mA	23.20	15.45
16RC80A	TO-48	800	960	2 V @ 40 mA	35.95	23.95

D 40 AMPS AVERAGE (63 AMPS RMS)

Low-cost, medium current SCR's for a wide range of precision applications. Fully encapsulated construction provides high dielectric strength; offers reliable performance under all conditions. All are rated 40 amperes average maximum current. Forward Conduction: maximum rms on-state current, 62 amps; maximum peak one-cycle non-recurrent surge current, 800 amps. Firing: maximum peak gate power, 5 watts; maximum average gate power, 0.5 watt; maximum peak positive gate current, 2 amps. Special stud-mount package.

Type No.	$V_{RRM}/V_{(BO)}$ (V)	V_{RSM} (V)	I_{RM}/I_{DM} (mA)	EACH 1-99	EACH 100-999
40RCS05	50	75	3.5	12.90	9.15
40RCS10	100	150	3.5	14.00	9.90
40RCS20	200	300	3.0	16.40	11.75
40RCS30	300	400	2.5	19.10	13.35
40RCS40	400	500	2.0	22.00	15.20
40RCS50	500	600	1.5	25.90	17.50
40RCS60	600	720	1.5	29.85	19.90

F 60-AMP POWER LOGIC-TRIACS

Offer unique characteristics and circuit design applications. With an AC supply, the Logic-Triac (properly gated) will control AC power to the load, requiring only one gate connection and one firing circuit connection. Because of the epitaxial process, it can be turned on in either direction by overvoltage or high dv/dt without causing damage to the device. Applications include: AC line voltage control, induction motor speed control, motor drives with inherent braking or reversing, etc. $I_{T(RMS)}$, 60 amps @ 85° C; I_{TSM}, 1000 amps; I^2t, 4000 amps; I_{GT} @ 25° C, 500 mA. V_{GT} @ 25° C, 2.5 volts. T_J, −40° C to +125° C.

Type No.	V_{DRM} (V)	$V_{(BO)}$ (V)	I_{DRM} (mA) at 125° C	EACH 1-24	EACH 25-99
60AC40	400	500	10	42.00	30.00
60AC60	600	700	10	50.00	34.00
60AC80	800	900	10	72.00	50.00
60AC100	1000	1100	10	110.00	75.00

70 AMPS AVERAGE (110 AMPS RMS)

*150° C types.

Type No.	IR No.	Fig.	Case Type	V_{RRM} (V)	Max. Req'd. Gate Sig./25°C	EACH 1-24	EACH 25-99
2N1792	.....	E	TO-83	60	2.5 V @ 70 mA	24.00	18.50
2N1793	.....	E	TO-83	120	2.5 V @ 70 mA	28.00	21.50
2N1794	.....	E	TO-83	180	2.5 V @ 70 mA	33.00	25.40
2N1795	.....	E	TO-83	240	2.5 V @ 70 mA	38.00	29.20
2N1798	.....	E	TO-83	480	2.5 V @ 70 mA	66.00	51.00
2N1913	.....	F	TO-49	200	2.5 V @ 70 mA	31.50	24.20
2N1916	.....	F	TO-49	400	2.5 V @ 70 mA	53.00	38.50
2N2025	71RC10B*	F	TO-94	100	2.0 V @ 70 mA	28.50	21.70
2N2027	71RC20B*	F	TO-94	200	2.0 V @ 70 mA	37.00	27.40
2N2028	71RC25B*	F	TO-94	250	2.0 V @ 70 mA	43.50	30.70

Be Sure to Specify Dept. No., Manufacturer's Type No. and Name

Silicon Rectifiers and SCR's

INCLUDING HOCKEY-PUK 390-AMP TYPES

IOR

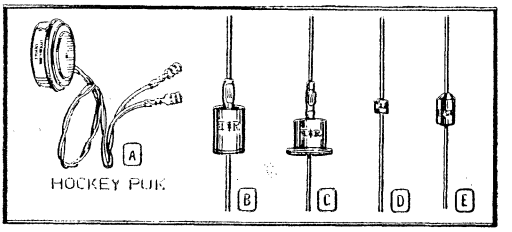
HOW TO ORDER

When ordering, specify Dept. No. 49 D 24, followed by Mfr's Type No. and Name.

Example: 49 D 24 115PA50 IR Designates International Rectifier Hockey-Puk Type 115PA50 Silicon Controlled Rectifier

EXPLANATION OF COLUMN HEADS

$I_{T(RMS)}$—max. rms on-state current. I^2T—max. for fusing. V_{RRM}—repetitive peak reverse voltage. $V_{(BO)}$—max. peak breakover voltage. I_{OM}—average rectified output current. I_{FM}—max. peak 1-cycle surge current. V_{FM}—peak forward voltage drop.



A HOCKEY-PUK EPITAXIAL SILICON CONTROLLED RECTIFIERS

International Rectifier Hockey-Puk silicon controlled rectifiers are designed to achieve high current handling capability, up to 390 amperes $I_{T(RMS)}$. Hockey-Puk is a pressure assembled device, designed to maximize the benefits of double-side cooling using air-cooled or liquid-cooled heat exchangers. Double-side cooling is accomplished by unique construction, with large area contacts for the anode and cathode connections, providing good heat transfer to the heat exchangers. The greater thermal efficiency achieved by this construction provides up to 60% more continuous current handling capability over comparable stud-mounted devices.

The pressure assembled construction eliminates all internal solder joints, preventing the thermal fatigue problem sometimes found in large area semiconductor devices. Hermetically sealed for use in heavy industrial applications.

Type No.	$I_{T(RMS)}$ (A)	I^2T (A^2 sec.)	V_{RRM} /$V_{(BO)}$ (V)	Max. Gate Signal at 25°C	EACH 1-24	EACH 25-99
115PA50	170	10,500	500	2.5 V @ 150 mA	90.00	66.00
115PA80	170	10,500	800	2.5 V @ 150 mA	156.00	120.00
115PA100	170	10,500	1000	2.5 V @ 150 mA	221.00	171.00
115PA120	170	10,500	1200	2.5 V @ 150 mA	290.00	236.00
175PA50	275	37,500	500	2.5 V @ 150 mA	122.00	110.00
175PA80	275	37,500	800	2.5 V @ 150 mA	206.00	175.00
175PA100	275	37,500	1000	2.5 V @ 150 mA	258.00	223.00
175PA120	275	37,500	1200	2.5 V @ 150 mA	325.00	275.00
250PA50	390	75,000	500	2.5 V @ 150 mA	152.00	137.00
250PA80	390	75,000	800	2.5 V @ 150 mA	258.00	220.00
250PA100	390	75,000	1000	2.5 V @ 150 mA	325.00	280.00
250PA120	390	75,000	1200	2.5 V @ 150 mA	409.00	345.00

B 0.75-1.3 AMP FLANGELESS SILICON RECTIFIERS

*Anode to case; all others cathode to case. Size: .220" dia. x .345" long; wire leads.

Type No.	IR No.	Max. PRV (V)	I_{OM} (Amps)	I_{FM} (Amps)	EACH 1-99	EACH 100-999
.....	10C1	100	1.3	40	.32	.29
.....	10C2	200	1.3	40	.35	.32
.....	10C3	300	1.3	40	.38	.35
.....	10C4	400	1.3	40	.42	.38
.....	10C6	600	1.3	40	.52	.46
.....	10C8	800	1.3	40	.75	.65
.....	10C10	1000	1.3	40	1.70	1.20
1N3639	.....	200*	0.75	40	.55	.36
1N3641	.....	600*	0.75	40	1.00	.65

C STANDARD TOP-HATS TO 1800 mA

Type No.	V_{RRM} (V)	I_{OM} (mA) @ 50° C	I_{OM} (mA) @ 100° C	I_{FM} (Amps)	EACH 1-99	EACH 100-999
10B1	100	1800	.....	40	.50	.37
10B2	200	1800	.....	40	.55	.40
10B3	300	1800	.....	40	.65	.51
10B4	400	1800	.....	40	.80	.64
10B5	500	1800	.....	40	.95	.75
10B6	600	1800	.....	40	1.10	.88
10B8	800	1800	.....	40	1.60	1.28
10B10	1000	1800	.....	40	2.05	1.64
SD-91	100	550	300	10	.53	.35
SD-91A	100	750	500	15	.59	.39
SD-92	200	550	300	10	.63	.42
SD-92A	200	750	500	15	.68	.46
SD-93	300	550	300	10	.73	.52
SD-93A	300	750	500	15	.86	.57
SD-94	400	550	300	10	.89	.60
SD-94A	400	750	500	15	.96	.64
SD-95	500	550	300	10	.99	.67
SD-95A	500	750	500	15	1.06	.71

C SILICON LOW-CURRENT CELLS (LEAD MOUNTED)

Type No.	PRV (V)	Max. I_{DC} @ T °C Amb.	I_{FM} (Amps)	Max. Oper. Temp.	EACH 1-99	EACH 100-999
1N560	800	600 mA @ 30° C	15	150° C	1.80	1.20
1N1694	300	600 mA @ 50° C	20	115° C	.56	.37
1N444B	500	650 mA @ 50° C	15	150° C	1.05	.70
1N445B	600	650 mA @ 50° C	15	150° C	1.42	.95
1N440B	100	750 mA @ 50° C	15	165° C	.66	.44
1N441B	200	750 mA @ 50° C	15	165° C	.69	.46
1N442B	300	750 mA @ 50° C	15	165° C	.79	.53
1N443B	400	750 mA @ 50° C	15	165° C	.97	.65
1N1487	100	750 mA @ 25° C	15	140° C	.49	.32
1N1488	200	750 mA @ 25° C	15	140° C	.52	.34
1N1489	300	750 mA @ 25° C	15	140° C	.59	.39
1N1490	400	750 mA @ 25° C	15	140° C	.67	.44
1N1491	500	750 mA @ 25° C	15	125° C	.75	.50
1N1492	600	750 mA @ 25° C	15	120° C	.95	.70
1N536	50	750 mA @ 50° C	15	165° C	.42	.29
1N538	200	750 mA @ 50° C	15	165° C	.52	.34
1N539	300	750 mA @ 50° C	15	165° C	.59	.39
1N540	400	750 mA @ 50° C	15	165° C	.67	.43
1N1095	500	675 mA @ 50° C	15	150° C	.76	.51
1N1096	600	640 mA @ 50° C	15	150° C	.96	.64
1N547	600	750 mA @ 50 °C	15	165° C	.95	.60

B SILICON LOW-CURRENT CELLS (FLANGELESS)

Type No.	PRV (V)	Max. I_{DC} @ 25° C Amb.	I_{FM} (Amps)	Max. Oper. Temp.	EACH 1-99	EACH 100-999
1N2610	100	850 mA	30	175° C	.55	.40
1N2611	200	850 mA	30	175° C	.62	.45
1N2612	300	850 mA	30	175° C	.70	.50
1N2613	400	850 mA	30	175° C	.79	.56
1N2614	500	850 mA	30	175° C	.89	.63
1N2615	600	850 mA	30	175° C	1.00	.70
1N3189	200	1 A @ 100° C	30	175° C	2.10	1.80
1N3190	400	1 A @ 100° C	30	175° C	3.00	2.45
1N3191	600	1 A @ 100° C	30	175° C	4.75	4.00

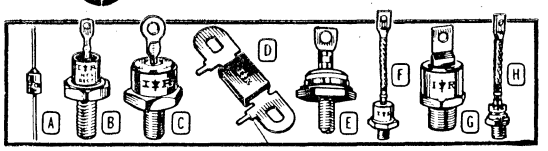
C LOW-CURRENT SILICON RECTIFIERS

Type No.	PRV (V)	I_{OM} @ T °C	Max. Oper. Temp.	EACH 1-99	EACH 100-999
1N1115	100	1.5 A @ 85° C case	170° C	1.04	.69
1N1116	200	1.5 A @ 85° C case	170° C	1.10	.75
1N1117	300	1.5 A @ 85° C case	170° C	1.40	.95
1N1118	400	1.5 A @ 85° C case	170° C	1.70	1.15
1N1119	500	1.3 A @ 85° C case	155° C	1.80	1.20
1N1120	600	1.3 A @ 85° C case	155° C	2.40	1.74
1N1124A	200	3.3 A @ 50° C amb.	150° C	2.20	1.45
1N1125	300	3.0 A @ 50° C amb.	150° C	2.75	1.82
1N1126A	400	3.3 A @ 50° C amb.	150° C	3.85	2.58

GENERAL-PURPOSE 1-AMP MOLDED SILICON RECTIFIERS

Type No.	IR No.	Fig.	V_{RRM} (V)	I_{OM} (mA)	V_{FM} (V) @ 25° C	EACH 1-99	EACH 100-999
1N2069	10D2	D	200	1000	.95	.32	.28
.....	10D3	D	300	1000	.95	.37	.32
1N2070	10D4	D	400	1000	.95	.41	.35
.....	10D5	D	500	1000	.95	.45	.38
1N2071	10D6	D	600	1000	.95	.50	.44
.....	10D8	D	800	1000	.95	.85	.75
.....	10D10	D	1000	1000	.95	1.20	1.02
.....	5A2	E	200	1000	.95	.32	.28
.....	5A4	E	400	1000	.95	.41	.35
.....	5A5	E	500	1000	.95	.45	.38
.....	5A6	E	600	1000	.95	.50	.44
.....	5A8	E	800	1000	.95	.85	.75
.....	5A10	E	1000	1000	.95	1.20	1.02

IOR Medium & High Power Silicon Rectifiers



HOW TO ORDER

Specify Dept. No. 49 D 24, followed by Mfr's Type No. and Name.
Example: 49 D 24 20A05-IR Designates IR Type 20A05.

C 35 AMP RECTIFIERS

Type No.	V_{RM} (V)	I^2t, A^2 sec.	I_{OM} (Amps) @ T °C	I_{FM} (Amps)	EACH 1-99	EACH 100-999
1N1183	50	1000	35A @ 140° C	500	1.95	1.30
1N1184	100	1000	35A @ 140° C	500	2.40	1.60
1N1185	150	1000	35A @ 140° C	500	2.90	1.96
1N1186	200	1000	35A @ 140° C	500	3.40	2.25
1N1187	300	1000	35A @ 140° C	500	4.70	3.10
1N1188	400	1000	35A @ 140° C	500	5.80	3.80
1N1189	500	1000	35A @ 140° C	500	6.40	4.20
1N1190	600	1000	35A @ 140° C	500	6.80	4.50
1N3765	700	1000	35A @ 140° C	500	8.55	5.70
1N3766	800	1000	35A @ 140° C	500	9.75	6.50
1N3768	1000	1000	35A @ 140° C	500	11.62	7.75

C 40 AMP RECTIFIERS

Type No.	V_{RM} (V)	I^2t, A^2 sec.	I_{OM} (Amps) @ T °C	I_{FM} (Amps)	EACH 1-99	EACH 100-999
40HF5	50	1000	40A @ 40° C	500	1.15	.80
40HF20	200	1000	40A @ 40° C	500	2.00	1.40
40HF30	300	1000	40A @ 40° C	500	2.55	1.85
40HF40	400	1000	40A @ 40° C	500	3.05	2.20
40HF50	500	1000	40A @ 40° C	500	3.85	2.80
40HF60	600	1000	40A @ 40° C	500	4.55	3.30
40HF70	700	1000	40A @ 40° C	500	5.75	4.10
40HF80	800	1000	40A @ 40° C	500	7.05	5.05
40HF90	900	1000	40A @ 40° C	500	8.20	6.10
40HF100	1000	1000	40A @ 40° C	500	9.90	7.20

E 70 AMP RECTIFIERS

Type No.	IR No.	V_{RM} (V)	I_{OM} (Amps) @ T °C	I_{FM} (Amps)	EACH 1-99	EACH 100-999
1N2128A	70H5A	50	70A @ 125° C	1200	3.35	2.56
1N2129A	70H10A	100	70A @ 125° C	1200	3.35	2.56
1N2130A	70H15A	150	70A @ 125° C	1200	4.12	3.07
1N2131A	70H20A	200	70A @ 125° C	1200	4.80	3.51
1N2132A	70H25A	250	70A @ 125° C	1200	5.40	3.88
1N2133A	70H30A	300	70A @ 125° C	1200	6.00	4.20
1N2134A	70H35A	350	70A @ 125° C	1200	6.00	4.20
1N2135A	70H40A	400	70A @ 125° C	1200	6.95	4.85
1N2136A	70H45A	450	70A @ 125° C	1200	6.95	4.85
1N2137A	70H50A	500	70A @ 125° C	1200	7.85	5.40
1N2138A	70H60A	600	70A @ 125° C	1200	8.70	5.85

F 100 AMP RECTIFIERS

Type No.	V_{RM} (V)	V_{RM} non-repet.	Max. I_{DM} Stud Single Phase Av.	I_{FM} (Amps)	EACH 1-24	EACH 25-99
1N3289	200	300	100A @ 130° C	1600	16.15	16.15
1N3290	300	400	100A @ 130° C	1600	19.85	19.85
1N3291	400	500	100A @ 130° C	1600	22.80	22.80
1N3292	500	600	100A @ 130° C	1600	25.50	25.50
1N3293	600	700	100A @ 130° C	1600	27.80	27.80
1N3294	800	1050	100A @ 130° C	1600	37.80	37.80
1N3295	1000	1300	100A @ 130° C	1600	57.50	57.50
1N3296	1200	1500	100A @ 130° C	1600	64.00	64.00

G 200 AMP RECTIFIERS

Type No.	V_{RM} (V)	I_{OM} (Amps) @ T °C	I_{FM} Amps	EACH 1-24	EACH 25-99
200UB5	50	200A @ 115° C	3500	6.30	5.70
200UB10	100	200A @ 115° C	3500	7.10	6.40
200UB20	200	200A @ 115° C	3500	11.60	10.50
200UB30	300	200A @ 115° C	3500	13.40	12.10
200UB40	400	200A @ 115° C	3500	15.30	13.80
200UB50	500	200A @ 115° C	3500	17.80	16.10

H 250 AMP RECTIFIERS

Type No.	V_{RM} (V)	V_{RM} non-repet.	Max. I_{OM} Stud Single Phase Av.	I_{FM} (Amps)	EACH 1-99	EACH 100-999
1N3739	400	525	250A @ 130° C	4500	26.60	22.60
1N3740	600	800	250A @ 130° C	4500	40.00	34.00
1N3741	800	1050	250A @ 130° C	4500	55.00	46.70
1N3742	1000	1300	250A @ 130° C	4500	66.00	56.00

A 2 AMP RECTIFIERS (MOLDED CASE)

Type No.	V_{RM} (V)	I_{OM} (mA)	I_R @ V_R (μA)	V_{FM} @ 25°C	EACH 1-99	EACH 100-999
20A05	50	2000	10	1.3	.45	.32
20A1	100	2000	10	1.3	.50	.35
20A2	200	2000	10	1.3	.55	.39
20A3	300	2000	10	1.3	.60	.43
20A4	400	2000	10	1.3	.70	.50
20A5	500	2000	10	1.3	.80	.56
20A6	600	2000	10	1.3	.90	.63
20A8	800	2000	10	1.3	1.30	.91
20A10	1000	2000	10	1.3	1.60	1.10

B 5 AMP RECTIFIERS

Type No.	V_{RM} (V)	V_{RM} non-repet.	I_{OM} (Amps) @ T °C	I_{FM} Max. Peak, 1 Cycle Surge	EACH 1-99	EACH 100-999
1N1612	50	100	5A @ 150° C	150 A	1.00	.71
1N1613	100	200	5A @ 150° C	150 A	1.15	.81
1N1614	200	350	5A @ 150° C	150 A	1.90	1.65
1N1615	400	600	5A @ 150° C	150 A	3.75	3.05
1N1616	600	800	5A @ 150° C	150 A	5.55	4.35

B 6 AMP RECTIFIERS

1N1341A	50	.....	6A @ 150° C	150 A	.95	.75
1N1342A	100	.....	6A @ 150° C	150 A	1.20	.85
1N1343A	150	.....	6A @ 150° C	150 A	1.55	1.00
1N1344A	200	.....	6A @ 150° C	150 A	2.05	1.40
1N1345A	300	.....	6A @ 150° C	150 A	2.85	2.00
1N1346A	400	.....	6A @ 150° C	150 A	3.75	2.60
1N1347A	500	.....	6A @ 150° C	150 A	4.60	3.10
1N1348A	600	.....	6A @ 150° C	150 A	5.40	3.65
1N3987	700	.....	6A @ 150° C	150 A	7.25	5.00
1N3988	800	.....	6A @ 150° C	150 A	8.25	5.60
1N3989	900	.....	6A @ 150° C	150 A	9.00	6.00
1N3990	1000	.....	6A @ 150° C	150 A	9.50	6.25

B 12 AMP RECTIFIERS

1N1199A	50	100	12A @ 150° C	240 A	1.20	.80
1N1200A	100	200	12A @ 150° C	240 A	1.35	.94
1N1201A	150	300	12A @ 150° C	240 A	1.75	1.20
1N1202A	200	350	12A @ 150° C	240 A	2.45	1.65
1N1203A	300	450	12A @ 150° C	240 A	3.45	2.30
1N1204A	400	600	12A @ 150° C	240 A	4.40	2.95
1N1205A	500	700	12A @ 150° C	240 A	5.25	3.50
1N1206A	600	800	12A @ 150° C	240 A	6.10	4.10
1N3670A	700	900	12A @ 150° C	240 A	7.80	5.25
1N3671A	800	1000	12A @ 150° C	240 A	8.70	5.85
1N3672A	900	1100	12A @ 150° C	240 A	9.40	6.30
1N3673A	1000	1200	12A @ 150° C	240 A	9.80	6.60

C 15 AMP RECTIFIERS

Type No.	V_{RM} (V)	V_{RM} non-repet.	I_{OM} @ T °C	I_{FM} (Amps)	EACH 1-99	EACH 100-999
1N3209	100	100	15A @ 150° C	250 A	1.25	.85
1N3209R	100	100	15A @ 150° C	250 A	1.25	.85
1N3210	200	200	15A @ 150° C	250 A	1.70	1.20
1N3211	300	300	15A @ 150° C	250 A	2.05	1.55
1N3212	400	400	15A @ 150° C	250 A	2.85	1.90
1N3213	500	500	15A @ 150° C	250 A	6.65	4.40
1N3214	600	600	15A @ 150° C	250 A	7.30	4.80

D 20 AMP PLASTIC RECTIFIERS

*20A @ 20° C when mounted on 3x3x1/16" aluminum heat sink on each tab in vertical plane.

21PT5	50	...	10A @ 50° C*	360 A	1.10	.82
21PT10	100	...	10A @ 50° C*	360 A	1.20	.90
21PT20	200	...	10A @ 50° C*	360 A	1.30	.98
21PT40	400	...	10A @ 50° C*	360 A	1.70	1.29
21PT60	600	...	10A @ 50° C*	360 A	2.25	1.70

E 25 AMP RECTIFIERS

1N2154	50	100	25A @ 110° C	400 A	3.53	3.53
1N2155	100	200	25A @ 110° C	400 A	4.65	4.65
1N2156	200	350	25A @ 110° C	400 A	6.68	6.00
1N2157	300	450	25A @ 110° C	400 A	9.00	9.00
1N2158	400	600	25A @ 110° C	400 A	10.65	10.65
1N2159	500	700	25A @ 110° C	400 A	14.85	14.85
1N2160	600	800	25A @ 110° C	400 A	19.58	19.58

Be Sure to Specify Dept. No., Manufacturer's Type No. and Name

Silicon Molded and Selenium Rectifiers

KLIP-SELS TRANSIENT VOLTAGE SUPPRESSORS (Not Illus.)

KSL series polarized. KZ and KSA series non-polarized for AC or DC circuits. *Protect rectifiers at indicated rating.

Type No.	Min. PRV (V)	Max. rms (V)	* Amps	EACH 1-99	EACH 100-999
KZ1DPF	67	26	0-16	.66	.49
KZ2DPF	133	52	0-16	.77	.57
KZ3DPF	198	78	0-16	.88	.65
KZ4DPF	265	104	0-16	.99	.73
KZ5DPF	333	130	0-16	1.10	.81
KZ6DPF	400	156	0-16	1.21	.89
KZ7DPF	462	182	0-16	1.32	.97
KZ8DPF	533	208	0-16	1.43	1.05
KZ9DPF	599	234	0-16	1.54	1.13
KZ10DPF	666	260	0-16	1.65	1.21
KSA1DAF	67	26	16-60	1.35	1.01
KSA2DAF	133	52	16-60	1.55	1.16
KSA3DAF	198	78	16-60	1.75	1.31
KSA4DAF	265	104	16-60	1.95	1.46
KSA5DAF	333	130	16-60	2.15	1.61
KSA6DBF	400	156	16-60	2.35	1.76
KSA7DBF	462	182	16-60	2.55	1.91
KSA8DBF	533	208	16-60	2.75	2.06
KSA9DBF	599	234	16-60	2.95	2.21
KSA10DBF	666	260	16-60	3.15	2.36
KSA11DBF	728	286	16-60	3.35	2.51
KSA12DBF	782	312	16-60	3.55	2.66
KSA14DBF	932	364	16-60	3.95	2.96
KSA16DBF	1050	416	16-60	4.35	3.26
KSA18DBF	1180	468	16-60	4.75	3.56
KSA19DBF	1230	494	16-60	4.95	3.71
KSA20DBF	1320	520	16-60	5.15	3.86
KSL2DAF	100	52	to 250	3.60	2.71
KSL5DAF	300	130	to 250	6.90	5.20
KSL10DBF	600	160	to 250	12.40	9.35
KSL19DBF	1200	494	to 250	22.30	16.82

HIGH-VOLTAGE MOLDED RECTIFIERS

Series-connected, avalanche rated diodes; encapsulated. Forward current, 0.25 amp.

Type No.	IR No. 67D-	Fig.	Max. PRV	EACH 1-24	EACH 25-99
IN1135	018H55FNN	H	1800	3.75	3.35
.....	020H53PNN	J	2000	5.50	4.95
IN1137	024H55FNN	H	2400	5.00	4.50
.....	030H53PNN	J	3000	6.00	5.40
IN1140	036H55FNN	H	3600	5.65	5.10
IN1142	048H55FNN	G	4800	8.35	7.50
.....	050H04TNN	G	5000	5.00	4.50
.....	050H55FNN	H	5000	8.70	7.85
.....	075H04TNN	G	7500	7.50	6.75
.....	100H04TNN	G	10000	10.00	9.00
.....	120H04TNN	G	12000	12.00	10.80
.....	150H04TNN	G	15000	15.50	13.50
.....	300H04TNN	G	30000	30.00	27.00

[K] HIGH-VOLTAGE SELENIUMS

Low current; 2 mA forward current.

IR No. US-	PRV (V)	Lgth.	EACH 1-9	EACH 10-99	EACH 100-999
16HFP	1000	1"	.82	.52	.48
24HFP	1500	1"	.92	.59	.54
48HFP	3000	1"	1.14	.73	.66
79HFP	5000	1½"	1.45	.94	.85
126HFP	8000	2¼"	1.78	1.14	1.05
158HFP	10000	2¾"	1.88	1.21	1.12
237HFP	15000	4⅛"	2.32	1.49	1.35
315HFP	20000	5⅜"	2.86	1.83	1.68
473HFP	30000	7⅞"	4.14	2.65	2.44

SILICON TUBE-REPLACING TYPES

Type No.	IR No.	Replaces Tube Types	EACH
IN2630	ST-1	6X4, 12X4	6.29
IN2631	ST-2	5AW4, 5AX4, 5AZ4, 5V3, 5U4, 5T4, 6004	5.50
IN2633	ST-3	6AX5, 6W5, 6X5, 6ZY5, 0Z4, 5839, 5852, 5X4	5.50
IN2637	ST-7A	866, 866A, 3B28, 249B	9.65
.....	ST-14C	5U4, 5T4, 5V4, 5W4, 5V3, 5Z4, 5AV4, 5AW4, 6004, 5AX4	4.20

HOW TO ORDER

When ordering, specify Dept. Number 49 D 24, followed by Mfr's Type No. and Name.

Example: 49 D 24 KZ1DPF-IR

Designates International Rectifier Type KZ1DPF Transient Voltage Suppressor.

[F] LOW-VOLTAGE STACKS

Miniature seleniums. All rated at 36 volts rms maximum, except Q4B, which is rated at 130 volts rms maximum. H in type number indicates single-plate half-wave; B indicates full-wave bridge rectifier.

Type No.	Max. DC mA	Size	EACH 1-99	EACH 100-999
AIH	100	1x1x7/16"	.43	.30
BIH	150	1 13/64x1 13/64x7/16"	.40	.28
CIH	250	1½x1½x7/16"	.42	.29
MIH	500	2x2x7/16"	.56	.34
QIB	100	4 3/64x4 3/64x7/16"	.41	.33
Q4B	100	4 3/64x4 3/64x1 5/16"	1.56	.94
AIB	180	1x1x¾"	1.22	.82
BIB	300	1 13/64x1 13/64x¾"	1.28	.86
CIB	600	1½x1½x¾"	1.46	1.00
MIB	1200	2x2x¾"	1.72	1.03

SELENIUM STACKS—POWER RECTIFIERS AND BATTERY-CHARGING TYPES

(Not Illus.)

Designed for widest possible industrial use. All are bridge-connected, except Types J14C1, J14C5, J14C8—have center-tapped common cathode; JD-4346B—center-tapped common anode. All battery-charger types are single plate for trickle chargers, except JD-4346B—a universal fast-charger replacement. *Rated 100 amps when fan-cooled at 800 cubic feet/minute. †Maximum. Battery charger-types: DC output V. 0-13. AC input V: 16.5/33 V. ‡Two units used as single phase bridge. §Three units used as three phase bridge.

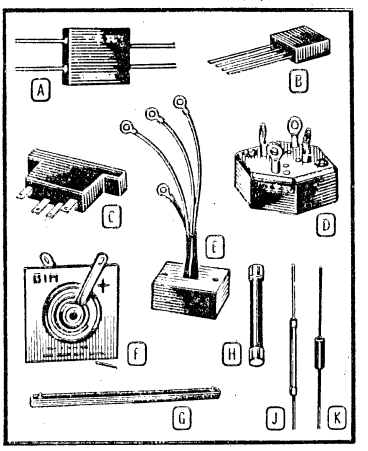
HIGH-DENSITY POWER RECTIFIERS

Type No.	†AC Input Volts	DC V	DC A	EACH 1-24	EACH 25-99
J14C1	36	14	1.5	1.50	1.25
J14C5	36	14	4.8	3.90	3.30
J14C8	36	14	8.4	5.30	4.50
J29B04	36	29	0.4	1.70	1.40
J29B1	36	29	1.5	2.40	2.10
J29B5	36	29	4.8	7.00	5.90
J29B8	36	29	8.4	10.25	8.25
J58B1	72	58	1.5	4.90	4.15
J58B5	72	58	4.8	13.90	11.80
J58B8	72	58	8.4	19.30	16.40
J116B04	144	116	0.4	6.00	5.15
J116B1	144	116	1.5	8.90	7.50
J116B5	144	116	4.8	26.40	22.40
J116B8	144	116	8.4	37.10	31.40
J135B04	180	135	0.4	7.70	6.20
J135B1	180	135	1.5	10.80	9.10
J135B5	180	135	4.8	32.70	27.50
J280D25‡	260	215	17	75.00	56.00
J280D25§	260	320	23	75.00	56.00

SELENIUM RECTIFIER STACKS BATTERY-CHARGING TYPES

(Not Illus.)

Type No.	DC Amps	Wt., Lbs.	EACH 1-9	EACH 10-99
JD-4346B	*30	3	19.03	16.10
JD-116K	2	2	1.75	1.49
JD-117K	2.7	2	2.34	2.00
JD-241K	6.0	2	3.35	3.04



MINIATURIZED ENCAPSULATED BRIDGE RECTIFIERS TO 1.8 AMPS

Single phase types. Max. rating listed. Apply safety factor when specifying.

[A] 0.65-AMP TRIPLERS

Type No.	Max. PRV (V)	Typ. rms (V)	EACH 1-99	EACH 100-999
6DP6A	600	.....	2.90	2.60
6DP10A	1000	.....	5.25	4.70

[A] 0.9-AMP DOUBLERS

9DD6A	600	423	2.30	2.05
9DD10A	1000	707	2.60	2.30

[B] 1-AMP BRIDGES

10DB1P	250	70	1.00	.75
10DB2P	350	140	1.10	.83
10DB4P	600	280	1.20	.90
10DB6P	800	420	1.49	1.11

[A] 1.8-AMP CENTER TAPS

18DC2A	200	70	2.10	1.85
18DC6A	600	210	2.30	2.05
18DC10A	1000	350	2.60	2.30
18DJ2A	200	70	2.10	1.85
18DJ6A	600	210	2.30	2.05
18DJ10A	1000	350	2.60	2.30

[A] 1.8-AMP BRIDGES

18DB2A	200	142	2.38	2.14
18DB6A	600	424	2.90	2.75
18DB10A	1000	707	5.12	4.95

[C] 5-AMP BRIDGES

50FB1L	100	70	2.75	2.05
50FB2L	200	140	3.20	2.46
50FB3L	300	210	3.60	2.70
50FB4L	400	280	4.20	3.15
50FB5L	500	350	4.70	3.50
50FB6L	600	420	5.20	3.90

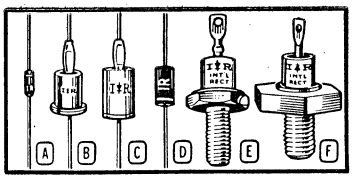
[D] 6-AMP BRIDGES

60FB5L	50	35	3.20	2.45
60FB1L	100	70	3.45	2.65
60FB2L	200	140	4.25	3.20
60FB3L	300	210	4.70	3.50
60FB4L	400	280	5.70	4.25
60FB6L	600	420	7.00	5.25

[E] 10-AMP BRIDGES

100PB5P	50	35	4.05	3.25
100PB1P	100	70	4.30	3.35
100PB2P	200	140	5.15	4.15
100PB3P	300	210	5.55	4.50
100PB4P	400	280	6.35	5.15
100PB6P	600	420	9.95	8.00

IR Silicon Zeners and Reference Elements



HOW TO ORDER

When ordering merchandise, specify Dept. No. 49 D 24, followed by Manufacturer's Type Number and name. For example: 49 D 24 IN3496-IR designates IR type IN3496

[A] REFERENCE ELEMENTS

Type No.	V_Z	Temp. Coeff. (%/°C)	EACH 1-99	EACH 100-999
IN3496	5.9 -6.5	0.005	3.70	2.50
IN3497	5.9 -6.5	0.002	5.75	4.50
IN3498	5.9 -6.5	0.001	9.00	7.00
IN3499	5.9 -6.5	0.0005	19.00	15.50
IN821	5.9 -6.5	0.01	2.30	1.85
IN823	5.9 -6.5	0.005	3.05	2.45
IN825	5.9 -6.5	0.002	4.60	3.70
IN827	5.9 -6.5	0.001	8.75	7.50
IN829	5.9 -6.5	0.0005	11.25	10.10
IN826	6.2 -6.9	0.002	6.60	5.25
IN828	6.2 -6.9	0.001	11.04	9.00
IN3779	6.3 -6.7	0.015	4.50	3.75
IN3780	6.3 -6.7	0.01	8.25	6.90
IN3781	6.3 -6.7	0.005	10.90	9.10
IN3782	6.3 -6.7	0.002	16.80	14.10
IN3783	6.3 -6.7	0.001	24.50	20.50
IN3154	8.0 -8.8	0.01	2.20	1.75
IN3155	8.0 -8.8	0.005	2.95	2.35
IN3156	8.0 -8.8	0.002	5.20	4.15
IN3157	8.0 -8.8	0.001	6.50	5.20
IN935	8.55-9.45	0.01	1.60	1.45
IN936	8.55-9.45	0.005	1.90	1.70
IN937	8.55-9.45	0.002	3.70	3.30
IN938	8.55-9.45	0.001	4.80	4.30
IN939	8.55-9.45	0.0005	12.40	11.15

[A] 250-mW GLASS ZENER DIODES

Add suffix "A" to indicate 5% tolerance. No suffix indicates 10% tolerance.

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	PRICES
IN702	2.6	5	60	
IN703	3.4	5	55	No Suffix, 10% Tolerance
IN704	4.1	5	45	
IN705	4.8	5	35	Quantity / EA.
IN706	5.8	5	20	1-99 / 1.00
IN707	8.0	5	10	100-999 / .80
IN708	5.6	25	3.6	
IN709	6.2	25	4.1	
IN710	6.8	25	4.7	
IN711	7.5	25	5.3	
IN712	8.2	25	6	"A" Suffix, 5% Tolerance
IN713	9.1	12	7	
IN714	10.0	12	8	
IN715	11.0	12	9	Quantity / EA.
IN718	15.0	12	13	1-99 / 1.00
IN721	20.0	4	20	100-999 / .85
IN722	22.0	4	24	
IN723	24.0	4	28	

[A] 400-mW GLASS ZENER DIODES

Add suffix to Type to indicate tolerance. "A" Suffix, 5%. No Suffix, 10%.

Type No.	V_Z	I_{ZT} (mA)	Z_{ZT} (ohms)	PRICES
IN746	3.3	20	28	No Suffix, 10% Tolerance
IN747	3.6	20	24	
IN748	3.9	20	23	
IN749	4.3	20	22	Quantity / EA.
IN750	4.7	20	19	1-99 / 1.00
IN751	5.1	20	17	100-999 / .08
IN752	5.6	20	11	
IN753	6.2	20	7	
IN754	6.8	20	5	"A" Suffix, 5% Tolerance
IN755	7.5	20	6	
IN756	8.2	20	8	Quantity / EA.
IN757	9.1	20	10	1-99 / 1.00
IN758	10.0	20	17	100-999 / .85
IN759	12.0	20	30	

400-mW GLASS ZENER DIODES

Type No.	V_Z @ I_{ZT}	I_{ZT} (mA)	Z_{ZT}@ I_{ZT}	EACH 1-99	EACH 100-999
IN4370	2.4	20	30	1.00	.80
IN4371	2.7	20	30	1.00	.80
IN4372	3.0	20	29	1.00	.80

GLASS ZENER DIODES

Add suffix "A" to type no. for 10% tolerance; suffix "B" for 5% tolerance.

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	PRICES
IN957	6.8	18.5	4.5	
IN958	7.5	16.5	5.5	
IN959	8.2	15.0	6.5	
IN960	9.1	14.0	7.5	
IN961	10	12.5	8.5	"A" Suffix, 10% Tolerance
IN962	11	11.5	9.5	
IN963	12	10.5	11.5	1-99 / 1.00
IN964	13	9.5	13	100-999 / .80
IN965	15	8.5	16	
IN966	16	7.8	17	"B" Suffix, 5% Tolerance
IN967	18	7.0	21	
IN968	20	6.2	25	1-99 / 1.00
IN969	22	5.6	29	100-999 / .85
IN970	24	5.2	33	
IN971	27	4.6	41	
IN972	30	4.2	49	
IN973	33	3.8	58	

[B] ¾-WATT AXIAL-LEAD TOP HATS

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	PRICES
IN1507	3.9	35	15	
IN1508	4.7	30	13	
IN1509	5.6	26	11	
IN1510	6.8	22	3	
IN1511	8.2	18	3	No Suffix, 10% Tolerance
IN1512	10	15	3.2	
IN1513	12	12	12	1-99 / 2.75
IN1514	15	10	10.5	100-999 / 2.10
IN1515	18	8	16	
IN1516	22	6	40	
IN1517	27	5	82	

[B] 1-WATT AXIAL-LEAD TOP HATS

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	EACH 1-99	EACH 100-999
IN1518	3.9	50	10	2.70	2.20
IN1519	4.7	40	8.5	2.70	2.20
IN1519A	4.7	40	8.5	3.50	2.75
IN1520	5.6	35	5.5		
IN1521	6.8	30	1.6		
IN1522	8.2	25	1.1		
IN1523	10	20	1.5		
IN1524	12	15	2.4	1-99 / 2.70	
IN1525	15	13	5.4	100-999 / 2.20	
IN1526	18	10	11		
IN1527	22	9	18		
IN1528	27	7	28		

[C] 1-WATT AXIAL-LEAD FLANGELESS

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	PRICES
IN3016	6.8	37	3.5	
IN3017	7.5	34	4.0	
IN3018	8.2	31	4.5	
IN3019	9.1	28	5.0	
IN3020	10	25	7	"A" Suffix, 10% Tolerance
IN3022	12	21	9	
IN3023	13	19	10	1-99 / 2.76
IN3024	15	17	14	100-999 / 2.15
IN3026	18	14	20	
IN3027	20	12.5	22	
IN3028	22	11.5	23	
IN3029	24	10.5	25	
IN3030	27	9.5	35	
IN3031	30	8.5	40	
IN3032	33	7.5	45	
IN3035	43	6.0	70	
IN3036	47	5.5	80	"B" Suffix, 5% Tolerance
IN3037	51	5.0	95	
IN3040	68	3.7	150	1-99 / 3.20
IN3041	75	3.3	175	100-999 / 2.25
IN3044	100	2.5	350	
IN3045	110	2.3	450	
IN3047	130	1.9	700	
IN3051	200	1.2	1500	

[D] 1-WATT EPOXY ZENER DIODES

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	EACH 1-99	EACH 100-999
IN4728	3.3	76	10		
IN4729	3.6	69	10		
IN4730	3.9	64	9		
IN4731	4.3	58	9		
IN4732	4.7	53	8		
IN4733	5.1	49	7		
IN4734	5.6	45	5		
IN4735	6.2	41	2		
IN4736	6.8	37	3.5		
IN4737	7.5	34	4.0		
IN4738	8.2	31	4.5		
IN4739	9.1	28	5.0		
IN4740	10	25	7		
IN4741	11	23	8	No Suffix, 10% Tolerance	
IN4742	12	21	9	1.25	.93
IN4743	13	19	10		
IN4744	15	17	14	"A" Suffix, 5% Tolerance	
IN4745	16	15.5	16		
IN4746	118	14	20	1.90	1.40
IN4747	20	12.5	22		
IN4748	22	11.5	23		
IN4749	24	10.5	25		
IN4750	27	9.4	35		
IN4751	30	8.5	40		
IN4752	33	7.5	45		
IN4753	36	7.0	50		
IN4754	39	6.5	60		
IN4755	43	6.0	70		
IN4756	47	5.5	80		
IN4757	51	5.0	95		
IN4758	56	4.5	110		
IN4759	62	4.0	125		
IN4760	68	3.7	150		
IN4761	75	3.3	175		
IN4762	82	3.0	200		
IN4763	91	2.8	250		
IN4764	100	2.5	350		

[C] 1-WATT AXIAL LEAD FLANGELESS

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	EACH 1-99	EACH 100-999
IN1765	5.6	100	1.2	2.55	2.05
IN1766	6.2	100	1.5	2.55	2.05
IN1767	6.8	100	1.7	2.55	2.05
IN1768	7.5	100	2.1	2.55	2.05
IN1769	8.2	100	2.4	2.55	2.05
IN1770	9.1	50	3.0	2.55	2.05
IN1771	10	50	3.5	2.55	2.05
IN1772	11	50	4.2	2.55	2.05
IN1773	12	50	5.0	2.55	2.05
IN1774	13	50	5.8	2.55	2.05
IN1775	15	50	7.6	2.55	2.05
IN1776	16	50	8.6	2.55	2.05
IN3821	3.3	76	400	No suffix, 10% Tolerance	
IN3822	3.6	69	400	2.00	1.60
IN3823	3.9	64	400		
IN3824	4.3	58	400	"A" Suffix, 5% Tolerance	
IN3825	4.7	53	500	2.50	2.00
IN3826	5.1	49	550		
IN3827	5.6	45	600		
IN3828	6.2	41	700		
IN3829	6.8	37	500		

[E] 10-WATT STUD-MOUNTED

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	EACH 1-99	EACH 100-999
IN1599	3.9	500	1.5	5.95	4.75
IN1600	4.7	400	0.9	5.95	4.75
IN1600A	4.7	400	0.9	8.00	6.40
IN1601	5.6	350	0.6	No Suffix, 10% Tolerance	
IN1602	6.8	300	0.4	5.95	4.75
IN1604	10	200	1.0		
IN1605	12	170	2.0		
IN1606	15	140	2.9	"A" Suffix, 5% Tolerance	
IN1608	22	90	6	8.00	6.40
IN1609	27	70	10		

[F] 50-WATT STUD-MOUNTED

All listed have 10% tolerance. *PRV.

Type No.	V_Z (V)	I_{ZT} (mA)	Z_{ZT} (ohms)	EACH 1-99	EACH 100-999
IN3305	6.8*	1850	0.2	4.75	4.15
IN3309	10*	1200	0.6	4.75	4.15
IN3311	12*	1000	1	4.75	4.15
IN3313	14*	890	1.2	4.75	4.15
IN3314	15*	830	1.4	4.75	4.15
IN3321	24*	520	2.6	4.75	4.15
IN3323	27*	460	2.8	4.75	4.15
IN3324	30*	420	3.0	4.75	4.15
IN3325	33*	380	3.2	4.75	4.15
IN3340	120	120	20	4.75	4.15

Be Sure to Specify Dept. No., Manufacturer's Type No. and Name

Texas Instruments Semiconductors

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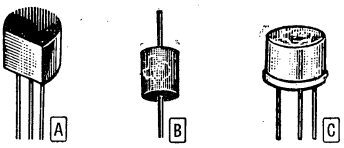
When ordering, please specify Department Number 49 D 32, followed by the Manufacturer's Type Number and Name.

For Example: 49 D 32 2N3707-TI

Designates Texas Instruments Type 2N3707



A SILICON NPN PLANAR AMPLIFIER TRANSISTORS

Plastic-encapsulated transistors withstand soldering temperatures without deformation. Stable under high humidity, capable of meeting MIL-STD-202C Method 160B. Insensitive to light. 2N4254 and 2N4255 are for FM, IF and RF amplifiers. 0.2x0.2″ body. 3 inline leads, spaced 0.05″. Pt at 25°C free air. †Epitaxial planar. *Nanoamps; others are in microamperes.

Type No.	P_t mW	I_c mA	BV_{CBO} V	I_{CBO} μA	h_{FE} @ I_c Min	Max	mA	f_T MHz	EACH 1-99	100-999
2N3707	250	30	30	0.5	100	400	.1	....	.34	.29
2N3708	250	30	30	0.5	45	600	1	....	.27	.24
2N3709	250	30	30	100*	45	165	1	....	.29	.25
2N3710	250	30	30	0.5	90	330	1	....	.30	.27
2N3711	250	30	30	0.5	180	660	1	....	.32	.28
2N3826	250	30	60	.....	40	160	10	200	.54	.36
2N3827	250	30	60	.....	100	400	10	200	.58	.39
2N4254†	200	50	30	10	50	....	2	700	.90	.60
2N4255†	200	50	30	10	30	150	2	700	.85	.57
TI408	200	12	30	100*	20	....	4	500	.57	.38
TI409	200	12	30	100*	20	....	4	500	.54	.36

A SILICON TRANSISTORS AS ABOVE BUT PNP

Type No.	P_t mW	I_c mA	BV_{CBO} V	I_{CBO} μA	h_{FE} @ I_c Min	max	mA	f_T MHz	EACH 1-99	100-999
2N4058	250	30	−30	−100*	100	400	100μA	....	.35	.31
2N4059	250	30	−30	−100*	45	660	1	....	.29	.25
2N4060	250	30	−30	−100*	45	165	1	....	.30	.27
2N4061	250	30	−30	−100*	90	330	1	....	.32	.28
2N4062	250	30	−30	−100*	180	660	1	....	.34	.29
TIS37	200	32	−35	−100*	45	....	−1	80	.38	.34
TIS38	200	32	−35	−100*	25	....	−1	50	.35	.31

A SILICON NPN PLANAR GENERAL-PURPOSE TRANSISTORS

Plastic-encapsulated. Withstand soldering temperatures without deformation. Stable under high humidity, can meet MIL STD 202C Method 160B. Insensitive to light. 0.2x0.2″ body. 3 inline leads spaced 0.05″. P_t, 250° C. free air. *Nanoamps.

Type No.	P_t mW	I_c mA	BV_{CBO} V	I_{CBO} μA	h_{FE} @ I_c Min	Max	mA	f_t MHz	EACH 1-99	100-999
2N3704	300	800	50	0.5	90	330	50	100	.34	.29
2N3705	300	800	50	0.5	45	165	50	100	.29	.25
2N3706	300	800	40	0.5	30	600	50	100	.27	.24
TIS60	300	400	40	*100	100	300	50	.....	.53	.34

SILICON EPITAXIAL PLANAR PNP TYPES. *Nanoamps.

2N3702	300	200	40	*100	60	300	50	100	.37	.32
2N3703	300	200	50	*100	30	150	50	100	.34	.29
TIS61	300	400	−40	*−100	160	300	50	.....	.57	.38

SILICON PLANAR UNIJUNCTION

- Reduces Component Count, Replaces 2 or More Transistors
- 155,000 Hours Operating Life Test, Withstands 60,000 G.
- Low Leakage, Ideal for Precision Timing Circuits

Plastic-encapsulated. For use in SCR triggering circuits, counters, timers, multivibrators, waveform generators, astable or bistable circuits. Characteristics: V_{OB1}, 3 V; η, 0.55 min., 0.80 max.; I_P, 5μA; I_V, 2 mA min; r_{bb}, 4000 ohms min., 9100 ohms max. Case, TO-92. Leakage; 10 nA max. at 25° C.

TIS43. 1-99.....Each .76 100-999.....Each .66

A SILICON PLANAR FIELD-EFFECT TRANSISTORS

Feature high input impedance, low noise and high radiation resistance. I_{GSS}—gate cutoff current. Y_{fs}—small signal common source forward transfer admittance. *N-channel type. †P-channel type.

Type No.	Case TO-	I_{GSS} μA	Y_{fs} Min.	(μS) Max	EACH 1-99	100-999
2N3819*	92	2	2000	6500	.56	.49
2N3820†	92	20	800	5000	.72	.63

B SILICON RECTIFIERS—ECONOMY EPOXY PACKAGE

Low-cost silicon rectifiers for a wide variety of uses.

Type No.	PIV (V)	I_O (mA)	I_{RP} (A)	Max. I_R (μA @ V)	EACH 1-99	100-999
1N2069	200	750	6	10 @ 200	.45	.29
1N2070	400	750	6	10 @ 400	.55	.33
1N2071	600	750	6	10 @ 600	.62	.42

C GERMANIUM BIDIRECTIONAL SMALL-SIGNAL NPN SWITCHING TRANSISTORS

TO-5 Case. All are alloy type. All have P_t=150 mW and I_c=300 mA. h_{FE} test conditions: for Types 2N594 and 2N596, V_{CE}=+0.2 V., I_c=+1 mA; for Types 2N1995 and 2N1996, V_{CE}=+1 V., I_c=+10 mA. Characteristics measured at 25°C free air temperature.

Type No.	BV_{CBO} (V)	I_{CBO} (μA)	h_{FE}	f_{hfb} MHz	EACH 1-99	100-999
2N594	20	5	20	1.5	2.75	1.83
2N595	20	5	35	3	4.25	2.83
2N596	20	5	50	5	5.65	3.77
2N1994	30	6	15	3	2.33	1.55
2N1995	25	6	25	5	3.75	2.50
2N1996	20	6	35	8	5.14	3.43

C GERMANIUM SMALL-SIGNAL GENERAL-PURPOSE SWITCHING AND AMPLIFIER TRANSISTORS

Power dissipation at 25°C free air temperature. Germanium alloy PNP transistors, except those with •NPN. +Positive voltage, others negative.

Type No.	P_t mW	BV_{CBO} V	I_c mA	I_{CBO} μA	@ V_{CB} V	h_{FE} Min.	f_{hfb} MHz	EACH 1-99	100-999
2N388A•	150	+40	200	5	+1	60	16	.88	.64
2N396	150	30	250	6	20	30	5	.61	.41
2N404	150	25	100	5	12	30	12	.42	.28
2N404A	150	40	150	5	12	30	12	.58	.39
2N428	150	30	400	4	1.5	60	10	1.23	.82
2N659	170	30	1000	6	12	25	10	1.30	.87
2N660	250	25	1000	1.5	25	40	15	1.48	.99
2N1302•	150	+25	300	6	+25	20	3	.42	.31
2N1303	150	30	300	6	25	20	3	.42	.30
2N1304•	150	+25	300	6	+25	40	5	.50	.36
2N1305	150	30	300	6	25	40	5	.48	.35
2N1306•	150	+25	300	6	+25	60	10	.62	.45
2N1307	150	30	300	6	25	60	10	.58	.42
2N1308•	150	+25	300	6	+25	80	15	.91	.66
2N1372	250	25	200	7	20	30	5.5	.81	.54
2N1373	250	45	200	7	20	30	5.5	1.20	.80
2N1374	250	25	200	7	20	50	7	1.02	.68
2N1375	250	45	200	7	20	50	7	1.38	.92
2N1376	250	25	200	7	20	75	10	1.29	.86
2N1377	250	45	200	7	20	75	10	1.50	1.00
2N1378	250	12	200	7	12	95	13	1.29	.86
2N1379	250	25	200	7	20	95	13	1.44	.96
2N1380	250	12	200	14	12	30	7	.66	.44
2N1381	250	25	200	14	20	30	7	.72	.48
2N1404	150	25	300	5	15	.....	4	.58	.39
2N1605•	150	+25	100	5	+12	40	12	.62	.45
2N1997	250	45	500	6	15	40	4	1.77	1.18
2N1999	250	30	500	6	15	75	12	2.07	1.38
2N2000	300	50	1000	10	30	50	.....	2.50	1.67
2N2001	300	30	1000	6	15	60	.....	2.17	1.45

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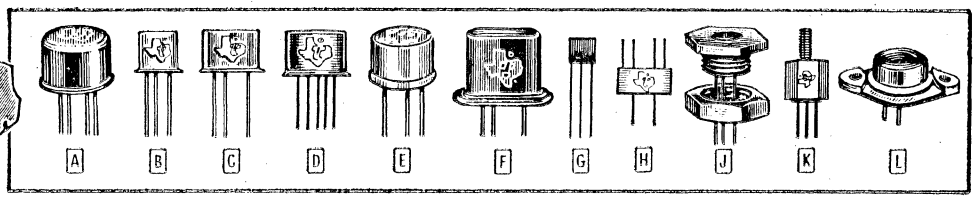
See Following Pages for Explanations of Column Headings and Symbols

Texas Instruments Transistors



SILICON SMALL-SIGNAL HIGH-FREQUENCY NPN AMPLIFIERS

NPN types for VHF and UHF oscillator and amplifier applications. *h_{fb}—common-base alpha cutoff freq., MHz. †BV_{CBO}. See following page for explanation of column heads.

Type No.	Fig.	S	† V	f_T MHz	I_c mA	P_t W	C_{OB} pF	EACH 1-99	EACH 100-999
2N760	B	M	45	*50	100	1.2	8	1.80	1.20
2N916	B	EP	45	300	.....	1.2	6	3.65	2.90
2N917	B	EP	30	500	0.1 μA	3.00	1.7	2.48	1.65
2N918	B	EP	30	600	50	.3	3	3.30	2.20
2N2883	C	EP	40	400	300	1.75	10	30.00	20.00
2N2884	C	EP	40	400	300	1.75	10	39.00	26.00
2N3572	B	EP	25	1000	50	.35	.85	5.90	3.95
2N4252	C	EP	30	600	50	.2	.1	1.85	1.23

SILICON SMALL SIGNAL HIGH-SPEED SWITCHING TRANSISTORS

Figures: TO-18, B; TO-5, C. TO-52 case similar to Fig. E. •NPN, others PNP.

Type No.	Case TO-	S	BV_{CBO} V	I_c mA	P_t W	h_{FE} Min	h_{FE} Max	f_T MHz	EACH 1-99	EACH 100-999
2N706A	18	•EP	25	.....	1	20	60	200	1.19	.79
2N709	18	•EP	15	.....	.5	20	120	600	2.48	1.65
2N726	18	EP	25	50	1	15	45	140	3.00	2.00
2N727	18	EP	25	50	1	30	120	140	3.15	2.10
2N743	18	•EP	20	200	1	20	60	300	1.95	1.30
2N744	18	•EP	20	200	1	40	120	300	1.90	1.25
2N753	18	•EP	25	.....	1	40	120	200	.72	.48
2N914	18	•EP	40	500	1.2	30	120	300	.95	.63
2N2368	18	•EP	40	500	1.2	20	60	400	1.07	.93
2N2411	18	EP	18	100	1	20	60	140	3.15	2.10
2N2412	18	EP	25	100	1	40	120	140	6.00	4.00
2N2894	18	EP	12	200	1.2	40	150	400	1.95	1.30
2N3012	18	EP	12	200	1.2	30	120	400	1.95	1.30
2N3013	18	•EP	40	500	1.2	30	120	350	7.00	4.69
2N3014	18	•EP	40	500	1.2	30	120	350	3.60	2.40
2N3015	5	•EP	60	500	3	30	120	250	3.50	2.00
2N3576	18	EP	20	200	1.2	40	120	400	9.40	6.25
2N3829	52	EP	35	500	1.2	30	120	350	6.00	4.00
2N3832	18	•EP	15	35	.2	25	125	800	7.50	5.00

GERMANIUM SMALL-SIGNAL HIGH-FREQUENCY AMPLIFIERS

Dissipation specifications are given at 25° C free-air temperature. All are PNP types. ‡h_{fab}. Fig. B is case TO-58; C is case TO-39; D is case TO-72.

Type No.	Fig.	S	P_t mW	I_c mA	BV_{CBO} V	h_{FE} @ I_C Min	h_{FE} Max	h_{FE} mA	f_T MHz	EACH 1-99	EACH 100-999
2N1142	C	EM	300	100	30	10	.....	10	‡600	4.05	2.70
2N1143	C	EM	300	100	25	10	.....	10	‡480	3.34	2.22
2N2188	B	AD	125	...	40	40	160	1.5	60	1.28	.85
2N2189	B	AD	125	11	40	60	180	1.5	102	1.64	1.09
2N2190	B	AD	125	...	60	40	160	1.5	60	1.47	.98
2N2191	B	AD	125	...	60	60	180	1.5	102	1.85	1.23
2N2996	D	EM	75	50	15	25	500	4	400	1.43	.95
2N2997	D	EM	75	50	30	40	500	4	400	3.08	2.05

[E] HIGH-VOLTAGE GERMANIUM SWITCHING TRANSISTORS

Germanium alloy transistors for direct control of neon indicators. Have TO-5 cases.

Type No.	S	P_t mW	I_c mA	BV_{CBO} V	h_{FE} @ I_c Min	h_{FE} @ I_c mA	f_{hfb} MHz	EACH 1-99	EACH 100-999
2N398	PNP	50	100	105	20	5	.8	.90	.60
2N398A	PNP	150	200	105	20	5	.8	.98	.65

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For Example: 49 D 32 2N760
Designates Texas Instruments Type 2N760

SILICON PLANAR FIELD-EFFECT TRANSISTORS

Feature high input impedance, low noise and high radiation resistance. I_{GSS}—gate cutoff current. Y_{fs}—small sig. common-source fwd transfer admittance. *N-channel type; †P-channel; TO-18 is Fig. A, TO-5 is Fig. C.

Type No.	Case TO-	I_{GSS} μA	Y_{fs} (μS) Min	Y_{fs} (μS) Max	NF dB	EACH 1-99	EACH 100-999
2N2386	5	.01	1000	.....	.....	2.70	1.80
2N2498	5	.01	1500	3000	3	3.70	2.45
2N2499†	18	.01	2000	4000	4	3.60	2.40
2N2500	5	.01	1000	2200	1	5.25	3.50
2N3329	18	.01	1000	2000	3	3.80	2.55
2N3331	18	.01	2000	4000	4	3.65	2.45
2N3573	5	0.6 nA	100	300	3	21.75	14.50
2N3574	5	0.6 nA	200	600	3	17.25	11.50
2N3575	5	0.6 nA	300	900	3	18.60	12.50
2N3823*	18	.1 nA	3500	6500	.....	2.48	1.65
2N3909†	18	.5 nA	1000	5000	.....	2.00	1.35

[E] UNIJUNCTION SILICON TRANSISTOR

For pulse timing circuits, relaxation oscillators, medium power switches. Maximum ratings of the units listed in the table below are as follows: peak emitter current, 2 amperes; rms, 50 milliamps. All are grown junction types with power dissipation from 450 to 600 milliwatts. PNP types, except • NPN.

Type No.	S	V_{BB} V	P_t mW	η Min.	η Max.	EACH 1-99	EACH 100-999
2N489	•GJ	65	600	.51	.62	7.10	4.75
2N491	•GJ	65	600	.56	.68	8.40	5.60
2N492	•GJ	65	600	.56	.68	9.80	6.55
2N493	•GJ	65	600	.62	.75	10.75	7.20
2N494	•GJ	65	600	.62	.75	10.90	7.30
2N1671	•GJ	35	450	.47	.62	2.95	1.98
2N1671A	•GJ	35	450	.47	.62	3.20	2.14
2N1671B	•GJ	35	450	.47	.62	3.55	2.36
2N489A	GJ	65	600	.51	.62	7.65	5.10
2N489B	GJ	65	600	.51	.62	9.15	6.10
2N490A	GJ	65	600	.51	.62	8.35	5.55
2N490B	GJ	65	600	.51	.62	9.85	6.55
2N491A	GJ	65	600	.56	.68	8.90	5.95
2N491B	GJ	65	600	.56	.68	10.40	6.95
2N492A	GJ	65	600	.56	.68	10.40	6.95
2N492B	GJ	65	600	.56	.68	11.90	7.95
2N494B	GJ	65	600	.62	.75	12.90	8.60
2N494C	GJ	65	.....	.62	.75	14.95	9.90
2N2160	GJ	35	450	.47	.80	1.49	.99

SILICON PNP ALLOY TRANSISTOR

Type No.	Fig.	S	P_t mW	BV_{CEO} V	h_{FE} Min.	h_{FE} Max.	EACH 1-99	EACH 100-999
2N329A	E	EP	675	30	36	88	4.50	3.00

LOW-LEVEL LOW-NOISE SILICON SWITCHING AND AMPLIFIER TRANSISTORS

*In Table indicates TO-46 case. P-W in table below is given at 25° case temperature, except ‡free-air temperature. •NPN types, others PNP.

Type No.	Fig.	S	P_t W	BV_{CBO} V	h_{FE} @ I_c Min	h_{FE} Max	I_c μA	f_T MHz	EACH 1-99	EACH 100-999
2N929	B	•P	0.6	45	40	120	10	60	2.25	1.50
2N1247	C	•P	0.6	60	25	150	5	.....	13.50	9.00
2N2484	B	•P	1.2	60	100	500	10	60	3.30	2.20
2N2586	C	•P	0.6	60	80	...	1	45	6.00	4.00
2N2604	*	EP	‡0.4	60	40	120	10	30	3.50	2.30
2N2605	*	EP	‡0.4	60	100	300	10	30	4.00	2.70
2N2862	B	EP	1	25	12	120	10	45	6.00	4.00

Specify Dept. No., Manufacturer's Type No. and Name on Semiconductor Orders

EXPLANATION OF COLUMN HEADINGS USED ON PAGES 96 AND 97

BV_{CBO}, breakdown voltage, collector-to-base, emitter open. C_{ob}, output capacitance. f_t, frequency at which h_{FE} becomes unity. h_{FE}, small-signal fwd. transfer ratio. I_{GSS}, gate cutoff current. I_c, collector current. P_t, dissipation at 25° C case temp. Y_{fs}, small signal fwd. transfer admittance, common source. Structure: •NPN, others PNP. Structures: EM, epitaxial mesa; EP, epitaxial planar; GJ, grown junction; M, mesa; P, planar.

HOW TO ORDER

When ordering, specify Department No. 49 D 32, followed by the Manufacturer's Type No. and Name. For Example:
49 D 32 2N118A-TI Designates Texas Instruments Type 2N118A.

NPN SILICON SMALL SIGNAL GENERAL-PURPOSE TRANSISTORS

Dissipation at 25°C case temp., except *25° C free-air temperature. †h_{fb} at I_E. §h_{fe} at I_E. ‡f_{ab}. #BV_{CEO}. Figs. on preceding page. 2N339 has TO-11 case, other Fig. C are TO-5.

Type No.	Fig.	S	P_t mW	I_c mA	BV_{CBO} V	h_{FE} @ I_c Min	Max	mA	f_t MHz	EACH 1-99	100-999
2N118A	F	•GJ	*150	25	45	18	40	.....	‡7	8.15	5.45
2N119	F	•GJ	*150	25	45	36	86	.....	‡6	11.05	7.35
2N244	F	•GJ	750	60	60	†0.96	0.99	5	....	16.36	12.24
2N332	C	•GJ	*150	25	45	9	20	.....	‡6	4.65	3.10
2N333	C	•GJ	*150	25	45	18	40	.....	....	4.65	3.10
2N333A	C	•GJ	*500	25	45	18	40	.....	....	4.90	3.30
2N334	C	•GJ	*150	25	45	18	90	.....	‡8	4.65	3.10
2N335	C	•GJ	*150	25	45	36	90	.....	‡11	4.90	3.30
2N335A	C	•GJ	*500	25	45	36	90	.....	‡11	5.20	3.50
2N336	C	•GJ	*150	25	45	76	333	.....	‡13	5.95	3.95
2N336A	C	•GJ	*500	25	45	76	333	.....	‡13	6.25	4.20
2N337	C	•GJ	*125	20	45	20	55	10	‡20	4.85	3.20
2N338	C	•GJ	*125	20	45	45	150	10	‡30	5.50	3.65
2N339	C	•GJ	1W	60	55	†.9	.99	5	....	8.12	6.08
2N341	C	•GJ	1W	60	125	†.9	.99	5	....	14.00	10.49
2N342A	C	•GJ	1W	60	85	†.9	.97	5	....	9.52	7.16
2N343	C	•GJ	1W	60	60	†.97	.99	5	....	14.72	11.03
2N542	C	•GJ	*200	25	30	80	200	5	....	6.20	4.10
2N543	C	•GJ	*200	25	45	80	200	5	....	7.95	5.30
2N696	C	•P	2W	....	60	20	60	150	40	.52	.46
2N697	C	•P	2W	....	60	40	120	150	50	.52	.46
2N698	C	•P	2W	....	120	20	60	150	40	1.57	1.05
2N717	B	•P	1.8W	....	60	20	60	150	40	.99	.66
2N718	B	•P	1.8W	....	60	40	120	150	50	.46	.40
2N718A	B	•P	1.8W	....	75	40	120	150	60	.78	.68
2N720	B	•P	1.8W	....	120	40	120	150	50	1.32	.88
2N730	B	•P	1.5W	....	60	20	60	150	40	.99	.66
2N731	B	•P	1.5W	....	60	40	120	150	50	1.30	.86
2N735	B	•M	1W	50	80	§40	100	5	60	2.50	1.65
2N736	B	•M	1W	50	80	§80	200	5	40	2.50	1.65
2N870	B	•P	1.8W	....	100	40	120	150	50	5.25	3.50
2N871	B	•P	1.8W	....	100	100	300	150	60	5.25	3.20
2N1277	C	•GJ	*150	25	40	§18	44	1	‡30	4.25	2.84
2N1278	C	•GJ	*150	25	40	§37	90	1	‡30	4.75	3.15
2N1507	C	•P	2W	....	60	100	200	150	50	1.20	.80
2N1564	C	•M	1.2W	50	80	§20	50	5	60	2.50	1.65
2N1565	C	•M	1.2W	50	80	§40	100	5	60	2.50	1.65
2N1566A	C	•M	1.2W	100	80	§80	200	5	100	2.50	1.65
2N1973	C	•P	3W	....	100	§80	200	5	60	2.37	1.58
2N1974	C	•P	3W	....	100	§40	100	5	50	2.37	1.58
2N1975	C	•P	3W	....	100	§20	50	5	50	5.30	4.00
2N2217	C	•EP	3W	800	#30	20	60	150	250	3.02	2.01
2N2220	B	•EP	1.8W	800	#30	20	60	150	250	3.02	2.01
2N2222	B	•EP	1.8W	800	#30	100	300	150	250	1.05	.70
2N2243	C	•EP	2.8W	1A	#80	40	120	150	50	4.80	3.20
2N2396	A	•E	450	300	60	40	120	150	....	11.55	7.70
2N3036	C	•EP	5W	1.2A	120	50	150	150	50	5.50	3.70
2N3712	C	•P	5W	200	150	30	105	30	40	3.00	2.00

GERMANIUM SMALL-SIGNAL HIGH-SPEED SWITCHING TRANSISTORS

Type No.	Fig.	S	P_t (mW)	BV_{CBO} (V)	I_C (mA)	I_{CBO} @ V_{CB} (μA@V)		h_{FE} Min.	f_T MHz	EACH 1-99	100-999
2N711	B	M	150	12	100	3	5	20	300	.89	.59
2N711B	B	M	150	18		1.5	10	30	300	.94	.63
2N797	B	•M	150	20	150	1	10	40	1000	4.27	2.85
2N964	B	EM	150	15	150	3	6	40	300	.99	.66
2N967	B	EM	150	12	150	5	6	40	250	.87	.58

SILICON DUAL FIELD-EFFECT TRANSISTORS

*Indicates N-channel type. Case TO-5 is Fig. C, TO-18, Fig. A. nA, nanoamperes.

Type No.	Case TO-	I_{GSS} nA	Y_{fs}(μS) Min.	Max.	NF dB	EACH 1-99	100-999
TIS26*	5	.25	1500	6000	5	8.50	6.90
TIS27*	5	.25	1500	6000	.....	7.20	5.85

PNP SILICON SMALL-SIGNAL GENERAL-PURPOSE TRANSISTORS

Type No.	Fig.	S	P_t W	I_c mA	BV_{CBO} V	h_{FE} @ I_c Min	Max	mA	f_T MHz	EACH 1-99	100-999
2N1132	A	EP	2	....	−50	30	90	−150	50	1.46	1.27
2N2906	B	EP	1.8	600	60	40	120	150	200	1.90	1.65
2N2906A	B	EP	1.8	600	60	40	120	150	200	4.65	3.10
2N2907A	B	EP	1.8	600	60	100	300	150	200	5.40	3.60
2N3504	B	EP	.....	400	.....	45	100	300	...	1.90	1.65
2N3505	B	EP	.....	400	.....	60	100	300	...	2.50	2.25

SILICON EPITAXIAL PLANAR DUAL EMITTER CHOPPERS

Ideal for differential amplifier applications. Two matched units in one package.

Type No.	Fig	S	P_t mW	BV_{E1E2} V	I_{E1E2} nA	V_{E1E2} μA	EACH 1-99	100-999
3N74	D	NPN	600	18	±2	50	14.70	9.80
3N79	D	NPN	600	12	±10	200	4.20	2.80
3N111	D	PNP	600	±30	±0.5	150	11.25	7.50

MINIATURE PLANAR SILICON TRANSISTORS

Audio amplifiers for microelectronics. Case only 0.06x0.06x0.05″

Type No.	Fig.	S	BV_{CEO} V.	I_c m	P_t mW	h_{FE} Min.	Max.	EACH 1-99	100-999
TIS22	G	•P	45	50	150	40	120	4.20	2.80
TIS23	G	•P	45	50	150	100	300	4.65	3.10
TIS24	G	•P	60	50	150	100	500	6.45	4.30

[D] SILICON DUAL DIFFERENTIAL AMPLIFIER TRANSISTORS

h_{FE1}/h_{FE2}—static fwd. curr. gain bal. ratio. $V_{BE1}V_{BE2}$—base-emitter voltage diff. Δ V_{BE}—base-emitter volt. diff./temp. gradient. All are Fig. D, except *, Fig. H.

Type No.	S	BV_{CBO} V	h_{FE} @ I_c Min	Max	μA	h_{FE1}/h_{FE2}	$V_{BE1}-V_{BE2}$ mV	ΔV_{BE} μV	EACH 1-99	100-999
2N2640	•P	45	50	300	10	20%	10	20	6.75	4.50
2N3348	EP	−60	40	300	10	20%	10	2.0	19.50	13.00
2N3350	EP	−60	100	300	10	10%	5	1.0	25.00	16.75
2N3351	EP	−60	100	300	10	20%	10	2.0	21.50	14.40

Type No.	S	BV_{CBO} V	h_{FE} @ I_c Min	Max	μA	$V_{BE1}-V_{BE2}$ mV	EACH 1-24	25-99	100-99
2N3838*	•EP	60	35	.....	100	0.85	27.75	24.00	18.50

GERMANIUM MEDIUM-POWER TRANSISTORS

All are PNP alloy-junction types.

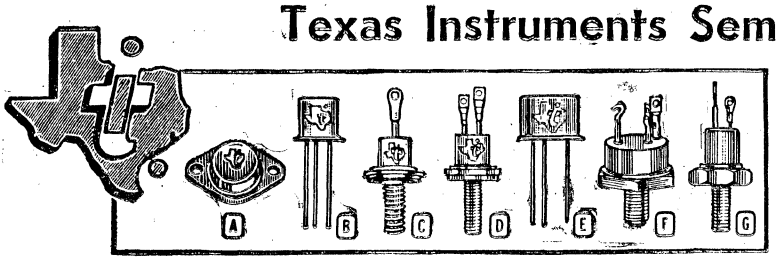
Type No.	Fig. or Desc.	P_C (W)	I_C (A)	h_{FE} @ I_C Min.-Max.	$V_{CE(sat)}$ (V)	BV_{CBO} (V)	EACH 1-99	100-999
2N1038	Round	20	3	20-60 @ 1A	0.25	40	1.80	1.20
2N1039	Round	20	3	20-60 @ 1A	0.25	60	2.40	1.60
2N1040	J	20	3	20-60 @ 1A	0.25	80	3.60	2.40
2N1041	J	20	3	20-60 @ 1A	0.25	100	4.50	3.00
2N1042	J	20	3	20-60 @ 3A	0.75	40	2.85	1.90
2N1043	J	20	3	20-60 @ 3A	0.75	60	4.20	2.80
2N1045	J	20	3	20-60 @ 3A	0.75	100	7.20	4.80
2N2552	K	20	3	20-60 @ 1A	0.25	40	1.88	1.25
2N2553	K	20	3	20-60 @ 1A	0.25	60	2.48	1.65
2N2557	J	20	3	20-60 @ 1A	0.25	60	2.48	1.65
2N2564	J	20	3	20-60 @ 3A	0.75	40	3.00	2.00
2N2659	Round	15	3	30-90 @ ½A	0.2	50	1.65	1.10
2N2660	Round	15	3	30-90 @ ½A	0.2	70	1.95	1.30
2N2661	Round	15	3	30-90 @ ½A	0.2	90	2.85	1.90
2N2662	K	15	3	30-90 @ ½A	0.2	30	1.65	1.10
2N2663	K	15	3	30-90 @ ½A	0.2	40	2.40	1.60
2N2665	Round	15	3	50-150 @ ½A	0.2	50	2.40	1.60
2N2667	Round	15	3	50-150 @ ½A	0.2	90	3.75	2.50
2N2668	K	15	3	50-150 @ ½A	0.2	50	2.33	1.55

[L] GERMANIUM HIGH-POWER TRANSISTORS

All are PNP alloy-junction types.

Type No.	P_C (W)	I_C (A)	h_{FE} @ I_C Min.-Max.	$V_{CE(sat)}$ (V)	BV_{CBO} (V)	EACH 1-99	100-999
2N511B	150	25	20-60 @ 10A	0.5	80	5.18	3.45
2N513	150	25	20-60 @ 20A	1.5	40	6.00	4.00
2N513A	150	25	20-60 @ 20A	1.5	60	6.65	4.43

Texas Instruments Semiconductors



HOW TO ORDER

When ordering Texas Instruments Semiconductors, please specify Department Number 49 D 32, followed by the Manufacturer's Type Number and Name.

Example: 49 D 32 2N250A-TI

Designates Texas Instruments Type 2N250A Germanium Power Transistor

A GERMANIUM POWER TRANSISTORS

All are PNP alloy-junction types. Av. shpg. wt., 1 oz.

Type No.	Pc (W)	Ic (A)	h_{FE} @ Ic Min.-Max.	$V_{CE(sat)}$ (V)	BV_{CBO} (V)	EACH 1-99	EACH 100-999
2N250A	90	7	25-100 @ 3A	0.7	40	1.73	1.15
2N251A	90	7	25-100 @ 3A	0.7	60	1.88	1.25
2N456B	150	7	30-90 @ 5A	0.3	40	1.80	1.20
2N457A	150	7	30-90 @ 5A	0.3	60	2.18	1.45
2N457B	150	7	30-90 @ 5A	0.3	60	2.18	1.45
2N458A	150	7	30-90 @ 5A	0.3	80	2.63	1.75
2N458B	150	7	30-90 @ 5A	0.3	80	2.63	1.75
2N1021A	150	7	30-90 @ 5A	0.3	100	3.08	2.05
2N1022	150	7	30-90 @ 5A	0.3	120	3.60	2.40
2N1022A	150	7	30-90 @ 5A	0.3	120	3.60	2.40
2N1539	150	5	50-100 @ 3A	0.3	40	1.50	1.12
2N1540	150	5	50-100 @ 3A	0.3	60	1.58	1.18

SILICON POWER TRANSISTORS

All of the units listed are NPN. *@ 25° C; all others 100° C case temperature. ‡‡Voltages are BV_{CEO} except †BV_{CER}. #Stud and leads. **Double, end stud. ††Fig. A on page 96. ##Flanged. §not illus. Other cases as illus. Shpg. wt., 1 oz.

Type No.	Fig.	Pt W	‡‡ V	h_{FE}@Ic Min A		EACH 1-99	EACH 100-999
2N389A	##	85	†60	12	1	21.00	14.00
2N424A	##	85	*80	12	1	16.50	11.00
T1487	**	.2	60	20	.2	5.60	3.75
2N497	C	4	60	12	.2	1.89	1.26
2N497A	C	5	60	12	.2	2.05	1.37
2N498	C	4	100	12	.2	2.12	1.41
2N656	C	4	60	30	.2	2.03	1.35
2N656A	C	5	60	30	.2	2.40	1.60
2N657	C	4	100	30	.2	2.20	1.47
2N657A	C	5	100	30	.2	2.92	1.94
2N1047B	#	40	80	36	.5	25.95	17.30
2N1049A	#	40	80	90	.5	16.75	11.15
2N1050A	#	40	120	90	.5	22.10	14.20
2N1050B	#	40	120	90	.5	46.90	31.20
2N1714	§	10	60	20	.2	6.00	4.00
2N1715	§	10	100	20	.2	8.25	5.50
2N1718	**	10	60	20	.2	6.75	4.50
2N1719	**	10	100	20	.2	9.00	6.00
2N1720	**	10	60	40	.2	8.25	5.50
2N1724	F	50	80	20	2	27.60	18.40
2N2151	**	30	80	40	1	21.00	14.00
2N2994	**	15	100	20	.2	13.90	9.25
2N3418	††	10	60	10	1	10.45	6.95
2N4001	††	1	100	40	.5	7.65	5.10

NPN DIFFUSED SILICON PHOTO DUO-DIODE

Have bias voltage ±50V maximum. Maximum dark current @ 25°C ±50V, .5 μA except Type H-38, 10 μA. Light current measured in terms of irradiation. Irradiation =9 mW/cm² in a frequency bandwidth of .7 to 1 micron. Ideal for installation in compact equipment. 2 leads, .010″ diameter, 1.3″ minimum length. Case size, 0.500″ maximum, by 0.082″ diameter. Av. shpg. wt., 1 oz.

Type No.	Max. Dark Curr. @ 25°C, ±50 V (μA)	Min. Light Curr. @ 25°C, ±10 V (μA)	Max. Light Curr. @ 25°C, ±10 V (μA)	EACH 1-99	EACH 100-999
1N2175	.5	100	...	6.40	5.05
H-11	.5	40	...	4.00	2.80
H-35	.5	60	...	5.00	3.50
H-38	10.	100	...	4.00	2.80
H-60	.5	100	200	8.00	5.60
H-61	.5	200	300	9.00	6.25
H-62	.5	300	400	13.50	10.00

HIGHLY SENSITIVE PLANAR SILICON PNP CONTROLLED RECTIFIERS

All are planar, oxide passivated junctions; no solder or fluxes. Anode is in electrical contact with case. 250 mA except *1 amp up to 100° C. I_{GT}, 20 μA except †200 μA. Typical characteristics: gate trigger voltage, 0.6 V; forward voltage, 1.4 V. Av. wt., 1 oz.

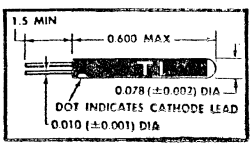
Type No.	Fig.	V_{FB} (V)	V_R (V)	V_F (V)	Peak V_{RDC} (V)	EACH 1-99	EACH 100-999
2N877	†B	30	30	30	30	3.00	2.00
2N3555	†*E	30	30	30	30	7.45	4.65
2N3556	†*E	60	60	60	60	8.95	5.95
2N3558	†*E	200	200	200	200	14.20	9.45
2N3559	†*E	30	30	30	30	5.75	3.83

ALL-DIFFUSED SILICON CONTROLLED RECTIFIERS

Silicon controlled rectifiers designed to meet a wide variety of uses in both industrial and commercial applications, or wherever precise switching or control functions are needed. Feature excellent stability and long-lasting reliability plus highly sensitive operation. Ruggedized to meet or exceed stringent military requirements. All-welded construction assures reliable operation even under severe environmental conditions. The anode is in electrical contact with the case; the gate terminal is connected to a P region. *Silect package. Av. shpg. wt., 1 oz.

Type No.	Fig.	I_o (A)	I_H @ 25°C (mA)	I_{sur} (A)	PIV (V)	BV_F(V) @ 125°C	I_{GT}(mA) @25°C Min.	I_{GT}(mA) @25°C Max.	EACH 1-99	EACH 100-999
TI-40A0	D	5	25	75	50	60	1	60	1.70	1.18
TI-40A1	D	5	25	75	100	120	1	50	1.85	1.28
TI-40A2	D	5	25	75	200	240	1	50	2.05	1.52
TI-40A3	D	5	25	75	300	360	1	50	3.65	2.45
TI-40A4	D	5	25	75	400	480	1	50	5.50	3.55
TI-145A2	E	.56	25	30	200	240	1	50	1.93	1.35
TI-145A4	E	.56	25	30	400	480	1	50	5.25	3.50
2N1595	E	1	25	15	50	60	1	10	3.00	2.00
2N1596	E	1	25	15	100	120	1	10	4.50	3.05
2N1597	E	1	25	15	200	240	1	10	9.35	6.20
2N1601	D	3	25	25	100	120	1	10	5.70	3.45
2N1602	D	3	25	25	200	240	1	10	9.45	6.30
2N1603	D	3	25	25	300	360	1	10	13.50	9.00
2N1604	D	3	25	25	400	480	1	10	16.80	10.80
2N1771	D	4.7	10	60	50	60	1	15	4.65	3.10
2N1772	D	4.7	10	60	100	120	1	15	5.75	3.85
2N1774	D	4.7	10	60	200	240	1	15	8.15	5.45
2N1845B	G	16	20	150	150	225	2	75	5.94	3.96
TIC44	*	.6	5	6	30	30	.....	.2	.77	.51
TIC45	*	.6	5	6	60	60	.....	.2	.83	.55
TIC47	*	.6	5	6	200	200	.....	.2	1.09	.85

NPN PLANAR SILICON LIGHT SENSORS—MICROMINIATURE



LS-400. For character recognition, tape read-out, photo switching, proportional control, differential amplifiers. V_R, 30 V; BV_F, 8 V @ 100 μA; BR_R, 50 V @ 100 μA. Turn to page 97 for explanation of symbols used here. Specifications in table below.

LS-600. For high-density matrix and line read-out equipment. Character recognition, tape and card readers, velocity indicators, encoders. $V_{CE(sat)}$, 0.3 V typ. @ 0.4 mA I_L and 20 mW/cm² H; coll.-emit. V, 50 V; emit.-coll. V, 7 V. See illus. above for dimensions and leads. LS600 is 60 mil. dia. Av. shpg. wt., 1 oz.

Type No.	Min. I_L @ 5 V (mA)	Max. I_D @ 30 V (μA)	P_F (mW)	t_r (μsec)	t_f (μsec)	EACH 1-99	EACH 100-999
LS-400	1 @ H=9 mW/cm²	0.025	50	1.5	15	8.30	7.05
LS-600	8 @ H=20 mW/cm²	0.025	50	1.5	15	7.35	6.50

Allied maintains large, up-to-date stocks of Texas Instruments Semiconductor devices, ready for same-day shipment in quantity and at OEM prices. Write, wire or phone the Allied industrial sales office nearest you for fast, complete price and delivery information.

Texas Instruments and Varo Semiconductors

HOW TO ORDER (TEXAS INSTRUMENTS)

When ordering, specify Dept. No. 49 D 32 followed by Mfr's Type No. and Name. For example:

49 D 32 G129-TI Designates Texas Instruments Type G129

HOW TO ORDER (VARO)

When ordering, specify Dept. No. 49 D 34, followed by Mfr's Type No. and Name. For example:

49 D 34 W110-VA Designates Varo Type W110

TEXAS INSTRUMENTS SEMICONDUCTORS

STABISTORS—SILICON FORWARD-CONDUCTANCE DIODES

Type No.	Max. I_F (mA)	PIV (V)	Max. V_F @ 1 mA	Temp. Coef. @ 1 mA	EACH 1-99	EACH 100-999
G129	250	10	0.56	−2mv/°C	1.00	.75

PNP PLANAR GALLIUM ARSENIDE DIODE LIGHT SOURCE

TIXL01. Emits near-infra-red light when forward biased, spectrally matched to silicon sensors. Temp. range, −65° to +125°C. I_F= 50 mA, radiant power to 90° cone is 50 μW, min., with V_F=1.3 V. Permits matrix assembly to PC boards. 0.12"x0.092" dia. Narrow light beam, ±20° angle from optical axis.

TIXL01. 1-99 Ea. 26.00 100-999 Ea. 19.00

OPTOELECTRONIC ISOLATOR

Combines silicon planar light sensor with gallium arsenide light source in a single epoxy pkg. Isolation to 5000 volts. Input current: 50 mA; output: 250 μA min., 500 μA typ. High-speed switching; t_r, 1.5 μsec, t_f, 15 μsec typ. Good temp. stability.

TIXL101. 1-99 Ea. 19.00 100-999 Ea. 15.00

HIGH-CONDUCTANCE 600-mW DIFFUSED SILICON DIODES

Type No.	Max. V_R (V)	BV_R (V)	Min. I_F (mA)	EACH 1-99	EACH 100-999
1N645	225	275	400	1.40	.80
1N645A	225	275	400	1.65	1.10
1N646	300	360	400	1.60	1.05
1N647	400	480	400	1.70	1.10
1N648	500	600	400	1.80	1.20

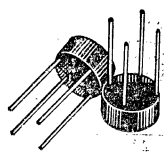
SILICON COMPUTER DIODES

Computer diodes, all with Type A-21 glass case. Uni/G pack. †JAN. 256 (30 milliamp I_F switched to 35 volts. VR recovery to 400K); *JAN 256 (5 mA to 40 V recovery to 200K); §JAN 256 (5 mA to 40 V recovery to 100K); ††JAN 256 (5 mA to 10 V recovery to 24K).

Type No.	PIV (V)	t_{rr} (μsec)	Max. I_R (μA)	EACH 1-99	EACH 100-999
1N251	30	0.15††	0.1	.32	.21
1N643	175	0.3*	1	.98	.65
1N658	50	0.3*	1	1.48	.98
1N659	50	0.3†	5	.56	.36
1N660	100	0.3†	5	.65	.34
1N661	200	0.3†	10	.98	.68
1N662	80	0.5§	20	.25	.15
1N663	80	0.5*	5	.58	.38

VARO SEMICONDUCTORS

1-AMP EPOXY BRIDGE RECTIFIERS

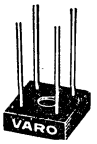


Types W110, W111, VE18, VE28, VE48, and VE68 are for use in non-controlled avalanche applications. Types VE27, VE47 and VE67 are controlled avalanche rectifiers. All units have .025" diameter leads. Ratings: peak surge current, 4 amps max., 1 second at 60 Hz, ambient temperature of 25° C. Peak 1-cycle surge current at 60 Hz, 25 amps max. (non-recurrent). Continuous power dissipation: 1 watt. Operating, storage temp. range, −50 to +150° C.

Explanation of Column Headings Used in Tables Below: V_{BR}, avalanche voltage; V_R, DC blocking voltage; V_{RM}, working peak reverse voltage; PIV, peak inverse voltage; I_o, average output, rectified current; V_F, forward voltage. See important "How to Order" information above, right.

Type No.	$V_{(BR)}$ (V) min.	$V_{(BR)}$ (V) max.	V_R VDC	V_R rms	V_{RM} (wkg)	EACH 1-99	EACH 100-999
W110	.....	.....	25	17	25	.90	.81
W111	.....	.....	50	35	50	.95	.85
VE18	.....	.....	100	70	100	1.00	.90
VE27	250	700	200	140	200	1.20	1.10
VE28	.....	.....	200	140	200	1.10	1.00
VE47	450	900	400	280	400	1.30	1.20
VE48	.....	.....	400	280	400	1.20	1.10
VE67	650	1100	600	420	600	1.59	1.45
VE68	.....	.....	600	420	600	1.49	1.35

6-AMP EPOXY BRIDGE RECTIFIERS



Types VH148, VH248, VH448 and VH648 are for non-controlled avalanche applications; Types VH247, VH447 and VH667 are controlled avalanche rectifiers. All units have .040" diameter leads. Ratings: peak surge current, 25 amps max., 1 second at 60 Hz, ambient temperature of 25° C. Peak 1-cycle surge current at 60 Hz, 100 amps max. (non-recurrent). Continuous reverse power dissipation, 2 watts. Operating and storage temperature range, −50 to +150° C.

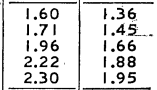
Type No.	$V_{(BR)}$ min.	$V_{(BR)}$ max.	V_R VDC	V_R rms	V_{RM} (wkg)	EACH 1-99	EACH 100-999
VH148	.....	.....	100	70	100	1.93	1.58
VH247	250	700	200	140	200	2.25	1.85
VH248	.....	.....	200	140	200	2.15	1.75
VH447	450	900	400	280	400	2.59	2.13
VH448	.....	.....	400	280	400	2.49	2.03
VH647	650	1100	600	420	600	2.98	2.45
VH648	.....	.....	600	420	600	2.88	2.35

HIGH-VOLTAGE/CURRENT RECTIFIERS

Diffused high voltage, high current silicon rectifiers for industrial and commercial uses. Epoxy encapsulated package. ¼" spade terminals. Max. DC reverse current at 25° C and rated PIV is 1.0 μA; at 125° C, 1 mA. Peak 1-cycle surge current at 60 Hz, 50 amps (non-recurrent). Ambient operating and storage temperature range, −50 to +125° C. Overall size, 3x¾x¾".

Type No.	PIV (V)	I_o (A)	V_F (V)	EACH 1-99	EACH 100-999
VC20	2000	2	4	5.20	4.00
VC30	3000	2	6	5.52	4.25
VC40	4000	2	8	5.85	4.50
VC50	5000	1.5	10	6.18	4.75
VC60	6000	1.5	12	6.50	5.00
VC70	7000	1.5	12	6.82	5.25
VC80	8000	1	14	7.15	5.50

ECONOMY HIGH-VOLTAGE RECTIFIERS

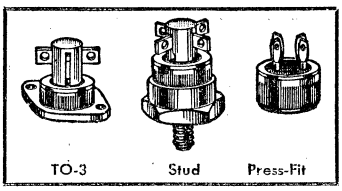


Diffused silicon rectifiers for high-voltage, low-current industrial and commercial applications. ¼" square epoxy encapsulated package. Pack-lengths listed in Table below. Tinned copper leads, .032" diameter. Maximum one-half cycle surge current at 60 Hz, 3 amps. Ambient operating temperature range, −55 to +125° C. In table below, electrical characteristics given at 25° C. I_o at 40° C.

Type No.	I_o mA	PIV (V)	V_F (V)	Lgth.	EACH 1-99	EACH 100-999
VF5-5	5	5000	12	1"	1.60	1.36
VF5-7	5	7000	12	1"	1.71	1.45
VF5-10	5	10,000	18	1"	1.96	1.66
VF5-12	5	12,000	18	1"	2.22	1.88
VF5-15	5	15,000	35	2"	2.30	1.95
VF5-20	5	20,000	35	2"	2.97	2.52
VF5-25	5	25,000	35	2"	3.72	3.15
VF5-30	5	30,000	50	3"	4.46	3.78
VF5-40	5	40,000	50	3"	5.95	5.04
VF10-5	10	5000	12	1"	1.77	1.50
VF10-7	10	7000	12	1"	1.89	1.60
VF10-10	10	10,000	18	1"	2.16	1.83
VF10-12	10	12,000	18	1"	2.44	2.07
VF10-15	10	15,000	35	2"	2.54	2.15
VF10-20	10	20,000	35	2"	3.27	2.77
VF10-25	10	25,000	35	2"	4.09	3.47
VF10-30	10	30,000	50	3"	4.91	4.16
VF10-40	10	40,000	50	3"	6.54	5.54
VF25-5	25	5000	12	1"	1.95	1.65
VF25-7	25	7000	12	1"	2.08	1.76
VF25-10	25	10,000	18	1"	2.38	2.02
VF25-12	25	12,000	18	1"	2.68	2.27
VF25-15	25	15,000	35	2"	2.80	2.37
VF25-20	25	20,000	35	2"	3.60	3.05
VF25-25	25	25,000	35	2"	4.51	3.82
VF25-30	25	30,000	50	3"	5.39	4.57
VF25-40	25	40,000	50	3"	7.20	6.10

Varo Rectifiers

INTEGRATED BRIDGE RECTIFIERS



Single-phase integrated full-wave bridge rectifiers in compact, welded packages. Available in choice of TO-3, stud and press-fit mounts.

10- and 25-Amp. Avalanche Series. Specified maximum/minimum characteristics permit selection of decreased PRV safety factors in design considerations without greatly reduced transient voltage vulnerability.

10-Amp Fast Recovery Series. Not controlled avalanche, has 200 nanoseconds recovery time to permit reliable operation in high frequency and low RF interference applications.

10-AMP FAST RECOVERY SERIES

Average forward current, 10 amps max. at 75°C case temperature. Forward current (surge), 75 amps/leg. Reverse recovery time, 200 nanoseconds max. Junction temp. range, −65° to +150°C.

Type No.	Mount	V_{RM} (V)	Max V_R (V)	t_{rr} nanosec (max)	EACH 1-99	EACH 100-999
VR100X	Press-fit	100	100	200	6.30	5.05
VR100X/T/F	TO-3	100	100	200	6.55	5.25
VR100X/S/F	Stud	100	100	200	6.70	5.35
VR200X	Press-fit	200	200	200	7.45	5.95
VR200X/T/F	TO-3	200	200	200	7.70	6.15
VR200X/S/F	Stud	200	200	200	7.85	6.25
VR400X	Press-fit	400	400	200	10.90	8.00
VR400X/T/F	TO-3	400	400	200	11.15	8.20
VR400X/S/F	Stud	400	400	200	11.30	8.30

10-AMP CONTROLLED AVALANCHE SERIES

Forward current (surge), 100 amps/leg. Continuous power dissipation in V_{BR} region, 4 watts at case temperature of 50°C. Junction temperature range, −65°C to +160°C.

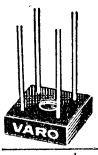
Type No.	Mount	V_{RM} (V)	V_{BR} (V) Min.	V_{BR} (V) Max.	Max. V_R (V)	EACH 1-99	EACH 100-999
1N4436	Press-fit	200	250	500	250	4.15	3.05
1N4436/T/F	TO-3	200	250	500	250	4.40	3.25
1N4436/S/F	Stud	200	250	500	250	4.55	3.35
1N4437	Press-fit	400	450	700	450	5.45	4.00
1N4437/T/F	TO-3	400	450	700	450	5.70	4.20
1N4437/S/F	Stud	400	450	700	450	5.85	4.30
1N4438	Press-fit	600	650	900	650	7.45	5.45
1N4438/T/F	TO-3	600	650	900	650	7.70	5.65
1N4438/S/F	Stud	600	650	900	650	7.85	5.75

25-AMP CONTROLLED AVALANCHE SERIES

Forward current (surge), 250 amps/leg. Continuous power dissipation in V_{BR} region, 4 watts at case temperature of 50°C. Junction temperature range, −65°C to +180°C.

Type No.	Mount	V_{RM} (V)	V_{BR} (V) Min.	V_{BR} (V) Max.	Max. V_R (V)	EACH 1-99	EACH 100-999
VT200	Press-fit	200	250	700	200	5.35	3.95
VT200/T	TO-3	200	250	700	200	5.60	4.15
VT200/S	Stud	200	250	700	200	5.75	4.25
VT400	Press-fit	400	450	900	400	7.00	5.30
VT400/T	TO-3	400	450	900	400	7.25	5.50
VT400/S	Stud	400	450	900	400	7.40	5.60
VT600	Press-fit	600	650	1100	600	9.85	7.10
VT600/T	TO-3	600	650	1100	600	10.10	7.30
VT600/S	Stud	600	650	1100	600	10.25	7.40

2-AMP EPOXY BRIDGE RECTIFIERS



Types VS 247 and VS 447 are for use in controlled avalanche applications; Types VS 248 and 448, non-controlled. All units have .040″ diameter leads. Ratings: Peak Surge Current: 10 amps max. (1 second at 60 Hz; ambient temperature, 25° C). Peak 1-Cycle Surge Current at 60 Hz, 50 amps max (non-recurrent). Continuous Power Dissipation: 1 watt. Operating and storage temperature, −50 to +150° C.

Type No.	BV_R(V) (min)	BV_R(V) (max)	V_R (VDC)	V_R (rms)	V_{RM} (wkg)	EACH 1-99	EACH 100-999
VS 247	250	700	200	140	200	1.20	1.10
VS 447	450	900	400	280	400	1.30	1.20
VS 248	.....	.....	200	140	200	1.10	1.00
VS 448	.....	.....	400	280	400	1.20	1.10

HOW TO ORDER

When ordering, specify Dept. No. 49 D 34, followed by the Manufacturer's Type No., and Name. For Example:
49 D 34 VR100X-VA Designates Varo Type VR100X

HIGH-VOLTAGE DIFFUSED SILICON RECTIFIERS

Series 7715. High-voltage diffused silicon rectifiers designed for industrial and commercial applications requiring high reliability at an economical cost. Epoxy-encapsulated package provides a dielectric strength of 400 volts/mil and an electrical insulation resistance of $3x10^{12}$ ohms at 95° C and 95% relative humidity. Tinned copper leads allow easy soldering with high electrical and thermal conductance. Withstand 500g shock, vibration of 100 cycles, and peak acceleration of 10g. Maximum DC reverse current at 25° C and rated V_R, I_R, 1.0 μA. DC reverse current at 125° C, 100.0 μA. Peak one-half cycle surge current, at 25° C and 60 Hz, 1.5 amps. Ambient operating and storage temperature range, −55° C to +125° C. Ratings obtained without special heat sinks or mountings.

Series 7715X. High-voltage diffused silicon rectifiers featuring fast reverse recovery time for critical applications. Reverse recovery time at I_F and I_R of 2 mA, 300 nsec max.; at I_F of 20 mA, I_R of 2 mA, 1000 nsec max. Other specifications and characteristics same as series 7715, except reverse current at 125° C, 150.0 μA, and peak one-half cycle surge current, 1.0 amp.

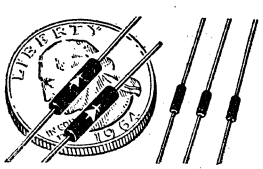
SERIES 7715

Type No.	PRV (V)	I_o (mA)	V_F (V)	EACH 1-99	EACH 100-999
7715-3	3000	75	6.0	2.20	1.80
7715-5	5000	50	10.0	2.75	2.25
7715-6	6000	50	12.0	3.03	2.48
7715-7	7000	50	14.0	3.30	2.70
7715-10	10,000	25	20.0	4.40	3.60
7715-15	15,000	25	30.0	6.60	5.40
7715-20	20,000	25	40.0	7.70	6.30
7715-30	30,000	25	60.0	9.90	8.10
7715-40	40,000	25	80.0	12.10	9.90
7715-50	50,000	25	100.0	15.40	12.60

SERIES 7715X

7715-3X	3000	50	8.0	4.06	3.32
7715-5X	5000	30	12.0	5.07	4.15
7715-7X	7000	30	18.0	6.08	5.00
7715-10X	10,000	20	24.0	8.10	6.65
7715-15X	15,000	20	36.0	12.20	9.95
7715-20X	20,000	20	52.0	14.20	11.60
7715-30X	30,000	15	75.0	18.27	11.90
7715-40X	40,000	15	100.0	22.32	18.27
7715-50X	50,000	15	125.0	28.41	23.25

VB SERIES DIFFUSED SILICON RECTIFIERS

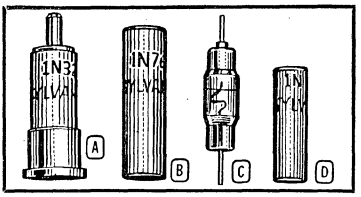


High-voltage diffused silicon rectifiers featuring small size for high-density packaging. Suffix X in Type No. and Type 1N4441 are *fast recovery series. Max. reverse recovery time at I_F and I_R of 2 mA, 300 nsec. Electrical characteristics: Max. DC reverse current at PIV and 25° C, .05 μA, *0.3 μA; at PIV and 100° C, 5.0 μA, *60 μA. Ambient operating temperature range, −55° to +150° C. Max. one-half cycle surge current at 60 Hz, 3 amps. All withstand 500g shock, vibration of 100 cycles, and peak acceleration of 10g. Epoxy encapsulated packages, 0.4″ long by .100″ diameter. Ratings obtained without special heat sinks or mounting.

Type No.	PIV (V)	I_o @ 40° C (mA)	V_F @ 25° C and I_o (V)	EACH 1-99	EACH 100-999
VB 10	1000	100	5	1.41	1.07
VB 15	1500	100	5	1.51	1.15
VB 20	2000	100	5	1.59	1.20
VB 25	2500	100	5	1.72	1.30
VB 30	3000	50	10	1.88	1.42
VB 40	4000	50	10	2.05	1.56
VB 50	5000	50	10	2.40	1.82
VB 60	6000	50	10	2.62	1.99
VB 10X	1000*	50	6	1.88	1.43
VB 15X	1500*	50	6	2.01	1.53
VB 20X	2000*	50	6	2.12	1.60
VB 25X	2500*	25	12	2.30	1.73
VB 30X	3000*	25	12	2.50	1.90
VB 40X	4000*	25	12	2.74	2.08
VB 50X	5000*	25	12	3.20	2.42
1N4441	1500*	25	4	2.01	1.53

Specify Dept. No., Mfr's Type No. and Name on Semiconductor Orders

Sylvania Diodes and Rectifiers



EXPLANATION OF COLUMN HEADS

Io, average forward current.
I_R, maximum reverse current.
V_R, reverse working voltage.
PRV, peak reverse voltage.

MICROWAVE MIXER DIODES

*Asterisk in Figure column indicates MIL approval. †In Noise column indicates comparative dB noise figure where IF amplifier noise equals 1.5 dB.

Type No.	Fig.	Freq. Band	†Noise (dB)	EACH 1-9	EACH 10-99
1N21B	A	S	8.3	.81	.70
1N21C	A	S	8.3	.84	.72
1N21D	A	S	7.3	2.10	1.80
1N21E	A	S	7.0	3.16	2.70
1N21F	A	S	6.0	6.30	5.40
1N21WE	A*	S	7.0	3.16	2.70
1N23B	A	X	11.5	.81	.70
1N23C	A	X	9.5	.84	.72
1N23D	A	X	7.8	2.10	1.80
1N23E	A	X	7.5	3.16	2.70
1N23F	A	X	7.0	6.30	5.40
1N23G	A	X	6.5	10.50	9.00
1N23WE	A*	X	7.5	3.16	2.70
1N25	A*	L	12.6	3.53	3.03
1N26	B*	K	13.1	6.50	5.60
1N26C	B	K	9.5	31.15	27.80
1N53	D*	KA	13.1	23.20	19.80
1N78A	B	KU	9.8	4.50	3.85
1N78B	B*	KU	8.8	5.00	4.30
1N415G	A	X	6.5	10.50	9.00
1N416G	A	S	5.5	10.50	9.00
1N831	C	S	8.3	6.85	5.85

SILICON UHF DIODE

Type No.	Fig.	V_R (V)	Io (mA)	EACH 1-99	EACH 100-999
1N82A	D	3	10-25	.91	.71

MICROWAVE VIDEO DETECTOR DIODES

Type No.	Fig.	Frequency Band	EACH 1-9	EACH 10-99
1N358A	B	L-X	15.00	12.85
1N830A	A	1000 MHz	3.85	3.30
1N3143	A	X	5.60	4.80

GENERAL-PURPOSE AND FAST-SWITCH SILICON JUNCTION DIODES

In .265x.105" dia. case (DO-7) with two tinned axial leads 1" long (min.). Ratings at 25°C. *Indicate meets MIL specs.

Type No.	V_R (V)	Io (mA)	I_R (μA)	EACH 1-99	EACH 100-999
1N456	25	90	.025	.42	.28
1N456A	25	200	.025	.42	.28
1N457	60*	75	.025	.45	.30
1N457A	60	200	.025	.45	.30
1N458	125*	55	.025	.48	.32
1N458A	125	200	.025	.48	.32
1N459	175*	40	.025	.51	.34
1N459A	175	200	.025	.51	.34
1N461	25	60	.5	.42	.28
1N461A	25	200	.5	.42	.28
1N462	60	50	.5	.44	.29
1N462A	60	200	.5	.44	.29
1N463	175	30	.5	.54	.36
1N463A	175	200	.5	.54	.36

GENERAL-PURPOSE AND FAST-SWITCHING SILICON JUNCTION DIODES (Cont'd)

See description below left.

Type No.	V_R (V)	Io (mA)	I_R (μA)	EACH 1-99	EACH 100-999
1N464	125	40	.5	.53	.35
1N464A	125	200	.5	.53	.35
1N482	36	100	.25	.66	.40
1N482A	36	200	.025	.69	.46
1N482B	36	200	.025	.69	.46
1N483	70	100	.25	.70	.47
1N483A	70	200	.025	.70	.47
1N483B	70	200	.025	.70	.47
1N484	130	100	.25	.70	.47
1N484A	130	200	.025	.70	.47
1N484B	130	200	.025	.70	.47
1N485	180	100	.25	.90	.60
1N485A	180	200	.025	.90	.60
1N485B	180	200	.025	.90	.60
1N486A	225	200	.05	.90	.60
1N486B	225	200	.025	.90	.60
1N487A	300	200	.1	1.41	.94
1N488	380	100	.25	1.17	.78
1N488A	380	200	.1	1.78	1.19
1N625	30	20	1.0	.43	.29
1N626	50	20	1.0	.45	.30
1N627	100	20	1.0	.60	.39
1N628	150	20	1.0	.72	.47
1N629	200	20	1.0	.81	.54
1N643A	175	40	1.0	1.50	1.00
1N659	50	100	5.0	.58	.39
1N662	50*	40	20.0	.92	.44
1N663	75*	40	5	1.20	.80
1N816	5.0	150	.1	.52	.35

GERMANIUM POINT-CONTACT DIODES

DO-7. For use at audio, IF, RF and VHF frequencies. *Type 1N35 supplied as a matched pair.

Type No.	V_R (V)	Io (mA)	EACH 1-99	EACH 100-999
1N34A	60	50	.30	.23
1N35	50*	23	1.58	1.21
1N38A	100	50	.49	.38
1N38B	100	50	.49	.38
1N48	70	50	.30	.20
1N54A	50	50	.42	.32
1N55A	150	50	.40	.31
1N58A	100	50	.55	.41
1N60	25	50	.30	.23
1N63	100	50	.36	.28
1N64	25	50	.30	.23
1N67A	80	30	.28	.21
1N68A	100	40	.28	.21
1N69A	60	40	.30	.23
1N81A	40	30	.48	.36
1N90	60	30	.33	.22
1N116	60	45	.49	.36
1N128	40	30	.32	.25
1N191	90	30	.35	.28
1N192	60	30	.34	.26
1N198	80	30	.35	.28
1N198B	80	30	1.03	.78
1N294	60	60	.34	.26
1N295	40	35	.35	.27

SILICON "BULLET" EPOXY RECTIFIERS

Offer reliable performance at low cost. For use in a wide variety of industrial and commercial applications. DO-7 case size. All types include 1" wire leads.

Type No.	V_R (V)	Io (mA)	EACH 1-99	EACH 100-999
1N2069	200	750	.45	.30
1N2069A	200	750	.50	.33
1N2070	400	750	.57	.38
1N2070A	400	750	.67	.45
1N2071	600	750	.72	.48
1N2071A	600	750	.75	.50
1N2482	200	750	.65	.43
1N2483	400	750	.69	.46
1N2484	600	750	.71	.47

HOW TO ORDER

When ordering, specify Dept. No. 49 D 12, followed by Mfr's Type No., and Name.
For Example: 49 D 12 1N251-SYL
Designates Sylvania 1N251

HIGH-SPEED SILICON EPITAXIAL PLANAR DIODES

(Not illus.) Recovery time 4 nsec except: 1N251 and 1N252, 150 nsec; 1N3605, 4 nsec; 1N3731, 3-nsec.

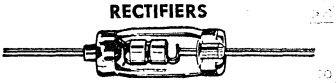
Type No.	V_R (V)	Io (mA)	EACH 1-99	EACH 100-999
1N251	30	75	.65	.43
1N252	20	100	.65	.43
1N905A	20	50	1.55	1.09
1N914	75	75	.45	.30
1N914A	75	75	.50	.33
1N914B	75	75	1.35	.90
1N916	75	75	.75	.50
1N916A	75	75	.75	.50
1N3605	30	75	.72	.48
1N3731	80	175	.85	.68

GERMANIUM BONDED DIODES

Engineered for general-purpose as well as computer applications. DO-7 case.

Type No.	V_R (V)	Io (mA)	EACH 1-99	EACH 100-999
1N98	80	60	.31	.24
1N99	80	60	.50	.39
1N100	80	60	.32	.27
1N118	75	60	.23	.20
1N270	80	60	.32	.25
1N276	50	40	.31	.24
1N277	100	75	.34	.26
1N279	30	80	.29	.22
1N281	60	75	.31	.24
1N283	20	100	.51	.40
1N497	30	80	.39	.30
1N498	60	80	.44	.35
1N500	60	100	.53	.41
1N634	100	60	.52	.41
1N695	20	100	.30	.24
1N770	20	40	.48	.38
1N995	15	30	.30	.24

SILICON DIFFUSED ALL-GLASS RECTIFIERS



- Hermetically Sealed Case (DO-29)
- Withstand High Reverse Power Transients
- 1-Amp Average Forward Current @ 50°C

Feature exceptionally low reverse leakage currents, even at high temperatures. Glass encapsulation offers enhanced electrical performance plus increased reliability. Double-diffused junctions with 50-amp forward surge capabilities, also withstand high reverse power transients. High conduction power sink lead; oversize heat conducting stud. Temperature range, —65° to +175°C. .350x.150" dia. case. Solder leads.

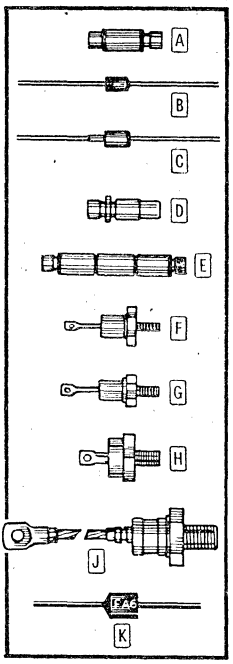
Type No.	VR (V)	Io (mA)	EACH 1-99	EACH 100-999
1N4383	200	10	.48	.38
1N4384	400	10	.58	.41
1N4385	600	10	.78	.54
1N4585	800	10	1.20	.80
1N4586	1000	10	2.70	1.80

MINIATURE SILICON EPOXY RECTIFIERS

In DO-7 package, .265x.105" diameter. 1" wire leads. Rated 1 A at 75°C; max. 1-cycle surge current, 30 amps.

Type No.	PRV (V)	Io (mA)	EACH 1-99	EACH 100-999
1N4001	50	750	.45	.30
1N4002	100	750	.49	.33
1N4003	200	750	.60	.40
1N4004	400	750	67	.45
1N4005	600	750	.75	.50

Sarkes Tarzian Avalanche Rectifiers



LOW AND MEDIUM CURRENT TYPES

A M SERIES (1.0 AMP)

Type No.	S-T No.	Max. PIV	Max. rms Volts	DC Load Amps	EACH 1-24	25-99	100-Up
1N1081	10M	100	70	1.0	.60	.55	.51
1N1082	20M	200	140	1.0	.65	.57	.53
1N1084	40M or M500	400	280	1.0	.75	.63	.59
.....	60M	600	420	1.0	.85	.70	.66

47 D 0050. Single Mounting Clip for 1N1084. Each .12
47 D 0051. Double Mounting Clip for 1N1084. Each .24

B F SERIES (1.0 AMP)

1N2482	F-2	200	140	1.0	.33	.29	.27
1N2483	F-4	400	280	1.0	.35	.30	.28
1N2484	F-6	600	420	1.0	.37	.32	.29
.....	F-8	800	560	1.0	.52	.44	.41

C C SERIES (1.0 AMP)

1N2610	10C	100	70	1.0	.35	.30	.28
1N2611	20C	200	140	1.0	.37	.32	.29
1N2613	40C	400	280	1.0	.43	.37	.35
1N2615	60C	600	420	1.0	.47	.40	.37

D LA SERIES (2 AMPS)

1N1085A	10LA	100	70	2.0	3.34	2.86	2.66
1N1086A	20LA	200	140	2.0	4.00	3.43	3.20
1N1088A	40LA	400	280	2.0	5.35	4.67	4.27

E HIGH-VOLTAGE SERIES (.325 to .45 AMP)

1N1108	80SM	800	560	.45	3.15	2.71	2.54
1N1109	120SM	1200	840	.425	4.00	3.43	3.20
1N1110	160SM	1600	1120	.4	4.75	4.15	3.86
1N1111	200SM	2000	1400	.375	5.65	4.86	4.53
1N1113	280SM	2800	1960	.325	7.35	6.30	5.87

HOW TO ORDER

When ordering, specify Dept. No. 49 D 31, followed by Mfr's Type No. and Name. Example: 49 D 31 1N1081-ST Designates Sarkes Tarzian 1N1081

MEDIUM CURRENT TYPES

F H3 SERIES (6 AMPS)

All are positive base types.

Type No.	S-T No.	Max. PIV	Max. rms Volts	EACH 1-24	25-99	100-Up
1N1341	10H3P	100	70	1.19	.96	.89
1N1343	20H3P	200	140	1.20	1.03	.96
1N1346	40H3P	400	280	1.50	1.29	1.20

G ST2 SERIES (12 AMPS)

1N1202	ST220P	200	140	1.25	1.07	1.00
1N1204	ST240P	400	280	1.67	1.43	1.33
1N1206	ST260P	600	420	2.34	2.00	1.86

H ST4 SERIES (35 AMPS)

Type No.	S-T No.	Max. PIV	Max. rims Volts	EACH 1-24	25-99	100-Up
1N1190	ST460P	600	420	4.89	4.19	3.90

J ST9 SERIES (250 AMPS)

Type No.	S-T No.	Max. PIV	Max. rms Volts	EACH 1-24	25-99	100-Up
1N3161	ST910P	100	70	14.20	12.19	11.36
1N3163	ST920P	200	140	15.80	13.50	12.60

PLUG-IN TUBE-REPLACEMENT SILICON RECTIFIERS (Not illus.)

Type Nos.	Max. PIV	Replaces	1-24, EACH	25-99, EACH	100-499, EACH
S5991	1600	5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5Y3	3.50	3.00	2.80
1N2490 (S5207)	1600	6X4	7.07	6.31	5.96
1N2389 (S5251)	1600	5U4, 5AU4, 5AW4, 5AZ4, 5T4, 5Y3	6.10	5.23	4.87
S5343	7000	816, 836, 3B28	8.33	7.44	6.55
S5130	10,100	866, 866A, 3B28	9.65	8.65	7.78

TYPE HVC HIGH-VOLTAGE AXIAL-LEAD CARTRIDGE-TYPE SILICON RECTIFIERS

Quality high-voltage avalanche rectifiers available in a wide range of ratings. Use in high-voltage power supplies in TV sets, oscilloscopes and test equipment. All are .375" in diameter; body length as shown in tables is ±1/32". Lead length is a minimum of 2".

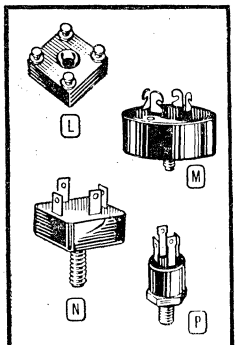
Type HVC	Max. PIV	I_F(av) mA	Max. V_F	Lgth., In.	EACH 1-24	25-99	100-Up
180	1800	250	4	.362	3.35	2.86	2.66
240	2400	250	5	.687	3.60	3.08	2.87
300	3000	200	6	.750	3.85	3.28	3.07
400	4000	200	8	.875	4.00	3.44	3.20
500	5000	200	10	1.0	4.15	3.67	3.34
600	6000	150	12	1.062	4.55	3.92	3.66
650	6500	150	13	1.187	5.00	4.29	4.00
750	7500	150	15	1.312	5.40	4.64	4.34
840	8400	100	16	1.375	5.85	5.00	4.66
960	9600	100	18	1.5	6.65	5.72	5.34
1000	10,000	100	20	1.75	7.10	6.07	5.66
1200	12,000	75	22	1.937	8.35	7.15	6.66
1500	15,000	75	25	2.312	10.40	8.94	8.34
1800	18,000	75	30	2.625	12.50	10.70	10.00
2100	21,000	50	35	3.0	14.60	12.50	11.67
2500	25,000	50	40	3.5	17.50	15.00	14.00
3000	30,000	50	50	4.062	20.80	17.90	16.70

K VR SERIES LOW-COST ZENER RECTIFIERS

1-watt zeners in rugged plastic case. For use in ¼, .4, ½ and 1-watt applications. Vz is avalanche voltage. Std. tolerance ±10%; for ±5% add suffix A.

Type	Vz	Type	Vz	Type	Vz	Type	Vz	Type	Vz
VR6	6	VR14	14	VR33	33	VR80	80	VR130	130
VR7	7	VR18	18	VR39	39	VR90	90	VR150	150
VR8.5	8.5	VR20	20	VR47	47	VR105	105	VR160	160
VR10	10	VR24	24	VR56	56	VR110	110	VR200	200
VR12	12	VR28	28	VR67	67	VR120	120	.....	...

Type No.	Tolerance	EACH 1-24	25-99	100-Up
VR6 to VR90	Suffix "A" ±5%	.67	.57	.53
	No Suffix ±10%	.62	.53	.49
VR105 to VR200	Suffix "A" ±5%	.87	.73	.69
	No Suffix ±10%	.82	.70	.65



AVALANCHE SILICON BRIDGE RECTIFIERS

Compact efficient assemblies for easy installation in single phase full wave bridge applications. All offer the inherent transient protection of avalanche characteristics. Use in power supplies for communication equipment, computers, control systems, etc.

L 2.0 AMPS SINGLE PHASE

Type No.	Max. PIV	Max. rms Volts	DC Load Amps	EACH 1-24	25-99	100-Up
S6211	200	140	2.0	2.12	1.82	1.69
S6211-1	400	280	2.0	2.34	2.00	1.86
S6211-2	600	420	2.0	2.56	2.19	2.04

M 6.0 AMPS SINGLE PHASE

S6121	100	.....	6.0	4.01	3.43	3.19
S6121-1	200	.....	6.0	4.21	3.60	3.35
S6121-2	300	.....	6.0	4.36	3.73	3.47

N 2 AMP MINIATURE SINGLEPHASE

Compact bridge rectifiers are only 9/16" square and ¼" high. Ideal for PC board applications.

Type No.	Max. PIV	Max. rms Volts	DC Load Amps	EACH 1-24	25-99	100-Up
S6230	200	140	2.0	1.47	1.26	1.19
S6230-1	400	280	2.0	1.77	1.52	1.41
S6230-2	600	420	2.0	2.11	1.80	1.68

P MINIATURE 2 AMP FULL WAVE BRIDGES

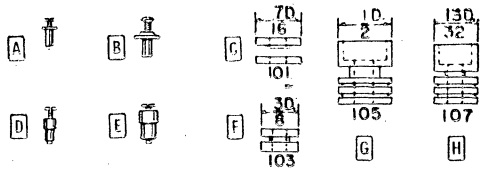
Miniature rectifiers, only a fraction of the size of conventional equipment. 5/8"x1 1/2" (with lugs).

S6240	200	140	12.0	3.76	3.22	3.00
S6240-1	400	280	12.0	5.15	4.40	4.00
S6240-2	600	420	12.0	6.93	5.93	5.40

Specify Dept. No., Manufacturer's Type No. and Name on Semiconductor Orders

Wakefield Coolers, Heat Sinks and Clips

NYLON AND TEFLON INSULATORS



For electrical isolation of heat sink from its mounting. Teflon®except, *Nylon. Av. shpg. wt., 2 oz. †Order in Multiples of 100 Only.

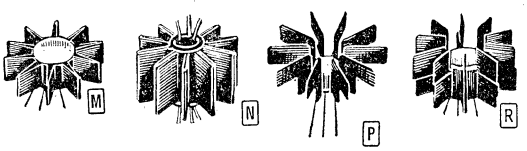
Stock No.	Mfr's Type	For Cooler No.	Fig.	No. Req.	EACH 1-99	†EACH 100-400
60 D 6290	100*	140, 141, 142	A	.....	.04	.03
60 D 6291	101	501	C	2		
		502, 503, 504, 505		4	.09	.07
60 D 6292	102A*	301	B	2	.07	.05
		401		3		
		302, 303, 403, 413, 421, 423, 621, 623, 641		4	.07	.05
60 D 6293	103	401	F	3		
		403, 413, 421, 423, 621, 623, 641		4	.05	.04
60 D 6294	104*	Same as 102A	D	.....	.05	.04
60 D 6295	105	441, 1244, 1245, 1541	G	4	.20	.18
60 D 6296	106*	Same as 105	E	.....	.07	.05
60 D 6297	107	Same as 103	H	.....	.20	.18

TYPE 140 SNAP-ON CIRCUIT BOARD HEAT SINKS

Black-anodized heat sinks fit press diodes and SCR's, also JEDEC TO-8 cases. *Transistor case temperature @ 5 watts. 1.03" H., .52" deep. †Order in Multiples of 100 Only. Av. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Wide, In.	*Temp. C. (approx.)	EACH 1-99	†EACH 100-400
60 D 6546	140	J	.93	85°	.14	.12
60 D 6547	141	K	1.41	71°	.16	.14
60 D 6548	142	L	3.0	46°	.19	.17

SERIES 200 FEATHERWEIGHT COOLERS



Unique fin design permits horizontal or vertical orientation with excellent natural convection in either position. In forced convection applications, the axis of the semiconductor may be oriented either perpendicular or parallel to the direction of air flow. Series 200 coolers are made from a beryllium copper alloy having twice the thermal conductivity of commonly used alloys. Black ebonal finish. Meet MIL-C-81021. 1 oz.

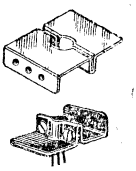
RISE (0°) FOR 1 WATT

Type	Nat. Conv.	250 Ft./Min.	Fits Jedec Case Styles
201	66	27	TO 18, 24, 28
203	56	19	(222 accepts
222	56	19	2 cases)
205	61	24	TO 5, 9, 11, 12, 16
207	49	17	29, 33, 39, 42, 43
209	34	10	(224 accepts
224	49	17	2 cases)
211	56	20	
213	44	13	TO 8
215	31	8	

FEATHERWEIGHT UNITS FOR MILLIWATT TRANSISTORS

Stock No.	Mfr's Type	Fig.	Inches Dia.	Inches Lgth.	Fits Case Dia.	EACH 1-99	EACH In Multiples of 100: 100-400	500-900	1000-9000
60 D 6527	NF201	M	.64	.19	.161/.24	.27	.21	.16	.11
60 D 6528	NF203	R	.64	.38	.161/.24	.29	.22	.17	.12
60 D 9525	NF204	M	.55	.20	.275/.335	.25	.20	.15	.10
60 D 6529	NF205	M	.72	.19	.275/.370	.27	.21	.16	.11
60 D 6530	NF207	R	.72	.38	.275/.370	.29	.22	.17	.12
60 D 6531	NF209	P	1.28	.44	.275/.370	.34	.29	.23	.18
60 D 7074	NF211	M	.83	.19	.440/.544	.27	.21	.15	.10
60 D 7073	NF213	R	.83	.38	.440/.544	.29	.22	.17	.12
60 D 7075	NF215	P	1.40	.44	.440/.544	.34	.29	.23	.18
60 D 7042	NF222	N	.64	.38	.161/.240	.38	.30	.24	.19
60 D 7043	NF224	N	.72	.44	.275/.371	.38	.20	.24	.19
60 D 6532	160 Installation tool for Models 201, 3, 5, 7, 9..... 1.50								
60 D 8921	161 Installation tool for Models 211, 13, 15..... 1.50								

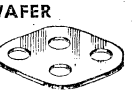
TYPE 150 "SPACE SAVING" CIRCUIT BOARD COOLERS



Type 150 requires only a 0.375 sq. in. area. For use with TO-5 cases where 1⅜" height is permitted above the circuit board. Characteristics: Case rise, 40°C @ 1-watt with bright aluminum finish; 34°C @ 1-watt with black anodize finish. Has 3 eyelets for keying to circuit board. Measures, 1⅜x1x.375". Av. shpg. wt., 4 oz. †Order in Multiples of 100 Only.

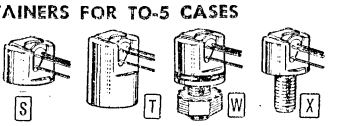
Stock No.	Mfr's Type	Finish	EACH 1-99	†EACH 100-400
60 D 6538	150	Aluminum	.06	.05
60 D 6539	150	Black anodized	.10	.09

TYPE 170 ALUMINUM INSULATING WAFER



For use with TO-3 transistors. Have thermally conductive dielectric coating providing a thermal path between the case and heat sink. Wt., 2 oz.
60 D 9495..... Each .12

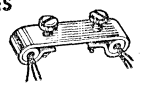
THERMAL RETAINERS FOR TO-5 CASES



Series TR-254 heat sinks are intended as thermal links from transistor to collar or chassis member acting as heat sink. .2 oz.

Stock No.	Fig.	Type TR-	θ case to chassis °C/W	EACH 1-99	EACH (In Multiples of 100) 100-400	500-900	1000-2400
60 D 6540	X	254-S	4.1	.18	.15	.14	.12
60 D 6541	W	254-SI	6.0	.25	.21	.19	.17
60 D 6542	T	254-T	5.3	.20	.17	.15	.14
60 D 6543	S	254-P	4.0	.13	.12	.11	.10

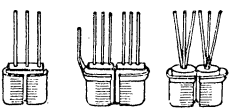
TYPE 255 THERMAL CLAMP FOR TO-1 CASES



For push-pull driver or low power output applications using TO-1 case style transistors. Holds cases solidly to chassis or heat sink. Aluminum.
60 D 6545. Shpg. wt., 2 oz..... Each .06

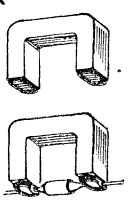
TYPE 256 BRASS CLIPS FOR PLASTIC TRANSISTORS

Type 256-ST electrostatic shield clip for any plastic transistor of .20" dia. May be used with TO-5 socket. Type 256-DT maintains 2 plastic transistors at same temp. 256-D is thermal retainer without shield tabs. Keeps 2 trans. at same temp. All are 50% hard brass. Av. shpg. wt., 2 oz.



Stock No.	Mfr's Type	EACH 1-99	EACH (In Multiples of 100) 100-499	500-999	1000-2499
60 D 9496	256-ST	.016	.015	.013	.012
60 D 9497	256-DT	.017	.016	.014	.013
60 D 9498	256-D	.016	.015	.013	.012

TYPE 258 THERMAL HEAT LINK



High-efficiency, low-cost thermal heat link designed for use with fused glass diodes. Provides high thermal conductivity. Increases current rating from 3 to 5 times. Thermal resistance from diode leads to chassis or heat sink is 12°/watt. Copper solder points are bonded to aluminum U-form but electrically isolated. High dielectric coating extends down legs to provide long creepage path. For bonding points to U-form, Delta Bond 152 adhesive is used. All thermal heat links are 100% tested at 1000 V hypot. Screw mounted. Shpg. wt., 2 oz.
60 D 9605, Type 258, (1-99)..... Each 1.00
In Multiples of 100 (100-400)..... Each .85

TYPE 630 HEAT SINKS FOR TO-3 AND TO-66

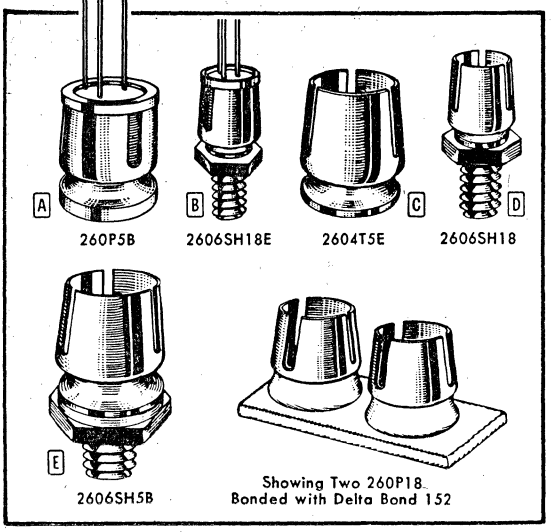
NC-631

Provide maximum cooling per unit cost, with TO-3 or TO-66 case transistors. Made of Type 1100-H14 aluminum with black immersion finish. Base size, 1.50x1.00"; choice of three heights. Available with either of two mounting patterns: Type 3 for TO-3 transistor with socket; Type 66 for TO-66 transistor. Both are pierced for fast mounting. Shpg. wt. per pkg., 8 oz. *Specify type when ordering.*

Stock No.	For TO-3 Type	For TO-66 Type	Ht. (1/32")	PKG. OF 100: 1-4	5-9	10-24	25-49
60 D 7108 C	NC-631-3	NC-631-66	1"	4.72	4.18	3.78	3.34
60 D 7109 C	NC-632-3	NC-632-66	2"	7.22	6.46	5.78	5.10
60 D 7110 C	NC-633-3	NC-633-66	3"	9.36	8.38	7.50	6.63

Wakefield Cup Clips, Heat Sinks and Coolers

SERIES 260 TRANSISTOR CUP CLIPS



- Heat Dissipating Cup Clips for TO-5 and TO-18 Cases
- Insulated With Epoxy or BeO and Non-insulated Types
- Choice of Plain, Tapped or Stud Mounting Bases

Provide insulated or non-insulated thermal linkage for transistors. Non-insulated types have their components soldered together. Epoxy-insulated (E) clips are economical. Delta bond 152ETC epoxy insulated components which have cadmium plate and gold irridite finish Beryllium oxide insulated (B) clips have highest breakdown voltage and are mainly for applications requiring low stray capacity to the heat sink.

All have Delta Bond 152ETC bond except BeO spacer, are cadmium plated and gold irridited. Mounting bases: plain type can be soldered, epoxy-bonded or used with pan head screws; tapped base; stud mounting base. Hypot ratings (VAC @ 60 Hz): TO-5 "E" 500; TO-5 "B" 1000; TO-18 "E" 250; TO-18 "B" 750. Continuous operating temperature ratings: maximum of 300° F and minimum of 100° F.

Cups are beryllium copper alloy #10, cadmium plate irridite. Bases are cadmium plated and gold irridite. Ceramic spacers are beryllium oxide. For style TO-5; 260P5B, 2604T5E, 2606SH5B. For style TO-18: 2606SH18, 260P18. *For solder or with screw, #4 TO-5, #2 for TO-18. †These types mount with Delta Bond 152. Av. shpg. wt., ¼ oz.

Units	Plain	Tapped base for 4-40 screw	Tapped base for 2-56 screw	Stud 6-32
TO-5 Non-Insulated	260P5*	2604T5	.....	2606SH5
TO-5 Epoxy Insulated	.....	2604T5E	.....	20606SH5E
TO-5 BeO Insulated	260P5B†	2604T5B	.....	2606SH5B
TO-18 Non-Insulated	260P18*	.....	2602TH18	2606SH18
TO-18 Epoxy Insulated	.....	.....	2602TH18E	2606SH18E
TO-18 BeO Insulated	260P18B†	.....	2602TH18B	2606SH18B

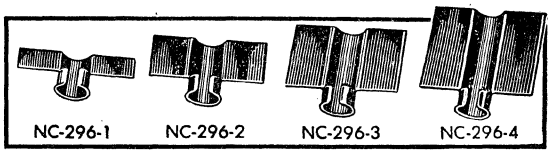
Stock No.	Mfr's Type	Fig.	Typ. case to sink thermal resis. (°C/W)	Typ. case to sink capacitance (pF)	EACH 1-99	100-499	500-999
60 D 6400	260P5	A	12	.....	.12	.10	.09
60 D 6401	2604T5	C	12	.....	.30	.26	.23
60 D 6402	2606SH5	E	12	.....	.32	.29	.25
60 D 6403	2604T5E	C	14	30	.38	.34	.29
60 D 6404	2606SH5E	E	14	30	.41	.36	.32
60 D 6405	260P5B	A	16	3	.50	.44	.38
60 D 6406	2604T5B	C	16	3	.65	.57	.50
60 D 6407	2606SH5B	E	16	3	.74	.65	.56
60 D 6408	260P18	A	22.5	.....	.12	.10	.09
60 D 6409	2602TH18	C	22.5	.....	.30	.26	.23
60 D 6410	2606SH18	D	22.5	.....	.32	.29	.25
60 D 6411	2602TH18E	C	25.0	16	.38	.34	.29
60 D 6412	2606SH18E	B	25.0	16	.41	.36	.32
60 D 6413	260P18B	A	27.5	1.5	.44	.39	.34
60 D 6414	2602TH18B	C	27.5	1.5	.68	.60	.52
60 D 6415	2606SH18B	D	27.5	1.5	.68	.60	.52

TYPE 292 HEAT SINK FOR TO-92 TRANSISTORS

Provides efficient heat dissipation for most TO-92 plastic transistors. Made of Type 6061-T6 aluminum with black immersion finish. Collector lead temperature rise above ambient is 18° C for power dissipation of 0.2 watt (natural convection characteristics). Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Inches Width	Inches Depth	PKG. OF 100 1-4	5-9	10-24	25-49
60 D 7050	6061-T6	⅜	¾	1.90	1.70	1.54	1.35

TYPE 296 HEAT SINKS FOR TO-5 TRANSISTORS

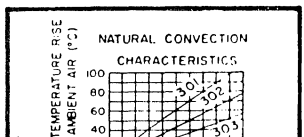


Aluminum heat sinks snap onto TO-5 transistors, for effective dissipation using minimum space on printed circuit board. Made of Type 6061T6 aluminum, with prepainted black finish (edges have no finish. Transistor mounting is .285" dia., extends approx. .21". Av. shpg. wt., 8 oz. 100 per package.

60 D 7100	NC-296-1A	1¼	¼	2.65	2.37	2.14	1.89
60 D 7101	NC-296-2A	1¼	½	2.89	2.55	2.32	2.05
60 D 7102	NC-296-3A	1¼	¾	2.95	2.69	2.40	2.15
60 D 7103	NC-296-4A	1¼	1	3.50	3.10	2.80	2.50

SERIES 300 RECTIFIER COOLERS

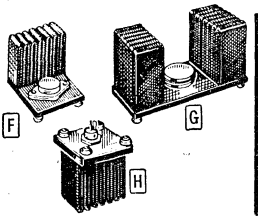
Increases Semiconductor Longevity

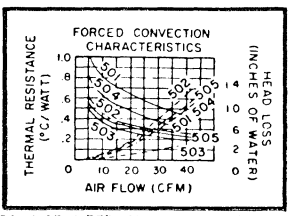


Radial fin. Accommodate stud-mounted (up to 1⅛") hex case, press-fitted rectifiers. MIL-spec black finish. Use Type 103 Teflon® insulators. Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Inches H	W	D	EACH 1-49	50-99	100-249	250-499
60 D 7077	NC301M	.75	2.00	2.00	1.55	1.30	1.05	.90
60 D 7078	NC301N	.75	2.00	2.00	1.55	1.30	1.05	.90
60 D 7079	NC301R	.75	2.00	2.00	1.55	1.30	1.05	.90
60 D 7080	NC301RR	.75	2.00	2.00	1.55	1.30	1.05	.90
60 D 7082	NC302M	1.50	2.00	2.00	1.65	1.40	1.15	1.04
60 D 7083	NC302N	1.50	2.00	2.00	1.65	1.40	1.15	1.04
60 D 7084	NC302R	1.50	2.00	2.00	1.65	1.40	1.15	1.04
60 D 7087	NC302RR	1.50	2.00	2.00	1.95	1.65	1.35	1.20
60 D 7089	NC303M	3.00	2.00	2.00	1.90	1.60	1.33	1.26
60 D 7090	NC303N	3.00	2.00	2.00	1.90	1.60	1.33	1.26
60 D 7091	NC303R	3.00	2.00	2.00	1.90	1.60	1.33	1.26
60 D 7093	NC303RR	3.00	2.00	2.00	2.20	1.85	1.50	1.39

SERIES 500 "COPPERCOOL" COOLERS





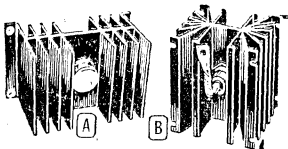
Semiconductor Mounting Areas: 501, 1.25x1.75"; 502, 1.50x1.75"; 503, 1.5x3.0"; 504, 1.75x1.75"; 505, 2.0x1.75". Fits any mtg. style 8 oz.

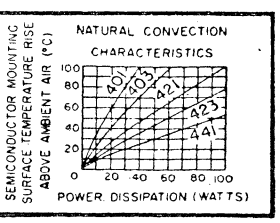
Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-49	50-99	100-249
60 D 6279	FC501A	F	1.75	1.75	2.25	5.61	5.20	4.96
60 D 6280	FC501B	F	1.75	1.75	2.25	5.45	4.86	4.64
60 D 6281	FC501K	F	1.75	1.75	2.25	5.06	4.51	4.24
60 D 6282	FC502A	H	1.75	3.50	1.75	8.03	7.47	7.13
60 D 6283	FC502B	G	1.75	3.50	1.75	7.87	7.14	6.82
60 D 6284	FC502K	G	1.75	3.50	1.75	7.48	6.71	6.33
60 D 6285	FC503A	G	1.75	3.50	1.75	13.42	12.05	11.28
60 D 6286	FC503B	G	1.75	3.50	1.75	13.26	11.88	11.11
60 D 6287	FC503K	G	1.75	3.50	1.75	12.87	11.55	10.84
60 D 6288	FC504K	H	1.75	3.50	1.75	4.76	4.53	4.33
60 D 6289	FC505K	H	1.75	1.75	2.00	6.71	6.00	5.73

Call the Nearest Allied Office for All Your Electronic Needs

Wakefield Engineering Semiconductor Coolers

SERIES 400 NATURAL CONVECTION COOLERS

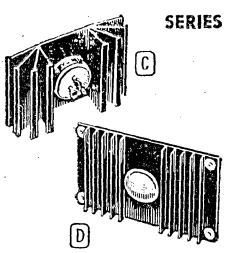


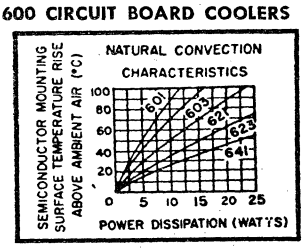


Optimum fin design for reliability in a wide range of semiconductor uses. Mtg. area, Types 401-423, 6.3 sq. in.; Type 441, 7.13 sq. in. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-49	50-99	100-249	250-499
60 D 6501	NC401A	A	1.50	4.81	1.25	1.55	1.27	1.07	.92
60 D 6502	NC401B	A	1.50	4.81	1.25	1.55	1.27	1.07	.92
60 D 7094	NC401E	A	1.50	4.81	1.25	1.78	1.45	1.22	1.06
60 D 6503	NC401K	A	1.50	4.81	1.25	1.29	1.06	.88	.76
60 D 6504	NC403A	A	3.00	4.81	1.25	1.78	1.45	1.23	1.07
60 D 6505	NC403B	A	3.00	4.81	1.25	1.78	1.45	1.23	1.07
60 D 7096	NC403C	A	3.00	4.81	1.25	1.78	1.45	1.23	1.07
60 D 6506	NC403K	A	3.00	4.81	1.25	1.52	1.24	1.05	.90
60 D 9526	NC413A	A	3.00	4.81	1.87	2.41	1.96	1.65	1.43
60 D 9527	NC413B	A	3.00	4.81	1.87	2.41	1.96	1.65	1.43
60 D 9528	NC413K	A	3.00	4.81	1.87	2.15	1.75	1.46	1.27
60 D 6507	NC421A	A	3.00	4.81	2.63	2.51	2.05	1.73	1.49
60 D 6508	NC421B	A	3.00	4.81	2.63	2.51	2.05	1.73	1.49
60 D 7098	NC421C	A	3.00	4.81	2.63	2.51	2.05	1.73	1.49
60 D 6509	NC421K	A	3.00	4.81	2.63	2.24	1.84	1.54	1.32
60 D 6510	NC423A	A	5.50	4.81	2.63	3.66	2.98	2.52	2.26
60 D 6511	NC423B	A	5.50	4.81	2.63	3.66	2.98	2.52	2.26
60 D 6512	NC423K	A	5.50	4.81	2.63	3.40	2.77	2.33	2.13
60 D 7106	NC441J	B	5.50	4.75	4.50	6.41	5.24	4.37	3.86
60 D 7107	NC441W	B	5.50	4.75	4.50	6.41	5.24	4.37	3.86
60 D 6533	NC441K	B	5.50	4.75	4.50	5.92	4.84	4.03	3.56

SERIES 600 CIRCUIT BOARD COOLERS

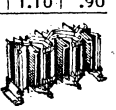




The natural convention characteristics are shown both for units mounted with fins and base plane vertical and with base plane horizontal. Semiconductor mounting area for Type NC601 and Type NC603 is 1.64 sq. inches. Semiconductor mounting area for Type NC621 through Type NC623 is 6.3 sq. inches. Semiconductor mounting area for Type NC641 is 5.40 sq. inches. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-49	50-99	100-249	250-499
60 D 7054	NC601K	C	1.25	2.02	.56	1.10	.90	.70	.55
60 D 7049	NC603T	C	2.00	2.02	.56	1.50	1.20	.95	.80
60 D 7055	NC603K	C	2.00	2.02	.56	1.20	.95	.75	.60
60 D 7056	NC621A	D	1.50	4.81	.46	1.65	1.35	1.10	.95
60 D 7057	NC621B	D	1.50	4.81	.46	1.65	1.35	1.10	.95
60 D 7058	NC621K	D	1.50	4.81	.46	1.35	1.10	.90	.75
60 D 7059	NC623A	D	3.00	4.81	.46	1.80	1.50	1.20	1.05
60 D 7061	NC623K	D	3.00	4.81	.46	1.50	1.25	1.00	.85
60 D 7062	NC641A	C	3.00	4.12	1.00	1.95	1.60	1.30	1.10
60 D 7063	NC641B	C	3.00	4.12	1.00	1.95	1.60	1.30	1.10
60 D 7064	NC641K	C	3.00	4.12	1.00	1.65	1.35	1.10	.90

Series 300 Rectifier Stack Hardware Kit. For use with Types NC301, 302, 303 R and RR coolers. Has bus bars, lugs, insulating supports, mtg. feet, and rectifier driving blocks. 6 oz.
60 D 9561 ..... Each 19.95



300

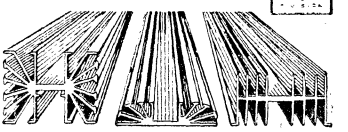
Series 400 Vertical Mtg. Brackets. Meet MIL-202B vibration specs. Type 111 for NC401, 403; Type 113 for NC421, 423. Use 2 per sink. Use Teflon insulator #103 for mtg. 6 oz.

Stock No.	Type No.	1-99 EA.	100-499 EA.
60 D 9529	111	.16	.14
60 D 9530	113	.20	.17

400

HEAT SINK EXTRUSIONS IN THREE-FOOT LENGTHS

- Extend Cooling Areas
- Accommodate Many Different Types



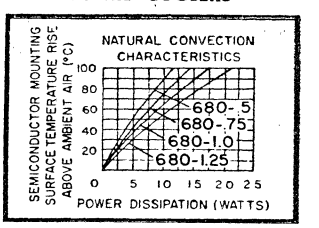
440 640 420

Heat Sink Extrusion in 3-Foot Lengths. Extrusions for use with Series NC300, 400 and 600 heat sink coolers. Av. shpg. wt., 4 lbs.

Stock No.	Mfr's Type	For Cooler Type	Inches H	W	PER 3-FT. LGTH. 1-4	5-9	10-25
60 D 9509 X	300	NC301, 302, 303	2.00	2.00	6.60	5.50	4.95
60 D 9510 X	400	NC401, 403	1.25	4.81	8.50	7.15	6.30
60 D 9522 X	410	NC413	1.87	4.81	14.00	12.10	10.45
60 D 9511 X	420	NC421, 423	2.63	4.81	14.00	12.10	10.45
60 D 9512 X	440	NC441	4.50	4.75	22.55	18.25	17.05
60 D 9513 X	600	NC601, 603	.56	2.00	3.55	3.00	2.75
60 D 9515 X	620	NC621, 623	.46	4.81	6.30	5.50	4.65
60 D 9516 X	640	NC641	1.00	4.12	8.25	7.15	6.30

SERIES 680 CIRCUIT BOARD COOLERS

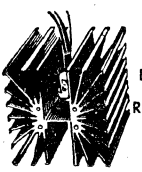
Optimum Natural Convection Cooling Above Circuit Board



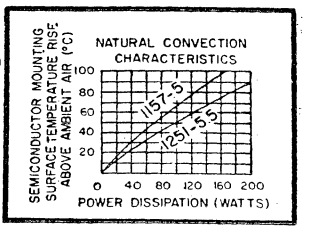
For transistor case sizes such as TO-5, TO-36, 2N-1016 or smaller. High thermal conductivity aluminum alloy. 1.81x1.81" mtg. centers. 2 oz.

Stock No.	Mfr's Type	Inches H	W	D	EACH 1-49	50-99	100-249	250-499
60 D 9531	NC680-.5A	.50	1.81	1.81	.91	.85	.80	.76
60 D 9532	NC680-.5B	.50	1.81	1.81	.91	.85	.80	.76
60 D 9533	NC680-.5K	.50	1.81	1.81	.91	.85	.80	.76
60 D 9534	NC680-.75A	.75	1.81	1.81	.92	.87	.84	.80
60 D 9535	NC680-.75B	.75	1.81	1.81	.92	.87	.84	.80
60 D 9536	NC680-.75K	.75	1.81	1.81	.92	.87	.84	.80
60 D 9537	NC680-1.0A	1.00	1.81	1.81	1.06	1.00	.96	.92
60 D 9538	NC680-1.0B	1.00	1.81	1.81	1.06	1.00	.96	.92
60 D 9539	NC680-1.0K	1.00	1.81	1.81	1.06	1.00	.96	.92
60 D 9540	NC680-1.25A	1.25	1.81	1.81	1.12	1.06	1.02	.97
60 D 9541	NC680-1.25B	1.25	1.81	1.81	1.12	1.06	1.02	.97
60 D 9542	NC680-1.25K	1.25	1.81	1.81	1.12	1.06	1.02	.97

GN SERIES FOR 70/200 AMP RECTIFIERS



Designed For Systems Requiring High Reliability



Replace forced convection systems. Black anodized finish. Width of semiconductor mounting area: GN1157, 1.07" minimum; GN1251, 1.31" minimum. Av. wt., 4 oz.

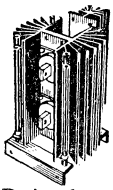
Stock No.	Mfr's Type	Inches H	W	D	EACH 1-24	25-49	50-99	100-199
60 D 9543	GN1157-5H	4.12	4.12	5.00	6.22	5.92	5.65	5.18
60 D 9544	GN1157-5J	4.12	4.12	5.00	6.22	5.92	5.65	5.18
60 D 9500	GN1157-5K	4.12	4.12	5.00	5.86	5.58	5.33	4.88
60 D 9545	GN1251-5.5W	5.00	5.00	5.50	8.52	8.10	7.74	7.10
60 D 9501	GN1251-5.5K	5.00	5.00	5.50	8.16	7.77	7.42	6.80

ATTENTION INDUSTRIAL BUYERS

Allied maintains complete stocks of Wakefield products. For complete information on any types not listed in this catalog, simply contact the Allied facility nearest you. Depend on Allied for prompt service, fast shipment and OEM prices on all your electronic needs.

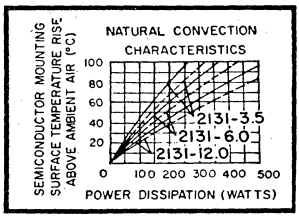
Wakefield, Avtron Coolers and Accessories

WAKEFIELD ENGINEERING COOLERS AND ACCESSORIES



MN SERIES—240/650 AMP RECTIFIERS

Natural Convection For High-Power Rectifiers

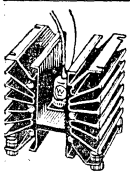


Designed to mount and cool multi-cell high-power rectifiers as large as 3½x3½" square plate. Aluminum alloy per MIL-QQ-A-200 specs. Black anodize finish per MIL-A-8625 Type II. Av. shpg. wt., 4 oz.

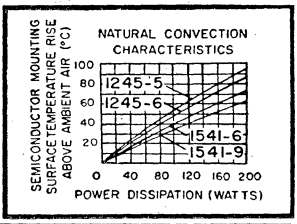
*Inserts for increased heat dissipation.

Stock No.	Mfr's Type	Inches H	W	D	EACH 1-9	10-24	25-49	50-99
60 D 9553	MN2131-3.5K	3.5	9.25	6.75	8.16	7.42	6.80	6.53
60 D 9554	MN2131-6K	6.0	9.25	6.75	13.78	12.53	11.50	11.02
60 D 9555	MN2131-12K	12.0	9.25	6.75	24.86	22.60	20.72	19.90
60 D 9556	MN2159-3.5K*	3.5	3.37	3.43	2.00	1.82	1.67	1.60
60 D 9557	MN2159-6K*	6.0	3.37	3.43	3.22	2.93	2.68	2.58
60 D 9558	MN2159-12K*	12.0	3.37	3.43	6.16	5.60	5.13	4.93
60 D 9559	109		1.5	7.50	1.50	Plastic Angle Brkt. EA. .95		

WN SERIES FOR 70/359 AMP RECTIFIERS

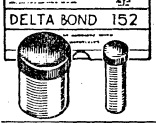


King-Size Heat Sinks For High-Power Rectifiers



For 1⅛", 1¼" and 1¾" hex rectifiers and SCR's. Min. width of mtg. area: WN1244, 1.10"; WN1245, 1.28"; WN-1541, 1.76". Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Inches H	W	D	EACH 1-24	25-49	50-99	100-199
60 D 9546	WN1244-5H	4.00	4.00	5.00	4.85	4.38	4.18	3.83
60 D 9547	WN1244-5J	4.00	4.00	5.00	4.85	4.38	4.18	3.83
60 D 9502	WN1244-5K	4.00	4.00	5.00	4.50	4.22	4.04	3.70
60 D 9548	WN1245-6W	5.00	5.00	6.00	7.56	7.11	6.87	6.30
60 D 9503	WN1245-6K	5.00	5.00	6.00	6.92	6.59	6.21	5.77
60 D 9549	WN1541-6Z	6.25	6.25	6.00	10.36	9.86	9.42	8.63
60 D 9550	WN1541-6Y	6.25	6.26	6.00	10.36	9.86	9.42	8.63
60 D 9504	WN1541-6K	6.25	6.25	6.00	9.74	9.28	8.85	8.12
60 D 9551	WN1541-9Z	6.25	6.25	9.00	14.82	14.11	13.47	12.35
60 D 9552	WN1541-9Y	6.25	6.25	9.00	14.82	14.11	13.47	12.35
60 D 9505	WN1541-9K	6.25	6.25	9.00	14.08	13.41	12.80	11.73



TYPE 152 DELTA BOND ADHESIVE

For thermally bonding semiconductors and components to chassis or heat sinks while electrically isolating one from the other; fabricating heat sinks or thermal links; all permanent bonding of assemblies which require highly thermally conductive interfaces. Provides high heat flow and electrical isolation. Effective on porous and nonporous surfaces such as metals, glass, and ceramics.

Stock No.	Mfr's Type	Shpg. Wt.	EACH
60 D 9493	152-1-RTA	1 oz. kit	2.25
60 D 9499	152-2-RTA	8 oz.	5.00

TYPE 120 THERMAL JOINT COMPOUND

Grease-like material with high thermal resistance. Reduces the high thermal impedance of an air gap present between the mating surfaces of the semiconductor case and then the heat sink surface. Av. shpg. wt., 8 oz.

Stock No.	Type No.	Quantity	EACH
60 D 9506	122	2 oz.	1.95
60 D 9507	128	8 oz.	5.10
60 D 9514	1280	5 lbs.	30.00

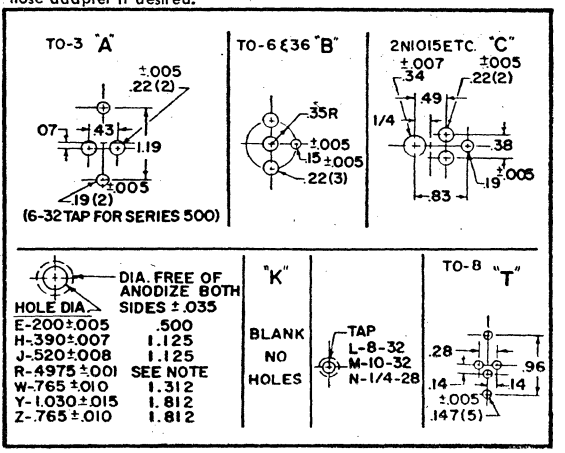
TYPE 153 DELTA CAST

A pourable casting resin for encapsulating components and assemblies. Equalizes assembly temperature by removing heat from components. Has thermal expansion similar to aluminum or copper. Shpg. wt., 8 oz.

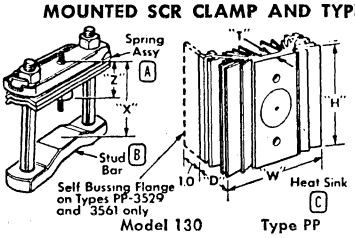
60 D 9494. 8-oz. Jar..... 4.00

STANDARD SEMICONDUCTOR MTG. ACCOMMODATIONS

Type suffix (A, B, etc.) denotes mounting from diagram below. Double suffix denotes 2 mountings. Note: Identification of R (.4975" diameter) hole free of anodize. For Series 500, specify top cover and/or hose adapter if desired.



MOUNTED SCR CLAMP AND TYPE PP HEAT SINK



One Model 130 force indicating clamp and two sinks are required for each compression mounting SCR or diode. Spring assembly includes force indicator. Black painted sinks are center drilled ⅛" diameter, 1⅜" above and below center to accept epoxy coated stud bar, rated 5 kV. T slots accept standard bolt heads for bussing and mounting. 1⅞" diameter flat spot face has no finish. *PWR dissipation per pair of sinks for 75°C natural convention temperature rise. Self-bussing flange on Types PP-3529, 3561 only. Av. wt., 4 oz.

A SPRING ASSEMBLY

Stock No.	Mfr's Type	No. of Leaves	"Z" Inches	Max. Force Lbs.	EACH 1-9	10-24	25-49
60 D 7607	130-2	2	.50	400	1.43	1.31	1.15
60 D 7608	130-3	3	.61	800	1.75	1.60	1.45
60 D 7609	130-4	4	.72	1200	2.05	1.85	1.70
60 D 7610	130-5	5	.83	2000	2.35	2.10	1.90

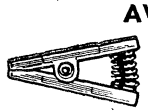
B STUD BAR

Stock No.	Mfr's Type	"X" Inches Min.	Max.	EACH 1-9	10-24	25-49
60 D 7611	130-A	1.74	2.12	2.38	2.10	1.90
60 D 7612	130-B	2.05	2.43	2.38	2.10	1.90
60 D 7613	130-C	2.36	2.74	2.38	2.10	1.90
60 D 7614	130-D	2.67	3.05	2.52	2.22	2.00
60 D 7615	130-E	2.98	3.36	2.52	2.22	2.00
60 D 7616	130-F	3.29	3.67	2.53	2.22	2.00
60 D 7617	130-G	3.60	3.98	2.53	2.22	2.00

C HEAT SINKS

Stock No.	Mfr's No. Per Pair	Inches H	W	D	T	*Watts	EACH 1-4	5-9	10-24	25-49
60 D 7618	3849-4.5-BA	4.5	5.0	1.1	.31	103	6.05	5.10	4.25	3.57
60 D 7619	3529-4.5-BA	4.5	5.0	1.1	.31	103	5.35	4.45	3.80	3.12
60 D 7620	3560-4.5-BA	4.5	5.0	2.0	.38	145	8.35	7.15	5.90	4.95
60 D 7621	3561-4.5-BA	4.5	5.0	2.0	.38	145	7.60	6.45	5.35	4.48
60 D 7622	3559-4.5-BA	4.5	7.0	3.1	.38	235	12.20	10.20	8.60	7.20
60 D 7623	3559-7.5-BA	7.5	7.0	3.1	.38	300	18.10	15.40	12.80	10.40

AVTRON HEAT-SINK CLIP

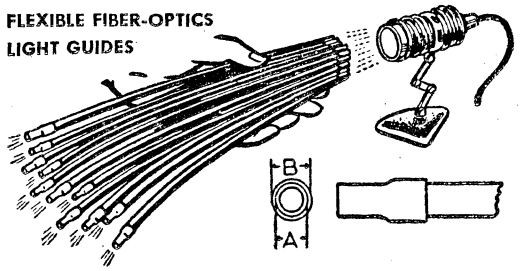


Protect semiconductors from effects of heat generated while soldering. Spring-loaded, aluminum clip fits around wire between semiconductor and joint. 2 oz.

60 D 8819. 1-99 Each .25 100-Up Each .20

Fiber Optics, SCR Circuits, Preamps, TV Camera

AMERICAN OPTICAL FIBER OPTICS

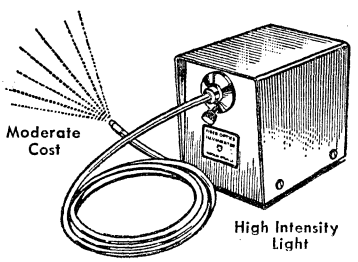


Flexible light guides transmit light over a flexible path. Can be used for remote illumination, fire detection, control systems, much more. Consist of bundles of optical fibers cemented and polished at each end. Guides have stainless steel end tips; encased in PVC sheath. Transmit light through visible and near infrared spectrum to a wave-length about 1.5 microns. Wt., 2 oz.

Stock No.	Mfr's Type	Min. Rad. of Bend	Bundle Dia.	A ±.003	B ±.004	Lgth.	EACH
60 D 8989	LGM-1	3/8"	.020"	.032"	.032"	12"	4.80
60 D 9780	LGM-1	3/8"	.020"	.032"	.032"	24"	6.40
60 D 8990	LGM-2	5/8"	.062"	.110"	.160"	12"	13.00
60 D 9781	LGM-2	5/8"	.062"	.110"	.160"	24"	14.00
60 D 8991	LGM-2	5/8"	.062"	.110"	.160"	36"	15.00
60 D 9782	LGM-2	5/8"	.062"	.110"	.160"	48"	16.00
60 D 8992	LGM-2	5/8"	.062"	.110"	.160"	72"	18.00
60 D 8993	LGM-3	3/4"	.125"	.169"	.250"	12"	15.00
60 D 9784	LGM-3	3/4"	.125"	.169"	.250"	24"	18.00
60 D 8994	LGM-3	3/4"	.125"	.169"	.250"	36"	21.00
60 D 9785	LGM-3	3/4"	.125"	.169"	.250"	48"	24.00
60 D 9787	LGM-3	3/4"	.125"	.169"	.250"	72"	30.00
60 D 8995	LGM-5	1 1/2"	.250"	.316"	.403"	12"	21.00
60 D 9772	LGM-5	1 1/2"	.250"	.316"	.403"	24"	29.50
60 D 8996	LGM-5	1 1/2"	.250"	.316"	.403"	36"	38.00
60 D 9774	LGM-5	1 1/2"	.250"	.316"	.403"	60"	55.00
60 D 9775	LGM-5	1 1/2"	.250"	.316"	.403"	72"	63.50

Light Transmitting Clad Rod. Consists of a glass core with refraction index of 1.62 and glass cladding having an index of 1.52. Can be bent in Bunsen flame. Should not be bent to radius of under 2.5".
60 D 7225. Type CR-1-6. 1/8" dia. x 12". Wt., 2 oz. 2.30
60 D 7226. Type CR-1-12. 1/8" dia. x 12". Wt., 2 oz. 3.25

FIBER OPTIC ILLUMINATOR



Model K-150. Fiber Optic Illuminator specially designed for use with AO Fiber Light Guides. Provides a convenient, inexpensive and constant source of intense illumination for a wide variety of fiber optic applications.

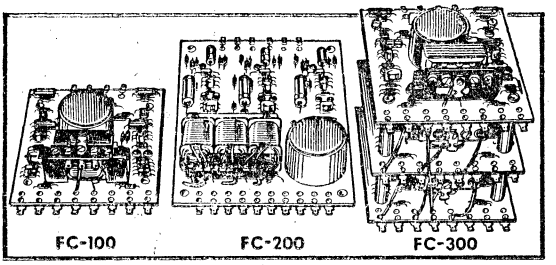
Provides intense illumination for Types LGM-1 and Type LGM-2 light guides up to 3/8-inch in diameter, listed in table above. The light source is a 150-watt reflector projection lamp. The light output is continuously variable by means of a solid-state controller. An efficient fan provides for cool operation. Rated lamp life at full voltage is fifteen hours. Yellow. Size, 6x5x8". Carrying handle. For 110-120 volts, 60 cycle AC. Shpg. wt., 3 1/2 lbs.
60 D 9271 ..... 79.75
60 D 9748. Type DCL Replacement Lamp. For K-150 ..... 5.95

Fused Fiber Image Conduit. Fiber bundle rod is capable of transmitting images from one end to the other. These rods can be heated and bent into complex shapes. Carbon rods or blocks may be used as forms to bend to desired configuration. Conduit supplied with polished ends. *Resolution in total lines per millimeter. Wt., 3 oz.

Stock No.	Mfr's Type	Cross Section	Lgth.	No. of Fibers	Fiber Dia.	Res.*	EACH
60 D 7205	IC-1-6	1/8" hex	6"	73,000	.0005"	80	7.00
60 D 7206	IC-1-12	1/8" hex	12"	73,000	.0005"	80	12.50
60 D 6628	IC-100-6	1/8" Rnd	6"	70,000	.0005"	80	5.50
60 D 6629	IC-100-12	1/8" Rnd	12"	70,000	.0005"	80	9.50

A single order to Allied will take care of all your electronic needs. You get factory OEM prices, same-day shipment, and personalized service. Contact the Allied facility nearest you.

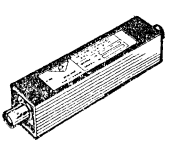
IR SCR FIRING CIRCUITS



Series FC. Standardized SCR firing circuits provide hard-firing gate triggering pulse. Eliminate SCR failure due to di/dt, false firing and interaction. Negative gate bias of 0.7 volt permits full utilization of SCR dv/dt. Magnetic amplifier isolated gate signals permit use in full-wave DC or anti-parallel AC circuit applications. Dual wound transformers allow selction of input voltage. Can be used for firing all JEDEC SCR's rated 10 amps or more. Typical applications include: speed controls, servo controls, generator and inverter regulators, constant-voltage or constant-current power supplies, temperature controls, winding equipment, battery chargers, Control Values: Type FC-100, 5 to 95% of average DC voltage, 9 to 99% of rms voltage; FC-200, 4 to 96% of average DC voltage, 9 to 97.5% of rms voltage (8.2-93.4% AC); FC-300, 4-90% of average DC voltage, 9-92% of rms (8-90% AC).

Stock No.	Mfr's Type	Input (50/60 Hz) Phase	V(+10%)	V A	Size, In.	Wt., Lbs.	EACH 1-9	EACH 10-24
60 D 6496	FC-100	1	120/240	7	5x6x2 1/2	1 1/2	60.00	51.00
60 D 6497	FC-200	2	240/480	18	6x8 1/2 x2	1 1/2	130.00	110.00
60 D 6498	FC-300	3	240/480	21	5x6x7 1/2	1 1/2	215.00	183.00

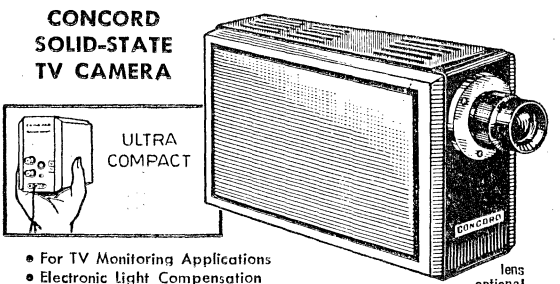
APPLIED CYBERNETICS MICRO POWERED INSTRUMENT PREAMPS



Featuring all silicon semiconductors, low noise, small rugged package, and over one year of continuous operation from internal mercury cells, these preamplifiers are ideally suited for both-laboratory and field applications. For upgrading the sensitivity and input impedance of oscilloscopes, counters, and VTVM's, they are ideal as preamplifiers for transducers such as medical sensors, accelerometers, hydrophones, and strain gauges. Output impedance: 100 ohms. Integrated rms noise: 3 μV for 100 kHz except for models with H in model number, which are 3 μV for 10 kHz. *Open circuit. Size, 4x1x1". Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Gain dB	Response (−3 dB)	Input Z Meg	Output *p-p V	EACH
51 D 5794	4UA	40	0.5-100 kHz	1	1.4	87.00
51 D 5795	2UA	20	0.5-500 kHz	5	1.4	85.00
51 D 5796	4UAH	40	0.5-100 kHz	500	1.4	97.00
51 D 5797	2UAH	20	0.5-200 kHz	1000	1.4	95.00
51 D 5798	4UAHV	20-40	0.5-100 kHz	500	1.2	150.00
51 D 5799	2UAHV	0-20	0.5-250 kHz	500	1.2	150.00

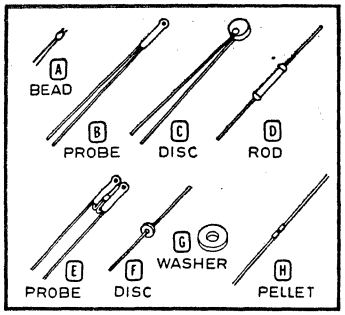
CONCORD SOLID-STATE TV CAMERA



- For TV Monitoring Applications
- Electronic Light Compensation
- Video and RF Outputs • Intercom Jack

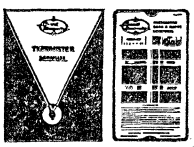
MTC-8. Vidicon camera connects to antenna terminals of standard TV receiver or input of video monitor. High-level output permits long distances between camera and receiver without loss of picture clarity. Intercom jack permits 2-way audio communication. RF and video outputs. Electronic light-compensation circuit automatically adjusts for light conditions. All solid-state circuit. Sensitive 7735A vidicon tube. Resolution, 450 lines. 3x5 1/4 x9 3/8". With 10' AC cord, 18' coax cable, junction box with 75-300-ohm transformer. Requires lens. 115 V, 60 Hz AC. Japan.
51 D 5804 U. Shpg. wt., 12 lbs. 279.50
51 D 5802 U. MTC-12. Above, with f/1.8 lens. Wt., 12 lbs. .. 299.50

Fenwal Electronics Thermistors



High-reliability precision thermal resistors with high negative coefficient of resistance. As temperature increases, resistance goes down. Use glass coated beads for compact size, fast response, and where temperatures go to 600°. Medium-small glass probes similar to beads, but are more rugged, mount more easily and are useful in liquid media. *Iso-Curve interchangeable glass probe thermistors are curved-matched to close resistance tolerances over large temperature spans. Discs are useful for medium power and time response applications. Rods and washers are used where high power dissipation is required. Discs, washers and rods operate at temperatures to +150° C. See Thermistor Engineering Package, below. Av. shpg. wt., 2 oz.

THERMISTOR ENGINEERING PACKAGE

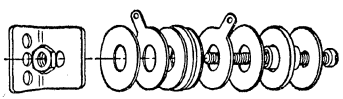


Includes a 5x8" resistance-temperature calculator and a thermistor manual that gives the specifications of over 500 thermistors. Serves as a step-by-step primer and handy guide. Shpg. wt., 4 oz.
60 D 9877.....1.00

WASHER MOUNTING HARDWARE KITS

ASSEMBLY H101

ASSEMBLY H102



ASSEMBLY H103

Include bakelite, steel and lead washers plus terminals, sleeves, screws and nuts for thermistor mounting. H101 uses 10-32 screw and hex nut. H102 uses 10-32 screw and tapped aluminum mounting base with two 8-32 mtg. holes. H103 uses 10-32 screw and steel mounting bracket with 10-32 hex nut.
60 D 9161. Kit H101. Wt., 3 oz. 1-9 Ea. 1.25
10-24.....Each 1.00 25-99.....Each .82
60 D 9162. Kit H102. Wt., 3 oz. 1-9 Ea. 1.25
10-24.....Each 1.00 25-99.....Each .82
60 D 9163. Kit H103. Wt., 3 oz. 1-9 Ea. 1.25
10-24.....Each 1.00 25-99.....Each .82
Kit H100. One each of H101, 2 and 3 above.
60 D 9160. 1-9.....Each 2.50
10-24.....Each 2.00 25-99.....Each 1.63

GLASS COATED BEADS

Stock No.	Mfr's Type	Fig.	Ohms @ 25°C	Tol. ±%	Resis. Ratio 0°C: 50°C	Diss. Const. mW °C	Time Const. (secs)	Dia. In.	EACH 1-9	10-24	25-99
60 D 8621	GD25J1	A	500	20	5.1:1	.7	2	.043	3.24	2.60	2.11
60 D 8622	GB31J1	A	1000	20	7.3:1	.7	2	.043	2.70	2.16	1.76
60 D 9911	GB32J2	A	2000	20	7.3:1	.7	2	.043	1.96	1.57	1.28
60 D 8623	GB35J1	A	5000	20	7.3:1	.7	2	.043	3.24	2.60	2.11
60 D 8624	GB41J1	A	10K	20	7.5:1	.7	2	.043	3.24	2.60	2.11
60 D 8702	GA42J16	A	15K	20	9.1:1	.7	2	.043	3.24	2.60	2.11
60 D 8625	GA45J1	A	50K	20	9.1:1	.7	2	.043	2.67	2.14	1.74
60 D 9909	GA51J1	A	100K	15	10.3:1	.7	2	.043	1.96	1.57	1.28
60 D 8703	GA52J16	A	150K	20	10.3:1	.7	2	.043	2.70	2.16	1.76
60 D 7113	GA52J2	A	200K	20	10.9:1	.7	2	.043	2.70	2.16	1.76
60 D 8626	GA55J1	A	500K	20	11.8:1	.7	2	.043	3.24	2.60	2.11
60 D 7114	GA61J1	A	1000K	20	14.0:1	.7	2	.043	3.78	3.03	2.46

GLASS PROBES

60 D 8627	GB31P2	B	1000	20	7.3:1	1	25	.1	2.00	1.60	1.30
60 D 8628	GB32P2	B	2000	20	7.3:1	1	25	.1	2.00	1.60	1.30
60 D 9912	GB32P8	B	2000	20	7.3:1	1	25	.1	2.35	1.88	1.53
60 D 8629	GB34P2	B	4000	20	7.3:1	1	25	.1	2.00	1.60	1.30
60 D 7115	GB34P92	E*	4000	2	7.04:1	1.9	25	.180	40.00	32.00	26.00
60 D 8630	GB41P2	B	10K	20	7.5:1	1	25	.1	2.40	1.92	1.56
60 D 8631	GB42P2	B	20K	20	7.5:1	1	25	.1	2.40	1.92	1.56
60 D 8705	GA41P8	B	10K	20	9.1:1	1	25	.1	3.24	2.60	2.11
60 D 8706	GA42P18	B	15K	20	9.1:1	1	25	.1	3.24	2.60	2.11
60 D 7116	GA45P2	B	50K	20	9.1:1	1	25	.1	2.20	1.76	1.43
60 D 8707	GA45P48	B	50K	20	10.3:1	1	25	.1	2.98	2.40	2.05
60 D 9910	GA51P8	B	100K	15	10.3:1	1	25	.1	2.00	1.60	1.30
60 D 9967	GA51P8	B	100K	15	10.3:1	1	25	.1	2.35	1.88	1.53
60 D 8632	GA52P2	B	200K	20	10.9:1	1	25	.1	2.00	1.60	1.30
60 D 8633	GA55P2	B	500K	20	11.8:1	1	25	.1	2.40	1.92	1.56
60 D 8708	GA52P48	B	150K	20	10.3:1	1	25	.1	2.60	2.08	1.69
60 D 8709	GA55P8	B	500K	20	11.8:1	1	25	.1	2.82	2.26	1.84
60 D 8634	GA61P2	B	1000K	20	14.0:1	1	25	.1	2.80	2.24	1.82
60 D 8711	GA61P8	B	1000K	20	14.1:1	1	25	.1	3.29	2.64	2.14

GLASS DIODE CLOSURES (PELLETS)

60 D 8712	PB32D1	H	2K	10	6.9:1	2	8	.07	3.00	2.40	1.95
60 D 8713	PB35D1	H	5K	10	6.9:1	2	8	.07	3.00	2.40	1.95
60 D 8721	PA41D1	H	10K	10	6.9:1	2	8	.07	3.00	2.40	1.95
60 D 8722	PA45D1	H	50K	10	9.1:1	2	8	.07	3.00	2.40	1.95
60 D 8744	PA51D1	H	100K	10	9.1:1	2	8	.07	3.00	2.40	1.95
60 D 8745	PP55D1	H	500K	10	11.6:1	2	8	.07	3.00	2.40	1.95
60 D 8746	PP61D1	H	1 meg	10	11.6:1	2	8	.07	3.00	2.40	1.95

DISCS

60 D 8747	FB31J1	C	1K	10	6.9:1	2	3	.05	1.45	1.16	.95
60 D 8748	FB32J1	C	2K	10	6.9:1	2	4	.05	1.45	1.16	.95
60 D 8752	FA41J1	C	10K	10	9.1:1	2	3.5	.05	1.45	1.16	.95
60 D 8753	FA42J1	C	20K	10	9.1:1	2	4.5	.05	1.45	1.16	.95
60 D 8756	FP52J1	C	200K	10	11.6:1	2	4.5	.05	1.45	1.16	.95
60 D 8757	JD12J4	C	15	10	4.8:1	3	10	.1	1.00	.80	.65
60 D 8758	JD21J1	C	100	10	4.8:1	4	10	.1	1.00	.80	.65
60 D 8635	JB25J1	C	500	10	6.9:1	3	10	.1	1.00	.80	.65
60 D 8636	JB31J1	C	1000	10	6.9:1	4	10	.1	1.00	.80	.65
60 D 8637	JA33J1	C	3000	10	9.1:1	3	10	.1	1.00	.80	.65
60 D 9975	JA35J1	C	5000	10	9.1:1	4	10	.1	1.00	.80	.65
60 D 7118	JA38J1	C	8000	10	9.1:1	4	10	.1	1.00	.80	.65
60 D 8638	JA41J1	C	10K	10	9.1:1	4	10	.1	1.00	.80	.65
60 D 9305	JP43J2	C	25K	10	11.6:1	3	8	.1	1.00	.80	.65
60 D 8759	JP45J2	C	50K	10	11.6:1	4	8	.1	1.00	.80	.65
60 D 9307	JP51J1	C	100K	10	11.6:1	4	12	.1	1.00	.80	.65
60 D 9295	KD05J1	C	5	10	4.8:1	4	20	.2	.85	.68	.56
60 D 8761	KD11J3	C	10	10	4.8:1	7.5	16	.2	.85	.68	.56
60 D 8762	KD13J31	C	30	10	4.8:1	8	28	.2	.85	.68	.56
60 D 8763	KD14J1	C	40	10	4.8:1	6	50	.2	.85	.68	.56
60 D 8639	KB21J1	C	100	10	6.9:1	4	16	.2	.85	.68	.56
60 D 8640	KB22J1	C	200	10	6.9:1	5	18	.2	.85	.68	.56
60 D 8641	KB23J1	C	300	10	6.9:1	6	20	.2	.85	.68	.56
60 D 8642	KB25J1	C	500	10	6.9:1	6	25	.2	.85	.68	.56
60 D 9914	KA31L1	F	1000	10	9.1:1	6	20	.2	.85	.68	.56
60 D 7119	KA33J1	C	3000	10	9.1:1	6	22	.2	.85	.68	.56
60 D 8643	KA35J3	C	5000	10	9.1:1	7	35	.2	.85	.68	.56
60 D 9303	KP41J2	C	10K	10	11.6:1	4	20	.2	.85	.68	.56
60 D 9306	KP45J1	C	50K	10	11.6:1	6	50	.2	.85	.68	.56
60 D 8764	CD13J1	C	30	10	4.8:1	10.5	75	.3	.85	.68	.56
60 D 8765	CB21J1	C	100	10	6.9:1	8.5	38	.3	.85	.68	.56
60 D 8766	CB23J1	C	300	10	6.9:1	10.5	75	.3	.85	.68	.56
60 D 8767	CA31J1	C	1000	10	9.1:1	9	48	.3	.85	.68	.56
60 D 8769	CA33J1	C	3000	10	9.1:1	11.5	85	.3	.85	.68	.56
60 D 9294	LD01J1	C	1	10	4.8:1	8	40	.4	.85	.68	.56
60 D 8770	LD03J5	C	2.5	10	4.8:1	14	25	.4	.85	.68	.56
60 D 9296	LD11J1	C	10	10	4.8:1	10	150	.4	.85	.68	.56
60 D 8644	LB12J2	C	18.6	10	6.9:1	6	26	.4	.97	.78	.64
60 D 7120	LB15J1	C	50	10	6.9:1	7	40	.4	.85	.68	.56
60 D 9915	LB21J1	C	100	10	6.9:1	8	65	.4	.85	.68	.56
60 D 8771	LB22J1	C	200	10	6.9:1	11	110	.4	.85	.68	.56

Make Allied Your Headquarters for Everything in Electronics

Fenwal Electronics Thermistors

DISCS (Cont'd)

Stock No.	Mfr's Type	Fig.	Ohms at 25°C	Tol. ±%	Resis. Ratio 0°C to 50°C	Diss. Const. mW °C	Time Const. (secs)	Dia. In.	EACH 1-9	EACH 10-24	EACH 25-99
60 D 8772	LA23J2	C	250	10	9.1:1	14	35	.4	.85	.68	.56
60 D 8646	LA25L2	C	500	10	9.1:1	8	60	.4	.85	.68	.56
60 D 8647	LA31J1	C	1000	10	9.1:1	10	70	.4	.85	.68	.56
60 D 9301	LP32J2	C	2000	10	11.6:1	8	40	.4	.85	.68	.56
60 D 8773	LP33J1	C	2500	10	11.6:1	14	35	.4	.85	.68	.56
60 D 9304	LP42J2	C	15K	10	11.6:1	10	150	.4	.85	.68	.56
60 D 8774	DD05J1	C	5	10	4.8:1	15.5	70	.5	.85	.68	.56
60 D 8807	DD11J1	C	10	10	4.8:1	17.5	120	.5	.85	.68	.56
60 D 8808	DB15J1	C	50	10	6.9:1	15.5	70	.5	.85	.68	.56
60 D 8809	DB21J1	C	100	10	6.9:1	17.5	120	.5	.85	.68	.56
60 D 8810	DA25J3	C	500	10	9.1:1	16.5	90	.5	.85	.68	.56
60 D 8811	DP35J1	C	5K	10	11.6:1	16.5	90	.5	.85	.68	.56
60 D 8648	MB13J1	C	25	10	6.9:1	25	85	.6	.85	.68	.56
60 D 8812	ND01J1	C	.05	10	4.8:1	15	180	.77	.85	.68	.56
60 D 8813	ND01J1	C	1	10	4.8:1	20	50	.77	.85	.68	.56
60 D 8650	NB11J1	C	10	10	6.9:1	20	90	.77	.85	.68	.56
60 D 8814	NA21J1	C	100	10	9.1:1	22	80	.77	.85	.68	.56
60 D 8652	NA22J1	C	250	10	9.1:1	30	140	.77	.85	.68	.56
60 D 9300	NP31J2	C	1000	10	11.6:1	15	180	.77	.85	.68	.56
60 D 9302	NP34J1	C	4000	10	11.6:1	20	300	.77	.85	.68	.56
60 D 8835	ZB11J1	C	10	10	6.9:1	30	120	1.0	1.25	1.00	.82
60 D 8836	ZA22J3	C	250	10	9.1:1	37	260	1.0	1.25	1.00	.82

RODS

Stock No.	Mfr's Type	Fig.	Ohms at 25°C	Tol. ±%	Resis. Ratio 0°C to 50°C	Diss. Const. mW °C	Time Const. (secs)	Dia. In.	EACH 1-9	EACH 10-24	EACH 25-99
60 D 8653	QB41J1	D	10K	10	7.1:1	2.5	20	.053	1.25	1.00	.82
60 D 9916	QA51J1	D	100K	10	9.1:1	2.5	20	.053	1.25	1.00	.82
60 D 8837	RB34J1	D	4300	10	6.9:1	6	50	.11	1.20	.96	.78
60 D 8838	RB41J1	D	10K	10	6.9:1	8	70	.11	1.20	.96	.78
60 D 9918	RA41L1	D	10K	10	9.1:1	6	90	.112	1.20	.96	.78
60 D 9878	RA43L1	D	31.5K	10	9.1:1	4	70	.11	1.20	.96	.78
60 D 8839	RA51J1	D	100K	10	9.1:1	10	70	.11	1.20	.96	.78
60 D 8840	TB35J1	D	5K	10	6.9:1	15	120	.173	1.35	1.08	.88
60 D 8847	RA42J	D	20K	10	9.1:1	13	80	.173	1.20	.96	.78
60 D 8848	TA45J1	D	50K	10	9.1:1	18	120	.173	1.60	1.28	1.04

WASHERS

Stock No.	Mfr's Type	Fig.	Ohms at 25°C	Tol. ±%	Resis. Ratio 0°C to 50°C	Diss. Const. mW °C	Time Const. (secs)	Dia. In.	EACH 1-9	EACH 10-24	EACH 25-99
60 D 9925	WB11W1	G	10	10	6.9:1	860	12	.77	1.25	1.00	.82
60 D 8849	WB23W1	G	315	10	6.9:1	350	18	.77	1.25	1.00	.82

WASHER ASSEMBLIES

Stock No.	Mfr's Type	Style	Ohms at 25°C	Tol. ±%	Resis. Ratio 0°C to 50°C	Diss. Const. mW °C	Time Const. (secs)	Dia. In.	EACH 1-9	EACH 10-24	EACH 25-99
60 D 8903	WB13W1	.....	31.5	10	6.9:1	.....	.....	.77	1.25	1.00	.82
60 D 8904	WB14W3	.....	41.5	10	6.9:1	.....	.....	.77	1.25	1.00	.82
60 D 8905	WA21W1	.....	100	10	9.1:1	.....	.....	.77	1.25	1.00	.82
60 D 8906	WA24W1	.....	415	10	9.1:1	.....	.....	.77	1.25	1.00	.82

ISO-CURVE GLASS COATED INTERCHANGEABLE THERMISTORS

Iso-Curve interchangeable glass coated thermistors are curved-matched to close resistance tolerance over large temperature spans. Resistance tolerance over temperature range, ±2 percent. See table, below, for specific temperature ranges. Bead style, .1 inch diameter with ⅜ inch leads. Miniprobe style, .12" x ½ inch with 1⅜ inch leads. Standard Probe style, .18" x ½ inch with 2-inch leads. Average shpg. wt., 3 oz.

Stock No.	Mfr's Type	Style	Ohms at 25°C	Temp. Range °F	Diss. Const. mW/°C	Time Const. (secs)	EACH 1-9	EACH 10-24	EACH 25-99
60 D 8937	GD24JM1	Bead	370	−50 to +150	0.8	2	30.00	24.00	19.50
60 D 8938	GB32JM1	Bead	2000	0 to +250	0.8	2	30.00	24.00	19.50
60 D 8939	GB42JM1	Bead	15K	+50 to +450	0.8	2	30.00	24.00	19.50
60 D 8940	GA51JM1	Bead	100K	+150 to +600	0.8	2	30.00	24.00	19.50
60 D 8941	GD24MM2	Miniprobe	370	−50 to +150	1.4	16	30.00	24.00	19.50
60 D 9150	GB32MM2	Miniprobe	2000	0 to +250	1.4	16	30.00	24.00	19.50
60 D 9151	GB42MM2	Miniprobe	15K	+50 to +450	1.4	16	30.00	24.00	19.50
60 D 9152	GA51MM2	Miniprobe	100K	+150 to +600	1.4	16	30.00	24.00	19.50
60 D 9153	GD24PM2	Std. Probe	370	−50 to +150	1.9	25	30.00	24.00	19.50
60 D 9154	GB32PM2	Std. Probe	2000	0 to +250	1.9	25	30.00	24.00	19.50
60 D 9155	GB42PM2	Std. Probe	15K	+50 to +450	1.9	25	30.00	24.00	19.50
60 D 9156	GA51PM2	Std. Probe	100K	+150 to +600	1.9	25	30.00	24.00	19.50

UNI-CURVE RT CURVE-MATCHED INTERCHANGEABLE THERMISTORS

Uni-curve thermistors completely interchangeable electrically. For temperature control and compensation. Resistance tolerance over temperature range, ±2%. 2 oz.

Stock No.	Mfr's	Ohms at 25°C	Temp. Range °F	Diss. Const. mW/°C	Time Const. (secs)	Lead Lgth. In.	Dia. Dia. In.	EACH 1-9	EACH 10-24	EACH 25-49
60 D 8910	UUA33J1	3K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09
60 D 8911	UUA35J1	5K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09
60 D 8912	UUA41J1	10K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09
60 D 8933	UUT43J1	30K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09
60 D 8934	UUT45J1	50K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09
60 D 8935	UUT51J1	100K	0°C to 70°C	2	10	3	.095	4.50	3.80	3.09

THERMISTOR ASSEMBLIES

Matched thermistor assemblies designed for use in gas chromatographic equipment and other thermal conductivity gas analysis instruments. Each bead is mounted in a special hermetically-sealed stem. For maximum sensitivity, the higher resistance units should be used at higher ambient temperatures. 8 oz.

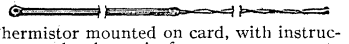
Type G126. Ro at 25°C, 2000 ohms ±25%; Ro at 0° C (approx.), 4900 ohms; Ro at 50°C (approx.), 890 ohms; ratio of Ro 0°/50°C, 4.95-6.95; Ro at max. op. temp., 88 ohms; pair matched Ro at 25°C, 5%. Beta nom. at 25°C, 3000°K. Temp. coef. at 25°C, −3.4%/°C. TC, still air, 1 s. DC, still air, 0.16 mW/°C; DC helium, 0.5 mW/°C. Pwr. rating, air, 15 mW; pwr. rating, helium, 60 mW.

Type G112. Ro at 25°C, 8000 ohms ±20%. Ro at 0°C (approx.), 23,200 ohms; Ro at 50°C (approx.), 3,200 ohms; ratio of Ro 0°/50°C, 6.56-7.99; Ro at max. op. temp., 25 ohms; pair matched Ro at 25°C, 2%. Beta nom. at 25°C, 3495°K. Temp. coef. at 25°C, −3.9%/°C. TC, still air, 1 s. DC, still air, 0.16 mW/°C; DC, helium, 0.5 mW/°C. Pwr. rating air, 45 mW; pwr. rating, helium, 140 mw.

Type G128. Ro at 25°C, 100,000 ohms ±20%; Ro at 0°C (approx.), 355,000 ohms; Ro at 50°C (approx.), 34,000 ohms; ratio of Ro 0°/50°C, 9.45-11.20; Ro at max. op. temp., 110 ohms; pair matched Ro at 25°C, 5%. Beta nom. at 25°C, 4115°K. Temp. coef. at 25°C, −4.6%/°C. TC, still air, 1 s. DC, still air, 0.16 mW/°C; DC, helium, 0.5 mW/°C. Pwr. rating, air, 45 mW; pwr. rating, helium, 140 mW.

Stock No.	Mfr's Type	Description	EACH 1-9	EACH 10-Up
60 D 7122	G126	2-GC32L3	14.42	11.54
60 D 9961	G112	2-GC38L1	26.00	20.80
60 D 9962	G128	2-GA51L2	33.00	26.40

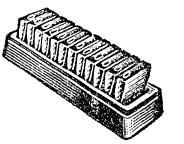
EXPERIMENTER'S THERMISTOR THERMISTOR PROBE



Thermistor mounted on card, with instructions and schematic for use as a remote temperature indicator, liquid level-control, or time-delay relay. Rated 135K at 25°C; 1 mW/°C diss. constant, 25 s; still-air time constant 0.3s in rapidly stirred water.

60 D 6615 Shpg. wt., 2 oz. 1.00

EXPERIMENTER'S THERMISTOR KITS



Model G-200 Standard Kit. Contains 12 different thermistors (2 glass probes, 3 beads, 2 discs, 3 rods, 2 washers). Each thermistor is packed with specification sheets showing characteristics.

60 D 9926. Shpg. wt., 1 lb. 19.95

Model G-700 Low-Cost Kit. Includes four glass beads and probes, manual, and computer for a variety of applications. Shpg. wt., 1 lb.

60 D 8658. ..... 4.95

Model G-701 Economy Kit. Includes 10 glass beads and probes, manual, and computer for a wider range of applications than G-700 kit above. Shpg. wt., 1 lb.

60 D 8659. ..... 9.95

Model G-500 Uni-Curve Kit. Contains 6 standard RT curve-matched interchangeable thermistors (3K, 5K, 10K, 30K, 50K, 100K). Includes complete data sheets with full specifications and DC, TC listings. Shpg. wt., 1 lb.

60 D 9167. ..... 19.95

YSI Thermistors

LOW-COST 1% THERMISTORS

Match standard resistance-temperature curves and each other to 1% or less tolerance over most of useable range of −80°C to +150°C. Chart gives resistance values at each degree of temperature; tolerance curves; dissipation and time constants. Serve as transducers for measurement and control circuits; high precision permits interchanging and multiple monitoring from single circuit, direct dialing of set points. Used as temperature-compensating units for meters, etc. Epoxy encapsulated. Size: .095″ diameter; 3-inch #32 tinned-copper leads. Resistance tolerance: 1% at 25°C. Av. shpg. wt., ¼ oz.

Stock No.	Mfr's Type	Base Res. Ohms	Stock No.	Mfr's Type	Base Res. Ohms
60 D 9806	44001	100	60 D 6417	44007	5000
60 D 9807	44002	300	60 D 9811	44008	30K
60 D 9808	44003	1000	60 D 9812	44011	100K
60 D 6416	44004	2252	60 D 9813	44014	300K
60 D 9809	44005	3000	60 D 9814	44015	1 meg
60 D 9810	44006	10K			

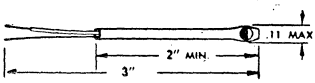
1-9.....Each 4.90 10-29.....Each 4.15 30-99.....Each 3.50

PRECISION ½% THERMISTORS

Match curves and each other to ½% or less over much of usable temperature range of −50°C to 100°C. Epoxy encapsulated, .09″ diameter, and have two 3″ leads. Can be used for temperature measurement, temperature control, differential thermometers and meter compensation. Time constant: in a well stirred oil bath, 1 sec. maximum, or 10 sec. maximum in still air. Dissipation constant: in a well stirred oil bath, 8 mW/°C, or 1 mW/°C in still air minimum. Values may be assorted at quantity prices. Wt., ¼ oz.

Stock No.	Mfr's Type	Base Resistance Ohms at 25° C	EACH 1-9	EACH 10-29	EACH 30-99
60 D 9793	44030	3000	9.90	8.90	7.75
60 D 9794	44031	10K	9.90	8.90	7.75
60 D 9795	44032	30K	9.90	8.90	7.75
60 D 9668	44033	2252	9.90	8.90	7.75
60 D 6418	44034	5000	9.90	8.90	7.75

TEFLON® 1% THERMISTOR PROBES

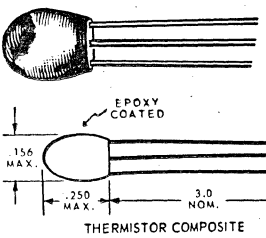


Accurate probes have same interchangeable thermistors listed above, but encased in 2″ long chemically impervious Teflon tube. Match standard resistance-temperature curves to 1% tolerance or less. 3″ leads extend 1″ beyond probe; insulated by smaller Teflon tube around one lead. Dia.: 11″ max. *Resistance tolerance 1% at 25°C. May be assorted for quantity prices. 2 oz.

Stock No.	Mfr's Type	Base Res. Ohms*	Stock No.	Mfr's Type	Base Res. Ohms*
60 D 9815	44101	100	60 D 9820	44108	30K
60 D 9816	44102	300	60 D 9821	44111	100K
60 D 9817	44103	1000	60 D 9822	44114	300K
60 D 9818	44105	3000	60 D 9823	44115	1 meg
60 D 9819	44106	10K			

1-9.....Each 9.90 10-29.....Each 8.90 30-99.....Each 7.75

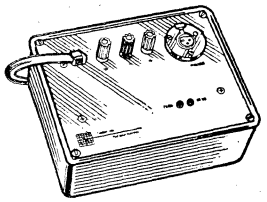
LINEAR OUTPUT THERMISTOR NETWORKS



Thermilinear Thermistor Networks. Precision devices provide linear voltage or resistance outputs with change of temperature. Many have sensitivities of 20 mv/°C or more, 400 times that of an IC thermocouple. Linearity deviations are as little as 2 parts in 1000 from 0 to 100°C. Useful for direct digital temperature indication with DVM or linear recorder. Linear temperature compensation with thermistor sensitivity. Time constant: 1 second in oil. *Additional composite for replacement or multiple work. Av. wt., 1 oz.

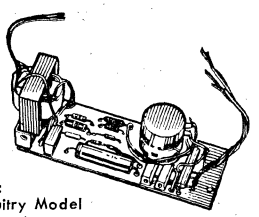
Stock No.	Mfr's Type	Range	Linearity	EACH 1-9	EACH 10-29	EACH 30-99
60 D 9788	44201	0° to +100°C	±.2°C	19.70	18.25	16.80
60 D 9789	44202	−5° to +45°C	±.1°C	19.70	18.25	16.80
60 D 9790	44203	−30° to +50°C	±.2°C	19.70	18.25	16.80
60 D 9791	44204	30° to +100°F	±.075°F	19.70	18.25	16.80
60 D 9792	44018*	−30° to +100°C	.....	14.90	13.70	12.60
60 D 9672	44211	−55° to +85°C	±1.1°C	19.70	18.25	16.80
60 D 9673	44019*	−55° to +85°C	.....	14.90	13.70	12.60

THERMIVOLT THERMILINEAR THERMOMETER



Bench Model

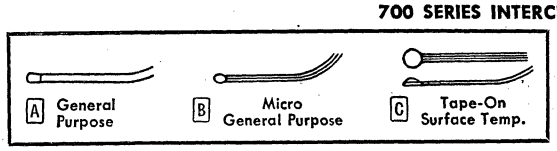
Composed of circuitry necessary to convert Thermilinear Component Type 44018 or 700 Series Thermistor Probe resistance into a DC analog voltage. Voltage conditioned to have direct numeric correspondence with temperature. When applied to proper digital recorders it results in direct reading thermometer. Thermivolt systems available as bench models or as circuitry components. Bench model in black box serves as link between probe and voltmeter. Circuitry components for incorporating temperature measurement function in OEM equipment. Rated at 5 watts maximum. Bench model: 2¼x 6¾x5¼″, 1 lb. Circuitry model: 1 15/16x5⅜x2″, 1¾ lbs. For 115-120 V, 50-60 Hz AC.



Basic Circuitry Model

Accuracy	Range	Sens.	Output	Stock No.	Bench Model	EACH	Stock No.	Basic Model	EACH
±0.4°C	0 to 100°C	1 mV/°C	0 to 100 mV	60 D 6419	741-1	130.00	60 D 6499	751-1	95.00
±0.4°C	0 to 100°C	10 mV/°C	0 to 1 V	60 D 6420	741-10	130.00	60 D 6500	751-10	95.00
±0.25°C	−5 to +45°C	1 mV/°C	−5 to +45 mV	60 D 6421	742-1	130.00	60 D 6549	752-1	95.00
±0.25°C	−5 to +45°C	10 mV/°C	−50 to +450 mV	60 D 6422	742-10	130.00	60 D 6561	752-10	95.00
±0.35°C	−30 to +50°C	1 mV/°C	−30 to +50 mV	60 D 6423	743-1	130.00	60 D 6562	753-1	95.00
±0.35°C	−30 to +50°C	10 mV/°C	−300 to +500 mV	60 D 6424	743-10	130.00	60 D 6563	753-10	95.00
±0.35°C	30 to 100°C	1 mV/°C	30 to 100 mV	60 D 6492	744-1	130.00	60 D 6564	754-1	95.00
±0.35°C	30 to 100°C	10 mV/°C	0.300 to 1 V	60 D 6493	744-10	130.00	60 D 7016	754-10	95.00

700 SERIES INTERCHANGEABLE PROBES



Three types of probes available: General Purpose, Tubular, Tape-on Surface Temperature. All have 10 ft. leads. All have maximum temperature of 100°C. General-purpose Type 701 for esophageal or rectal temperature in humans and larger lab animals; used with long leads for deep water temperature; most rugged, least expensive probe. Tubular Type 703 for rugged duty in liquid immersion use; fast response oral or rectal probe. Immersible only to cap, 4½″. Tape-on Surface Temperature Type 709, easy to tape on skin or flat surface for reading. Average shpg. wt., 2 oz.

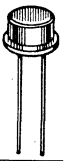
Stock No.	Mfr's Type	Fig.	Material	Time Const.	EACH
60 D 7017	701	A	Vinyl tip	7 sec.	30.00
60 D 7018	703	B	Stainless steel	3.4 sec.	43.50
60 D 7019	709	C	Stain. steel cup, epoxy backed	1.7 sec.	39.50

Make Allied Your Headquarters for Industrial Electronics

Photoconductive Cells by Solar Systems, Inc.

Cut costs by making "one order" purchases from Allied. You pay OEM factory prices. You reduce handling expense in purchasing and receiving. You place one order, receive one shipment, make one disbursement. You also get same-day shipment from the world's largest stock of electronic equipment and components.

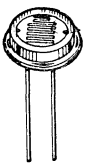
HERMETICALLY SEALED



Cds and CdSe photoconductive cells for instrumentation, control and a variety other industrial applications. Feature high sensitivity to visible light. Hermetically sealed in metal case. Operating temperature range, −30 to +80° C, except types with *, −30 to +70° C. MKB types are cadmium-selenide (CdSe), others cadmium-sulfide (Cds). Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	O.D. In.	Res. KΩ@ 10 ft. C	Res. Megs	Diss. mW	Peak Volts	EACH 1-99	EACH 100-999
60 D 8864	MPY-5H89	.260	200-500	60	120	200	1.50	1.10
60 D 8865	MKY-5H49*	.260	10-20	1	50	150	1.50	1.25
60 D 8866	MPY-7H79	.360	100-200	50	200	150	1.50	1.30
60 D 8867	MKY-7H49*	.360	10-20	2	80	150	1.50	1.25
60 D 8868	MKB-7H26P*	.360	2-6	1.5	60	120	2.50	2.10
60 D 8869	MPY-12H59	.600	20-50	10	500	200	2.60	2.25
60 D 8870	MKB-12H49	.600	10-20	10	300	200	2.50	2.10

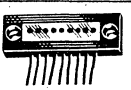
EPOXY SEALED



Cds photocells with plastic coated epoxy seal. Precision manufactured to assure high reliability and operating stability. Feature excellent sensitivity to visible light. Type MPY-25R29 is hermetically sealed in plastic case, temperature range, −30 to +70° C. Type MPY-5C89 temperature range, −20 to +70° C; Types MKY-5C38 and MKY-7C38, −20 to +60° C. MPY types are high-power Cds cells; MKY types are high sensitivity cells. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	O.D. In.	Res. KΩ@ 10 ft. C	Res. Megs	Diss. mW	Peak Volts	EACH 1-99	EACH 100-999
60 D 8871	MPY-25R59	1.180	20-50	10	750	500	3.00	2.50
60 D 8872	MPY-5C89	.200	200-500	60	100	200	.90	.75
60 D 8873	MKY-5C38	.200	3-15	0.3	45	150	.60	.50
60 D 8874	MKY-7C38	.325	3-15	0.3	70	150	.75	.60

SILICON READOUT CELL



For data processing systems, punched card and tape equipment. Features high reliability, low leakage, less than 20 μsec response. Wt., 2 oz.

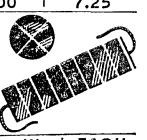
Stock No.	Mfr's Type	Cells	C/C Inch	EACH 1-24	EACH 25-49
60 D 7578	SSR-4-001	4	.1	10.00	8.40
60 D 7579	SSR-5-001	5	.1	12.50	10.50
60 D 7580	SSR-6-001	6	.1	15.00	12.60
60 D 7581	SSR-7-001	7	.1	17.50	14.70
60 D 7582	SSR-8-001	8	.1	20.00	16.80
60 D 7583	SSR-9-001	9	.1	22.50	18.90
60 D 7584	SSR-10-001	10	.1	25.00	21.00
60 D 7585	SSRC Case	9-Pos.	.1	5.00	4.50

SS-300 SILICON CELLS

Designed for use as photovoltaic sensor. 300 mV (minimum) at 1000-ohm load; less than 20 μA at −0.5 volts dark reverse. 1000 fc, 2800°K, 25°C. Spectral Response, 0.4 to 1.15 micron. Coated and sealed against moisture. Wt., 2 oz.

Stock No.	Mfr's Type	Case	EACH 1-9	EACH 10-24
60 D 9753	SS-300-1	TO-5	8.00	7.25
60 D 9754	SS-300-2	TO-5	8.00	7.25
60 D 9755	SS-300-3	TO-11	8.00	7.25
60 D 9756	SS-300-4	TO-11	8.00	7.25

LIGHT-SENSITIVE DEVICES



Silicon solar-cell power devices designed to recharge batteries, operate small meters and low-current relays. Have epoxy coated, 6″ leads. 20 μsec response time. Operating temperature range, −65°C to +175°C. Wt., 2 oz.

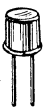
Stock No.	Type SS-	Size Inches	mA min.	mW min.	EACH 1-99
60 D 7566	10-4LC	.8x.4	18	7.2	1.95
60 D 7567	10-6LC	.8x.4	28	11.2	2.40
60 D 7568	10-8LC	.8x.4	36	14.4	3.60
60 D 7569	11LC	.4x.4	12	4.8	1.95
60 D 7570	12LC	.2x.4	5	2	1.50
60 D 7571	20LC	.8x.2	12	4.8	3.50
60 D 7572	21LC	.4x.2	5	2	2.20
60 D 7573	22LC	.2x.2	2.5	1	1.40
60 D 7574	23LC	.2x.1	1.3	.52	1.00
60 D 7575	30LC	1.125 dia.	60	24	6.75
60 D 7576	40LC	.8x.8	50	20	7.25

SS-400 SILICON CELLS

Hermetically sealed glass case, 0.080″ diameter x ½″ long. 1250 fc, 2800°K, 25°C, 1000-ohm load. Ideal for computers, card and tape readers, etc. Wt., 2 oz.

Stock No.	Mfr's Type	Output mV (min.)	Reverse @ −1 Volt	EACH
60 D 9757	SS-400-1	300	10 μA	6.50
60 D 9758	SS-400-2	300	20 μA	5.75
60 D 9759	SS-400-3	250	10 μA	5.00
60 D 9760	SS-400-4	250	20 μA	4.30
60 D 9761	SS-400-5	250	50 μA	3.50
60 D 9762	SS-400-6	200	.....	2.95

SS-500 MINIATURIZED PHOTO CELL



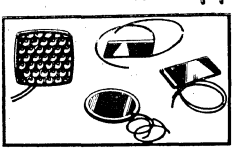
Miniature silicon sensor. N-on-P or P-on-N junction, photo voltaic or photo resistive modes, Isc, 900 μA at 1000 FTC, less than 10 μA at −0.5 volts (N/P) $I_{Rev.}$ TO-18 case. 2 oz.
60 D 8875. 1-24.....Each 6.90 25-49.....Each 6.25

SS-200 SILICON CELLS

High-efficiency sealed, glass covered unit. Diameter, 1.312″. Provide instant electrical energy from sunlight and incandescent light sources. Entire unit is glass covered to protect it from dirt, moisture, and surface damage. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	mA min.	mW min.	EACH
60 D 9749	SS-200A	60	24	11.50
60 D 9750	SS-200B	90	36	13.50
60 D 9751	SS-200C	120	48	17.50
60 D 9752	SS-200D	150	60	25.50

SS-1000 EXPERIMENTERS KIT

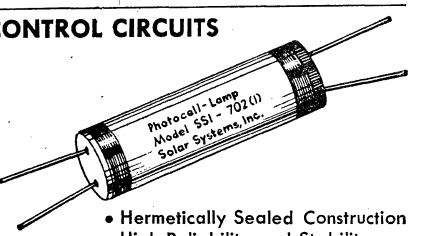


Eight typical cells used in computers, miniature meters, solarized radios, etc. Cad Sulphide, Cad Selenide, Selenium, and Silicon cells. With circuit diagrams.
60 D 8876. Shpg. wt., 16 oz. . 5.75

LAMP ASSEMBLIES FOR OPTOELECTRONIC CONTROL CIRCUITS

Compact hermetically-sealed assembly consists of high-reliability neon or tungsten lamp, plus a composite cadmium sulphide/cadmium selenide photo-resistive cell. Acts as a variable resistor with changes in voltage levels. Countless applications in data processing, automatic equipment, modulating devices, automation systems, etc. Photocell Output: 400 ohms minimum (MCL-701 neon, 500 ohms minimum); 51 megohms maximum; 150 volts maximum. Photocell dissipation is 60 milliwatts. Bulb voltage: 100, 3 or 10 volts AC, as indicated below. Lightweight, but rugged construction; engineered for extra-long life and high stability in demanding industrial applications. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Input (Bulb) Type	VAC	mA	Response Time, msec. Rise	Delay	EACH 1-99	EACH 100-999
60 D 9796	MCL-701	Neon	100	1.5	10	40	2.00	1.65
60 D 9797	MCL-702	Tungsten	3.0	16	50	100	2.00	1.65
60 D 9798	MCL-703	Tungsten	10.0	15	50	150	2.00	1.65

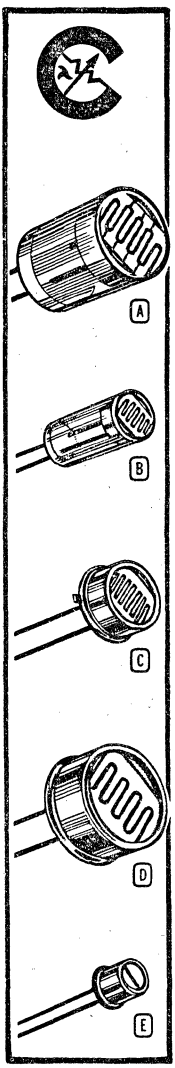


- Hermetically Sealed Construction
- High Reliability and Stability
- Ideal for Data Processing and Automation Systems
- Neon or Tungsten Lamps

Clairex Photocells

CdS AND CdSe PHOTOCELLS

*Res. @ 2 fc ±33⅓%. †Res. ratio from 2 fc to dark within 5 seconds. ‡at 25°C. (mW). §With/without heat sink. Av. shpg. wt., 2 oz.



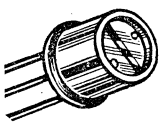
Stock No.	Mfr's Type	Fig.	Description	Dia. x L	*Resist. @ 2 fc	†Max. Res. Ratio	Max. Volt.	‡Power Dissip.	EACH 1-99	EACH 100-499
60 D 9488	CL5M2	D	Type 2 CdS, Peak resp. 5150 A., bluest response photosensitive material; high stability, low temp. error. Use with fluorescent and incandescent lamps.	.55x.18	55K	1:100	250	2000/500§	2.00	1.55
60 D 7460	CL602	B		.25x.5	1 meg	1:100	300	75	1.50	1.15
60 D 7472	CL702	C		.36x.18	1 meg	1:100	300	125	2.00	1.55
60 D 7486	CL902	E		.21x.15	1 meg	1:100	250	50	2.00	1.55
60 D 7469	CL503	A	Type 3 CdSe, peak spectral response 7350 angstroms, fast reponse, and very high light-to-dark resistance ratio. Can be used for high-speed switching or counting. Sensitive to near infra red. For use with incandescent or neon lamps.	.5x.5	7.2K	1:10,000	250	500/250§	1.50	1.25
60 D 9489	CL5M3	D		.55x.18	7.2K	1:10,000	250	2000/500§	1.50	1.25
60 D 7461	CL603	B		.25x.5	133K	1:10,000	300	75	1.75	1.50
60 D 7462	CL603A	B		.25x.5	75K	1:10,000	300	75	1.75	1.50
60 D 7463	CL603AL	B		.25x.5	3.5K	1:10,000	170	75	1.75	1.50
60 D 7473	CL703	C		.35x.18	133K	1:10,000	300	125	1.50	1.25
60 D 6437	CL703A	C		.36x.18	67K	1:10,000	300	125	1.50	1.25
60 D 7474	CL703L	C		.36x.18	2.7K	1:10,000	100	125	1.50	1.25
60 D 7488	CL903	E		.21x.15	133K	1:10,000	250	50	1.50	1.25
60 D 6438	CL903A	E		.21x.15	67K	1:10,000	250	50	1.50	1.25
60 D 6439	CL903L	E		.21x.15	6K	1:10,000	100	50	1.50	1.25
60 D 7456	CL504	A	Type 4 CdSe, peak spectral reponse 6900 angstroms, very low resistance photocells. Can be used for "on-off" applications when low resistance is desired. For use with either incandescent or neon lamps.	.5x.5	1.5K	1:1000	250	500/250§	1.50	1.25
60 D 9490	CL5M4	D		.55x.18	1.5K	1:1000	250	2000/500§	1.50	1.25
60 D 7457	CL504L	A		.5x.5	0.25K	1:1000	170	500/250§	1.50	1.25
60 D 6440	CL5M4L	D		.55x.18	0.25K	1:1000	170	2000/500§	1.50	1.25
60 D 7464	CL604	B		.25x.5	30K	1:1000	300	75	1.75	1.50
60 D 7465	CL604L	B		.25x.5	1.5K	1:1000	170	75	1.75	1.50
60 D 6441	CL704	C		.36x.18	30K	1:1000	300	125	1.50	1.25
60 D 7476	CL704L	C		.36x.18	0.6K	1:1000	100	125	1.50	1.25
60 D 7490	CL904	E		.21x.15	30K	1:1000	250	50	1.50	1.25
60 D 6442	CL904L	E		.21x.15	2K	1:1000	100	50	1.50	1.25
60 D 7458	CL505	A	Type 5 CdS, peak spectral reponse 5500 angstroms (closely matches the human eye), stable, low memory photocell. Can be used in light measuring applications. and precision low speed switching. For use with incandescent, fluorescent or neon lamps.	.5x.5	9K	1:100	250	500/250§	1.50	1.15
60 D 9491	CL5M5	D		.55x.18	9K	1:100	250	2000/500§	1.50	1.15
60 D 7459	CL505L	A		.5x.5	1.5K	1:100	170	500/250§	1.50	1.15
60 D 6443	CL5M5L	D		.55x.18	1.5K	1:100	170	2000/500§	1.50	1.15
60 D 7466	CL605	B		.25x.5	166K	1:100	300	75	1.50	1.15
60 D 7467	CL605L	B		.25x.5	7.5K	1:100	170	75	1.50	1.15
60 D 6444	CL705	C		.36x.18	166K	1:100	300	125	2.00	1.55
60 D 7478	CL705L	C		.36x.18	3.3K	1:100	100	125	1.50	1.15
60 D 6445	CL905	E		.21x.15	166K	1:100	250	50	1.50	1.15
60 D 6446	CL905L	E		.21x.15	10K	1:100	100	50	1.50	1.15
60 D 6447	CL705HL	C	Type 5H CdS, peak response 5500A Uniform color temp. response. For speed switching, hi-stability measuring; incandescent, fluorescent, neon lamps.	.36x.18	28K	1:1000	100	125	1.50	1.35
60 D 6448	CL905HL	E		.21x.15	100K	1:1000	100	50	1.50	1.35
60 D 6449	CL905HN	E		.21x.15	700K	1:1000	100	50	1.50	1.35
60 D 6450	CL507	A	Type 7 CdS, peak spectral reponse 6150 angstroms, moderate speed and ratio. Can be used in general beam breaking applications. For use with incandescent, neon or fluorescent lamps.	.5x.5	7.2K	1:1000	250	500/250§	1.50	1.15
60 D 9492	CL5M7	D		.55x.18	7.2K	1:1000	250	2000/500§	1.50	1.15
60 D 7468	CL607	B		.25x.5	133K	1:1000	300	75	1.50	1.15
60 D 6451	CL707	C		.36x.18	133K	1:1000	300	125	1.50	1.15
60 D 6452	CL707L	C		.36x.18	2.7K	1:1000	100	125	1.50	1.15
60 D 6453	CL907	E		.21x.15	133K	1:1000	250	50	1.50	1.15
60 D 6454	CL907N	E		.21x.15	66K	1:1000	100	50	1.50	1.15
			DUAL ELEMENT							
60 D 6455	CL703/2	C	Type 3 CdSe Photocells contain two separate elements with two separate leads and one common lead.	.36x.18	50K	1:10,000	300	125	2.30	1.95
60 D 6456	CL703L/2	C		.36x.18	6.5K	1:10,000	100	125	2.30	1.95
60 D 6457	CL704/2	C	Type 4 CdSe	.36x.18	17K	1:1000	300	125	1.80	1.55
60 D 6458	CL704L/2	C	Type 4 CdSe	.36x.18	1.5K	1:1000	100	125	1.80	1.55
60 D 6459	CL705/2	C	Type 5 CdSe	.36x.18	166K	1:100	300	125	2.30	1.95
60 D 6460	CL705L/2	C	Type 5 CdS	.36x.18	7.5K	1:100	100	125	1.80	1.45
60 D 6461	CL707H	C	Type 7H CdS Peak Spectral reponse 6150 angstroms. Very fast decay time coupled with low resistance and high linearity. Ideal for beam breaking applications.	.36x.18	500K	1:1000	300	125	1.50	1.35
60 D 6462	CL707HM	C		.36x.18	100K	1:1000	250	125	1.50	1.35
60 D 6463	CL707HL	C		.36x.18	10K	1:1000	100	125	1.50	1.35
60 D 6464	CL907H	E		.21x.15	600K	1:1000	250	50	1.50	1.35
60 D 6465	CL907HN	E		.21x.15	300K	1:1000	100	50	1.50	1.35
60 D 6466	CL907HL	E		.21x.15	24K	1:1000	100	50	1.50	1.35

PHOTOCELL KIT

Five CdS and CdSe cells. CdS types include: CL505, which closely matches human eye response; CL707, for general beam-breaking; CL902, for linear resistance vs. light-level response (smallest hermetically sealed unit). CdSe types include: CL603A, high speed; CL704L, sensitive—66-ohm resistance @ 100 fc.

60 D 9265. Wt., 5 oz..... **10.00**

PHOTOCHOPPER CELLS



Maintain high efficiency over wide temperature range and eliminate warmup time. Efficiency levels, in spite of SPDT configuration: 72% at 1 kHz, 93% at 400 kHz, 98% at 60 Hz. Efficiency change from 28° C to 60° C less than 15%. Range, —50° to +75° C. Rated 50 mW at 25° C. Conductive glass windows and third lead grounded to case for shielding. Size, .210 x .150". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Res. ON Ohms	Res. OFF Ohms	EACH 1-99	EACH 100-499
60 D 7470	CL906CS	82K	8 megs	2.54	1.91
60 D 7471	CL906CLS	2.75K	.27 meg	2.54	1.91

PHOTOMOD® PHOTOCELL-LAMP MODULE

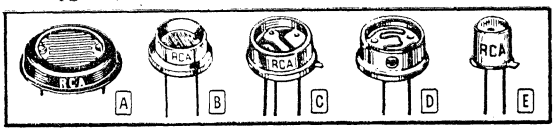
Clairex high stability photocells in photocell-lamp modules. Ideal for use in automation and data processing systems. Hermetically-sealed, high reliability lamps have been combined with proven hermetically-sealed photocells in a rugged potted package. For maximum efficiency, the cells are optically coupled to the lamps. Operating temperature, 20° C to 75° C. Maximum power dissipation 50 mW at 25° C. Maximum cell volts, 120 volts with lamp off. †Maximum voltage for 5000-hour life. *Neon lamps are of the "high-brightness" type. Their brightness, on an equal life basis is approximately ten times that of the standard brightness. In table below, Rise Time is the time-required to reach 110% of on-resistance from off condition; tested after lamp has been on 24 hours. Size, 1⅛" long by ⅜" diameter. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Max. ON Res. in Ohms	Rise Time Seconds	Lamp †Volt.	Lamp mA	EACH
60 D 6467	CLM3006 A	160	.060	6V	40	3.25
60 D 6468	CLM4006 A	55	.080	6V	40	3.25
60 D 6470	CLM3012 A	160	.080	12V	40	3.25
60 D 6471	CLM4012 A	30	.080	12V	40	3.25
60 D 6476	CLM3120 A	1150	.005	120V	2.5*	3.25
60 D 6477	CLM4120 A	160	.005	120V	2.5*	3.25
60 D 6478	CLM5H10A	3000	.120	10V	17	3.50
60 D 6479	CLM7H16A	550	.090	16V	17	3.50

Photocells, Readouts and Warning Devices

RCA CADMIUM-SULFIDE AND CADMIUM-SULFO-SELENIDE PHOTOCELLS

For use in a variety of light-operated control applications. Maximum response for the cadmium-sulfide photocell types occurs at about 5100 angstroms and for the cadmium sulfo-selenide photocells at about 6150 angstroms. The 5100-angstrom cells are for general-purpose use, while the 6150-angstrom cells are for use where faster time-response characteristics are required—the 6150-angstrom units are three times faster. Hermetically sealed glass-metal cases. *Voltage between terminals DC or peak AC. **Power dissipation. †Photocurrent. ‡Voltage between terminals. §Illumination. §§Maximum decay current. #Continuous service. ##AC. Av. shpg. wt., 2 oz.



BROAD-AREA CADMIUM-SULFIDE TYPES

Stock No.	Mfr's Type	Fig.	Dia. In.	Max. Rating * V	** W	† mA	Char. @ 25°C ‡ DC	§ fc	§§ μA	EACH 1-99	100-Up
60 D 8275	SQ2503	A	1	600	.75#	75	50##	1	40	1.21	.88
60 D 8276	SQ2508	D	⅓	300	.075	10	12	1	1	1.24	.90
60 D 8277	SQ2519	D	⅓	300	.075	20	12	10	12	1.16	.84
60 D 8278	SQ2520	B	½	200	.35	75	12	1	80	1.32	.96
60 D 8279	SQ2521	B	½	250	.35	50	50##	1	40	1.40	1.02
60 D 8281	SQ2526	B	½	200	.35	75	12	1	80	1.32	.96
60 D 8282	SQ2527	B	½	200	.35	75	12	1	80	1.32	.96
60 D 8284	SQ2529	D	⅓	300	.075	3	12	1	0.1	1.24	.90
60 D 9971	SQ2530									1.32	.96
60 D 8285	SQ2534	D	⅓	300	.075	1	90	30	0.1	1.24	.90
60 D 8286	SQ2535	E	⅓	200	.03	10	12	10	12	1.57	1.14
60 D 8287	SQ2536	D	⅓	150	.075	25	12	1	15	1.24	.90
60 D 9972	SQ2554	D	⅓	150	.075	25	12	1	15	1.24	.90
60 D 9973	SQ2555	D	⅓	200	.075	15	12	10	12	1.24	.90
60 D 9974	SQ2556	B	½	200	.35	75	12	1	80	1.24	.90
60 D 9976	SQ2557	C	⅓	100	.075	5	12	1	5	1.40	1.02
60 D 9977	SQ2558	C	⅓	100	.075	10	12	1	20	1.57	1.14
60 D 8289	4403	A	1	350	.75#	100	50##	1	78	1.21	.88
60 D 8290	4404	A	1	600	.75#	75	50##	1	40	1.21	.88
60 D 8292	4448	A	1	600	.75#	75	50##	1	40	1.32	.96
60 D 8295	4453	A	1	600	.75#	75	50##	1	40	1.21	.88
60 D 8296	7163	A	1	600	.75#	75	50##	1	40	1.21	.88

BROAD-AREA CADMIUM-SULFO-SELENIDE TYPES

Three times faster response than above.

60 D 8298	SQ2543	E	⅛	100	.03	15	12	1	0.5	2.06	1.50
60 D 8299	SQ2544	D	⅓	100	.075	25	12	1	2	1.90	1.38
60 D 8300	SQ2544V1	D	⅓	150	.075	25	12	1	2	1.90	1.38
60 D 8301	SQ2545	B	½	125	.35	75	12	1	15	1.90	1.38
60 D 8302	SQ2545V1	B	½	200	.35	75	12	1	7.5	1.90	1.38
60 D 8303	SQ2546	A	1	200	.75#	100	12	1	5	1.90	1.38

MALLORY SONALERT SOLID-STATE AUDIBLE WARNING DEVICE

Ideal Safety Device

Solid state miniature audible-signal warning device, emits a discernible signal at minimum current. Eliminates arcing and RF noise. Use with communications control systems; appliances; automotive functions etc. *Type SC628P emits pulsing sound output. Av. shpg. wt., 8 oz.

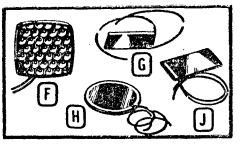
SPECIFICATIONS

Mfr's Type	Freq.	Volts	mA	dB	Temp. F°
SC628	2.5 kHz	6-28DC	3-14	68-80	−40, +120
SC628P*	2.5 kHz	6-28DC	3-14	68-80	−40, +120
SC628H	4.5 kHz	6-28DC	3-14	68-80	−40, +120
SC628A	2.5 kHz	6-28AC/DC	3-14	68-80	−40, +120
SC110	2.5 kHz	110AC/86DC	14	80	−40, +120

ORDERING INFORMATION

Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499	500-Up
60 D 8983	SC628	5.50	5.40	5.15	4.65	4.15	3.85
60 D 9745	SC628P*	9.95	9.75	9.30	8.40	7.45	6.85
60 D 8984	SC628H	6.35	6.25	5.95	5.40	4.80	4.40
60 D 8985	SC628A	8.75	8.60	8.20	7.40	6.60	6.10
60 D 8986	SC110	8.75	8.60	8.20	7.40	6.60	6.10

IR SOLAR CELL AND PHOTOCELL EXPERIMENTER KIT



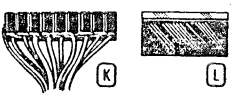
Type K-421. For engineers and hobbyists. May be used for powering transistor radios, building light meters, operating small motors from sunlight, etc. Contains 7 different selenium, silicon, and cadmium-sulfide photocells similar to Figs. F, G, H and J. Instruction manual with circuit diagrams and experiments, plus "Experimenter Handbook."
60 D 7660. Shpg. wt., 1 lb.....5.95

IR PHOTOCELLS

Selenium cells (B2M, B3M) have a spectral response similar to that of the human eye. Silicon cells (S1M, S3M, S5M) are used as solar batteries to convert sunlight to electrical energy for use in radios, light meters, etc. B2M is ½x¾"; others, 1⅛x1⅛x3/16". Includes 24-page project handbook. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Output Volts	Output mA	EACH 1-99	EACH 100-999
60 D 7876	B2M	.2-.4	.077	1.50	1.35
60 D 7877	B3M	.2-.4	.077	1.75	1.55
60 D 7879	S1M	.3-.45	10-16	2.25	2.00
60 D 6494	S3M	.6-.85	10-16	3.95	3.51
60 D 6495	S5M	.6-.85	18-25	4.95	4.40

IR SILICON READOUT AND SOLAR CELLS



Readout cells (K) are designed for perforated tape and punched card data reading systems, etc. Each readout array is a matrix of silicon cells. Typical current generated is 350 mA for 0.01 square inch of active area at 1000 footcandles illumination. Have 20 μS response, or better. Solar cells (L) can be used to power transistor radios, operate relays or small motors from sunlight, etc. Maximum response is 20 μS. Peak sensitivity at 0.95 microns. Unmounted. 6-in. color-coded leads. Av. shpg. wt., 2 oz.

K READOUT CELLS

Stock No.	Mfr's Type	Cells	EACH 1-99
60 D 9311	SPR-4-10PL	4	7.50
60 D 9312	SPR-5-10PL	5	8.00
60 D 9313	SPR-6-10PL	6	9.50
60 D 9314	SPR-7-10PL	7	11.00
60 D 9315	SPR-8-10PL	8	12.50
60 D 9316	SPR-9-10PL	9	14.00
60 D 9317	SPR-10-10PL	10	15.00

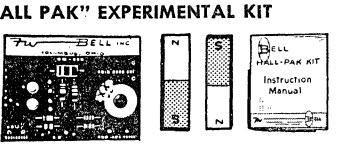
L SOLAR CELLS

Stock No.	Mfr's Type	Output mA	Output mW	Size	EACH 1-99
60 D 9318	S2900E5M	60	24	1.312" dia.	8.00
60 D 9319	S2900E7M	90	36	1.312" dia.	8.65
60 D 9320	S2900E9.5M	120	48	1.312" dia.	9.50
60 D 9321	S2900E11M	150	60	1.312" dia.	15.00
60 D 9322	S1020E4PL	18	7.2	.8x.4"	1.95
60 D 9323	S1020E6PL	28	10.8	.8x.4"	2.50
60 D 9324	S1020E8PL	36	14.4	.8x.4"	3.45
60 D 9372	S1010E6PL	13.5	5.4	.4x.4"	2.10
60 D 9373	S1005E5PL	5	2	.4x.2"	1.95
60 D 9374	S0520E6PL	12	4.8	.8x.2"	2.00
60 D 9375	S0510E5PL	5	2	.4x.2"	1.85
60 D 9376	S0505E5PL	2.5	1	.2x.2"	1.55
60 D 9465	49-1950	1.3	0.52	.2x.1"	1.00
60 D 9466	S2900E5PL	68	28.5	1.125" dia.	6.75

D POLARIS "MAJ-1" PHOTOCELL

LDR-C1. CdS. 75-300 ohms, 92 fc. 10 megs, total darkness. Max diss., .2 W at 40°C. Max V, 110 AC (peak) or DC. Wt., 1 oz.
60 D 7565. 1-24.....Each 1.00 25-99.....Each .80
100-249.....Each .68 250-499.....Each .61

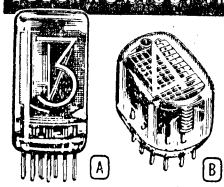
F. W. BELL "HALL PAK" EXPERIMENTAL KIT



Shows Hall effect—the development of a voltage between two edges of a strip of metal in which electric current is flowing longitudinally. Kit includes: Hall-effect device; circuit board (contains balancing network and transistorized DC amplifier with a voltage gain of 50); magnet; instructions.
60 D 7659. Shpg. wt., 4 lbs.....21.95

In-Line Digital Readouts and Flashtubes

NATIONAL ELECTRONICS, INC.



NL-900 NL-8422/5991

- Economy, plus long-life
- Built-in uniformity
- Simple, rugged construction
- Will not fade with age

NUMERICAL NEON-GLOW READOUT TUBES

Visible display is a red-orange neon glow in the form of desired character. Can easily be read even under high ambient light. Careful manufacturing techniques assure no variation of color or intensity. Under most difficult conditions, as display of one number only, life is in excess of four years. With different numbers life is much greater. Regular types have 5,000-8,000 hours. *200,000 hours or 20 year life. †Wide angle; ‡rectangular; §left hand decimal point. Av. wt., 4 oz. *Specify Dept. and Tube No.*

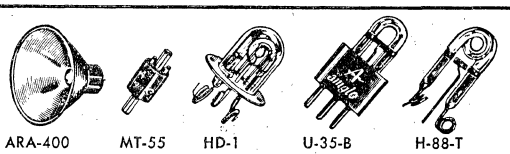
SOCKETS FOR READOUT TUBES

Stock No.	Type	EACH	Stock No.	Type	EACH	Stock No.	Type	EACH
47 D 2408	RTS-2	.75	47 D 2411	RTS-4	.90	47 D 2418	RTS-14	.40
47 D 2410	RTS-3	1.00	47 D 2412	RTS-5	1.25	47 D 2419	RTS-17	.40

Stock No. Dept.	Stock No. Tube Type	Description	Max. DC Ion V.	Min. DC Supp. V.	Cathode mA Peak	Cathode mA Av. Max.	Cathode mA Av. Min.	Pre-Bias V. Limits	Numerical Char. Ht.	Max. Tube Size Ht.	Max. Tube Size Dia.	Max. View Distance	Fits Socket	EACH
59 D 10	*NL-7977/4032	End View (0-9)	170	170	2.0	1.4	0.7	50-120	.310″	.940″	.680″	14′	RTS-3	19.00
59 D 10	NL-7009	End View (0-9)	170	170	2.0	1.2	0.7	50-75	.310″	.925″	.650″	14′	RTS-3	19.00
59 D 10	*NL-8421/5092	†End View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.125″	1.080″	30′	RTS-2	15.75
59 D 10	*NL-8422/5991	‡End View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	.862″	1.020″	30′	RTS-4	15.75
59 D 10	NL-6844A	End View (0-9)	170	170	4.0	3.0	1.5	50-120	.610″	1.125″	1.080″	30′	RTS-2	11.00
59 D 10	*NL-8091	†End View (0-9)	170	170	6.5	6.0	3.0	65-120	1.375″	1.980″	2.060″	65′	RTS-5	22.50
59 D 10	*NL-7037	Side View (0-9)	200	200	10	10	6	65-120	2.000″	3.625″	2.030″	100′	RTS-5	26.00
59 D 10	NL-8502/4021	End View (0-9)	120	120	2.0	1.4	0.7	50-75	.310″	.925″	.650″	14′	RTS-3	33.00
59 D 10	*NL-809	§‡End View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	.862″	1.020″	30′	RTS-4	17.35
59 D 10	*NL-803	Side View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.937″	.875″	30′	RTS-17	8.00
59 D 10	*NL-840/8754	Side View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.800″	.750″	30′	RTS-14	8.00
59 D 10	*NL-841	§Side View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.800″	.750″	30′	RTS-14	8.40
59 D 10	*NL-900	Side View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.375″	.750″	30′	RTS-14	8.40
59 D 10	*NL-901	§Side View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.375″	.750″	30′	RTS-14	8.75
59 D 10	*NL-8037/5031	End View (0-9)	170	170	3.5	3.0	1.5	50-120	.610″	1.125″	1.080″	30′	RTS-2	15.75
59 D 10	*NL-5992	‡End View (±)	170	170	3.5	3.0	1.5	50-120	.610″	.862″	1.020″	30′	RTS-4	15.75
59 D 10	*NL-5091	†End View (±)	170	170	3.5	3.0	1.5	50-120	.610″	1.125″	1.080″	30′	RTS-2	15.75
59 D 10	*NL-8423/6091	†End View (0-9)	170	170	4.5	4.0	1.5	65-120	.808″	1.212″	1.350″	38′	RTS-2	19.00
59 D 10	NL-7153	End View (0-9)	250	250	5.0	3.0	2.0	65-120	.808″	1.212″	1.350″	38′	RTS-2	14.50

FLASHTUBES AND ACCESSORIES FOR INDUSTRIAL USE

amglo



ARA-400-SD-H-88-P4. Reflector assembly for use in stroboscopes, wheel and balancing equipment. Semi-diffused flat field surface for photographic applications. Max. input, 80 joules. Operates at 350-600 volts. H-88 flashtube adjusted to 50° beam spread. Repetitive flashing: 60 per minute, 10 joules per flash; 100 per second, .1 joule per flash. Size, 4 7/32″ diameter by 3 7/8″ deep. Shpg. wt., 6 oz.
60 D 6753. 1-9. Ea. 21.00 10-49. Ea. 18.00

ARA-400-S-H-88-TP4. As above, with trigger coil; specular finish for applications where "hot spot" is required. Wt., 4 oz.
60 D 6754. 1-9. Ea. 24.00 10-49. Ea. 21.60

ARA-400-S-H-88-P4. As above, specular finish; less trigger coil. Wt., 3 oz.
60 D 6755. 1-9. Ea. 21.00 10-49. Ea. 18.00

ARA-300-SD-H-88-TP4. 3″ diameter reflector assembly with H-88 flashtube adjusted to 50° beam spread. Trigger coil. For use in wheel balancer equipment. Max. input, 80 joules. Operates 350-600 volts. Repetitive flashing: 60 per minute, 10 joules/flash 100 per second, .1 joules/flash. 6 oz.
60 D 6756. 1-9. Ea. 24.00 10-49. Ea. 21.60

MT-55. Iron core trigger transformer for use with HD flashtubes. Output, 24 kV. (discharge 400 V at .5 μF); 12 kV (discharge 180 V at .2 μF). 7/8″ diameter, 2″ long. 4-lead output. Wt., 1½ oz.
60 D 9387. 1-9. Ea. 5.95 10-49. Ea. 5.45

ST-25. Air-core trigger transformer for H-88, U-35 flashtubes. Output: 7 kV (discharge 300 V at .2 μF); 4 kV (discharge 180 V at .2 μF). ½″ diameter, ¾″ long. ⅛ oz.
60 D 7914. 1-9. Ea. 2.95 10-49. Ea. 2.65

HD-Series Flashtubes. Ultra-high efficiency tubes in Pyrex cover. Av. wt.,. 6 oz.
60 D 9380. HD-1. Max. input, 60 joules at 450 V. 1-9. . . Ea. 12.00 10-49. . . Ea. 10.80
60 D 7913. HD-2. Max. input, 120 joules at 450 V. 1-9. . . Ea. 15.00 10-49. . . Ea. 13.50
60 D 6758. HD-2A. Max. input, 250 joules at 900 V. 1-9. . . Ea. 16.85 10-49. . . Ea. 15.15

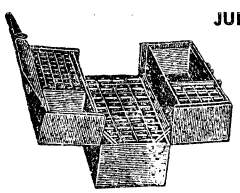
U-35 Series Flashtubes. Stroboscopic tubes, non-polarized connections. 300-600 VDC. 20 joules/flash. Av. wt., 5 oz.
60 D 9384. U-35-B. With trigger band, base mount. 1-9. . . . Ea. 9.25 10-49. . Ea. 8.35
60 D 9382. U-35-T. With trigger band, no base. 1-9. . . . Ea. 8.70 10-49. . . . Ea. 7.80
60 D 9383. U-35-0. No trigger band or base. 1-9. . . . . Ea. 8.15 10-49. . . . Ea. 7.35
60 D 6757. U-35-BS. Base, trigger band, silver stripe to facilitate triggering. 1-9. . . . . Ea. 9.75 10-49. . . . . Ea. 8.75

H-88 Series Flashtubes. Heavy-duty signal, stroboscopic, or photographic use. 8 oz.
60 D 6759. H-88-T. With trigger band. 1-9. . . . . Ea. 10.55 10-49. . . . . Ea. 9.55
60 D 6760. H-88-0. Less trigger band. 1-9. . . . . Ea. 10.00 10-49. . . . . Ea. 9.00
60 D 6761. H-88-B4. 4-pin plug-in-base. 1-9. . . . . Ea. 13.50 10-49. . . . . Ea. 12.25
60 D 6762. CE 525-45C. 525 μF discharge capacitor. 450 V, 53 joules storage. 1-9. . . . . Ea. 14.50 10-49. . . . . Ea. 12.45

60 D 9425 E. Flashtube Engineering Manual Vol II. Design and theory of strobelight circuits. 20 pgs. 1½ oz. 2.00

ARGOS SERVICEMEN'S TUBE CADDIES

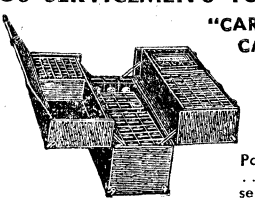
JUNIOR TUBE CADDY



Two-thirds the size and weight of most caddies

Model TC-201. Has room for tools, meters, 143 tubes. "Break-open" section for small parts. Gray vinyl. 12½x15¾x8″.
24 D 9681 X. Shpg. wt., 8 lbs. 11.50

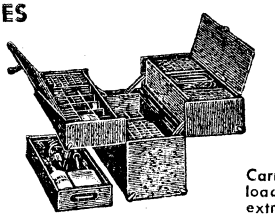
"CARRY-ALL" CADDY



Popular-priced . . . a best selling model

Type TC-400. Carries up to 262 tubes. Room for soldering gun, probes, tools. Designed for quick access. Gray vinyl. 15x21x8″.
24 D 9682 X. Shgp. wt., 11 lbs. 17.95

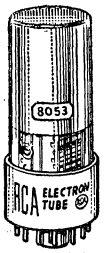
SUPER TUBE CADDY



Carries a full load to save extra trips

Type TC-600. Rugged, double-door caddy holds up to 325 tubes. Removable tray for fuses, bulbs, etc. Gray vinyl. 16½x24x8½″.
24 D 9683 X. Shpg. wt., 22 lbs. 31.95

Make Allied Your Headquarters for Everything in Electronics

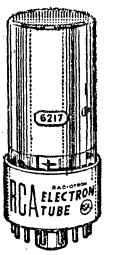


- Over 800 Types
- 14 Manufacturers

Special-Purpose Tube Directory

KEY TO NAMES OF MANUFACTURERS

AMP	Amperex Elect. Corp.	**NU**	National Union
BOM	Bomac	**RCA**	Radio Corp. America
DUM	Dumont	**RAY**	Raytheon Mfg. Co.
EIM	Eimac (Div. of Varian)	**SYL**	Sylvania Electric
ELEC	Electrons, Inc.	**THER**	Thermosen, Inc.
ML	Machlett Lab.	**VAR**	Varian
NAT	Nat'l Electronics, Inc.	**VIC**	Victoreen Instrument



- Dependable
- Highest Quality

Complete selection of high-reliability tubes for almost every purpose. Suffix "MP" in tube type no. indicates matched pair. To assure speedy service, give Dept. No. and tube type, thus: 59 D 1—OA2. *Purchases of tube types are billed at current OEM price.*

Stock No. Dept.	Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1	OA2	RCA	1.32	1.25	1.19	1.12
59 D 4	OA2	AMP	1.26	1.20	1.13	1.07
59 D 1	OA2WA	RCA	See 6626/OA2WA			
59 D 1	OA3	RCA	1.54	1.46	1.38	1.30
59 D 1	OA3A	RCA	1.54	1.46	1.38	1.30
59 D 1	OA4G	RCA	1.86	1.77	1.68	1.60
59 D 4	OB2	AMP	1.32	1.26	1.19	1.13
59 D 1	OB2	RCA	1.37	1.30	1.23	1.16
59 D 1	OB2WA	RCA	2.40	2.28	2.16	1.69
59 D 2	OB3	RAY	2.35	2.23	2.11	.....
59 D 1	OC2	RCA	1.50	1.43	1.35	1.28
59 D 1	OC3	RCA	1.50	1.43	1.35	1.28
59 D 1	OC3A	RCA	1.50	1.43	1.36	1.29
59 D 1	OD3	RCA	1.44	1.37	1.30	1.22
59 D 1	OD3A	RCA	1.44	1.37	1.30	1.23
59 D 2	1AD4	RAY	2.80	2.66	2.52	.....
59 D 2	1AG4	RAY	7.30	6.94	6.60	5.68
59 D 11	ELC1A	ELEC	13.65	11.95	10.85	.....
59 D 11	ELC1B	ELEC	17.80	16.91	.....	.....
59 D 20	1B85	VIC	16.30	13.75	11.20	8.70
59 D 11	EL1C	ELEC	10.85	10.31	.....	.....
59 D 1	1C21	RCA	4.15	3.94	3.74	3.52
59 D 12	1D21/SN4	SYL	7.30	7.10	6.90	.....
59 D 1	1EP1	RCA	29.40	27.93	26.53	25.20
59 D 1	1EP11	RCA	30.80	29.26	27.80	26.41
59 D 11	ELC1K	ELEC	11.80	11.21	10.62	10.03
59 D 1	C1K/6014	RCA	11.80	11.21	10.62	10.03
59 D 1	1L4	RCA	1.50	1.43	1.35	1.28
59 D 4	1M3/DM70	AMP	2.30	2.19	2.08	1.98
59 D 1	1P21	RCA	55.30	52.54	49.91	47.41
59 D 1	1P22	RCA	17.25	16.39	15.57	.....
59 D 1	1P28	RCA	21.80	20.71	19.67	.....
59 D 1	1P28A	RCA	27.30	25.94	24.64	23.41
59 D 1	1P29	RCA	8.45	8.03	7.63	7.25
59 D 1	1P37	RCA	6.85	6.51	6.18	5.87
59 D 1	1P39	RCA	3.45	3.28	3.12	2.96
59 D 1	1P40	RCA	5.60	5.32	5.05	4.80
59 D 1	1P41	RCA	6.15	5.84	5.55	5.27
59 D 9	2-01C	EIM	20.00	19.00	.....	.....
59 D 1	2AP1A	RCA	18.55	17.62	16.74	15.90
59 D 18	2AS15A	THER	10.00	9.00	8.10	7.29
59 D 1	2BP1	RCA	19.70	18.72	17.78	.....
59 D 1	2C39A	RCA	20.75	19.71	.....	.....
59 D 1	2C39A/V1	RCA	28.00	26.60	.....	.....
59 D 1	2C39WA	RCA	20.75	19.71	.....	.....
59 D 1	2C40	RCA	31.75	29.26	27.80	26.41
59 D 1	2C43	RCA	26.95	25.60	.....	.....
59 D 12	2C51	SYL	4.05	3.85	3.66	.....
59 D 19	2C53 (COM)	NU	9.15	8.85	8.40	.....
59 D 19	2C53 (JAN)	NU	9.45	9.00	8.65	.....
59 D 1	2D21	RCA	1.29	1.23	1.16	1.10
59 D 1	2D21W	RCA	2.90	2.76	2.61	2.47
59 D 1	2E24	RCA	7.60	7.22	6.86	6.52
59 D 1	2E26	RCA	3.95	3.75	3.56	3.38
59 D 4	2J42	AMP	127.50	121.13	115.08	109.33
59 D 4	2J51	AMP	675.00	641.25	609.19	578.78
59 D 4	2J55	AMP	298.50	283.58	269.40	255.93
59 D 2	2K25	RAY	43.00	.....	.....	.....
59 D 1	2K26	RCA	68.00	64.60	61.37	58.30
59 D 18	2SM15	THER	12.00	11.00	9.60	8.80
59 D 1	2X2A	RCA	4.20	3.99	3.79	3.60
59 D 4	DH3-91	AMP	14.70	13.50	.....	.....
59 D 9 T	3-400Z/8163	EIM	34.00	.....	.....	.....
59 D 9	3-500Z	EIM	34.00	32.30	30.60	.....
59 D 1	3A4	RCA	1.55	1.19	1.13	1.06
59 D 1	3A5	RCA	2.03	1.93	1.83	1.73
59 D 1	3AP1A	RCA	26.60	25.27	24.01	22.81
59 D 1	3AQP1	RCA	34.35	32.63	31.00	29.45
59 D 1	3B4WA	RCA	5.85	5.56	5.28	5.02
59 D 2	RK3B24W	RAY	10.55	10.03	.....	.....
59 D 2	3B24WB	RAY	10.95	10.40	9.87	.....
59 D 1	3B28	RCA	8.85	8.41	7.99	7.59
59 D1	3BP1A	RCA	33.90	32.20	30.59	29.06
59 D 11	EL3C	ELEC	12.90	12.26	.....	.....
59 D 11	EL3C/L	ELEC	14.80	14.06	.....	.....
59 D 1	3C23	RCA	11.98	11.38	10.78	10.18
59 D 1	3C45	RCA	(See 6130/3C45)			
59 D 9	3CX100A5	EIM	26.50	25.27	.....	.....
59 D 9	3CX2500A3	EIM	200.00	.....	.....	.....
59 D 9	3CX2500F3	EIM	205.00	.....	.....	.....
59 D 9 F	3CX3000A1/8238	EIM	238.00	.....	.....	.....
59 D 1 F	3CX3000A7	RCA	278.00	.....	.....	.....
59 D 9 F	3CX3000F1	EIM	245.00	.....	.....	.....
59 D 1 F	3CX10000A7	RCA	580.00	.....	.....	.....
59 D 1	3D22A	RCA	41.00	38.95	37.00	35.15
59 D 1	3E29	RCA	21.10	20.05	19.05	.....
59 D 11	ELC3J	ELEC	12.70	12.06	11.45	.....
59 D 1	C3J/5632	RCA	12.70	12.06	11.45	.....
59 D 11	ELC3J/A	ELEC	13.10	12.45	11.83	.....
59 D 1	C3J-A/5684	RCA	13.10	12.45	11.83	.....
59 D 11	ELC3J/L	ELEC	14.20	13.49	12.82	.....
59 D 1	C3J/L	RCA	14.20	13.49	12.82	12.18
59 D 1	3KP1	RCA	28.60	27.17	25.81	24.52
59 D 1	3RP1	RCA	18.30	17.39	16.52	15.69
59 D 1	3RP1A	RCA	27.00	25.65	.....	.....
59 D 1	3RP7A	RCA	31.60	.....	.....	.....
59 D 1	3WP1	RCA	35.90	34.16	.....	.....
59 D 6 T	3WP7	DUM	41.00	38.95	.....	.....
59 D 1	4-65A	RCA	Use 8165/4-65A			
59 D 9	4-65A/8165	EIM	29.50	28.03	.....	.....
59 D 4	4-125A	AMP	36.00	.....	.....	.....
59 D 1	4-125A/4D21	RCA	36.00	34.20	32.49	26.00
59 D 1	4-250A/5D22	RCA	48.00	45.60	43.32	41.15
59 D 9	4-250A/5D22	EIM	48.00	45.60	43.32	41.15
59 D 9	4-400A/8438	EIM	48.00	45.60	.....	.....
59 D 9 Z	4-1000A/8166	EIM	135.00	.....	.....	.....
59 D 4	4B32	AMP	13.50	.....	.....	.....
59 D 9	4CX250B/7203	EIM	35.60	33.82	.....	.....
59 D 9	4CX250F/7204	EIM	38.00	.....	.....	.....
59 D 9	4CX250K/8245	EIM	70.00	66.50	.....	.....
59 D 9	4CX250R/7580W	EIM	44.50	42.28	.....	.....
59 D 9	4CX300A/8167	EIM	54.00	51.30	.....	.....
59 D 9	4CX350A/8321	EIM	48.50	46.08	.....	.....
59 D 9	4CX5000A/8170	EIM	495.00	.....	.....	.....
59 D 9	4CX10000D/8171	EIM	575.00	.....	.....	.....
59 D 2	4D32	RAY	74.30	61.58	.....	.....
59 D 1	4E27A/5-125B	RCA	50.00	47.50	45.13	42.88
59 D 11	ELC4H-2	ELEC	25.00	23.75	.....	.....
59 D 11	ELC4H-3	ELEC	25.00	23.75	.....	.....
59 D 9 T	4PR60B/8252	EIM	115.00	.....	.....	.....
59 D 9	4X150A/7034	EIM	23.15	21.99	.....	.....
59 D 1 T	4X500A	RCA	128.50	.....	.....	.....
59 D 9	4X500A	EIM	127.50	.....	.....	.....
59 D 1 Z	5ABP1	RCA	47.60	.....	.....	.....
59 D 6 Z	5ADP1	DUM	48.00	45.60	.....	.....
59 D1	5ADP1	RCA	47.60	45.22	42.96	40.81
59 D 6 Z	5ADP2	DUM	48.00	45.60	.....	.....
59 D 6 Z	5ADP7	DUM	48.00	45.60	.....	.....
59 D 6 Z	5AQP1A	DUM	61.00	52.40	.....	.....
59 D 6 F	5BHP2AM	DUM	83.50	.....	.....	.....
59 D 1 Z	5BP1A	RCA	38.85	.....	.....	.....
59 D 1 Z	5CP1A	RCA	37.10	.....	.....	.....
59 D 6 Z	5CP7A	DUM	52.40	.....	.....	.....
59 D 1	5FP7A	RCA	39.20	37.24	.....	.....
59 D 6 Z	5LP1A	DUM	55.00	.....	.....	.....
59 D 2	5R4GYA	RAY	2.05	1.95	1.85	1.48
59 D 1	5R4GYB	RCA	2.03	1.93	1.83	1.47
59 D 2	5R4WGA	RAY	9.65	9.17	8.71	6.97
59 D 2	5R4WGB	RAY	14.20	13.49	12.82	12.18
59 D 1 Z	5UP1	RCA	21.10	.....	.....	.....

Special-Purpose Tube Directory (Cont'd)

Dept.	Stock No. Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1	5UP7	RCA	25.70	24.42	23.20	22.04
59 D 1	5UP31	RCA	21.80	20.71	19.68	.....
59 D 12	GB5Y3WGTA	SYL	4.05	3.85	3.66	.....
59 D 1Z	5ZP16	RCA	98.00	93.10	88.45	84.03
59 D 1	6AC7W	RCA	5.45	.....	.....	.....
59 D 1	6AG7Y	RCA	2.80	2.66	2.53	2.41
59 D 2	6AH6WA	RAY	7.66	7.28	.....	.....
59 D 1	6AH6WA	RCA	7.60	7.22	6.90	6.56
59 D 1	6AK6	RCA	1.40	1.33	1.26	1.01
59 D 2	6AN5	RAY	4.17	3.96	.....	.....
59 D 1	6AN5	RCA	4.20	3.99	3.79	3.60
59 D 2	6AR6	RAY	5.75	5.46	.....	.....
59 D 1	6AS6	RCA	3.43	3.26	3.10	2.75
59 D 1	6AS7G	RCA	4.93	4.69	4.46	3.57
59 D 12	6AS7GA	SYL	4.93	4.69	4.46	3.57
59 D 1	6AU6WB	RCA	2.70	2.57	2.44	1.95
59 D 11	EL6B	ELEC	16.50	15.68	.....	.....
59 D 11	EL6B/L	ELEC	17.75	16.85	.....	.....
59 D 11	ELC6C	ELEC	58.90	.....	.....	.....
59 D 11	EL6C	ELEC	24.05	22.85	.....	.....
59 D 1	6D4	RCA	3.20	3.04	2.89	2.75
59 D 12	6D4	SYL	3.30	3.14	2.98	2.83
59 D 4	6DJ8/ECC88	AMP	1.89	1.81	1.72	1.63
59 D 1	6DJ8/ECC88	RCA	1.89	1.80	1.71	1.62
59 D 4	6EH7/EF183	AMP	1.93	1.83	1.74	1.65
59 D 4	6EJ7/EF184	AMP	1.78	1.69	1.61	1.53
59 D 11	EL6F	ELEC	18.60	17.67	.....	.....
59 D 1	6F4	RCA	14.40	13.68	13.00	10.40
59 D 11	ELC6H-1	ELEC	29.10	27.65	.....	.....
59 D 11	ELC6H-2	ELEC	30.25	28.74	.....	.....
59 D 11	ELC6H-3	ELEC	30.25	28.74	.....	.....
59 D 11	ELC6J	ELEC	28.10	26.70	.....	.....
59 D 1	C6J/5C21	RCA	28.10	26.70	.....	.....
59 D 11	ELC6J/A	ELEC	28.30	26.39	.....	.....
59 D 1	C6JA/5683	RCA	29.00	27.55	.....	.....
59 D 11	ELC6J/F	ELEC	30.00	28.50	.....	.....
59 D 11	ELC6J/K	ELEC	29.10	27.65	.....	.....
59 D 11	ELC6J/KL	ELEC	30.25	28.74	.....	.....
59 D 11	ELC6J/L	ELEC	29.40	27.93	.....	.....
59 D 1	6J4	RCA	4.02	3.82	3.63	2.91
59 D 1	6J6WA	RCA	5.35	5.08	4.83	3.87
59 D 6	6Q5G	DUM	10.50	.....	.....	.....
59 D 1	6SJ7Y	RCA	2.15	2.04	1.94	1.84
59 D 12	6SL7WGT	SYL	3.15	2.99	.....	.....
59 D 1	6X4W	RCA	1.60	1.52	1.40	1.12
59 D 12 X	7JP1/7VP1	SYL	51.30	.....	.....	.....
59 D 1 F	7TP4	RCA	73.15	.....	.....	.....
59 D 1 F	7VP1	RCA	30.80	.....	.....	.....
59 D 1	7VP31	RCA	30.80	29.26	27.80	26.41
59 D 1	8HP4	RCA	52.50	49.88	47.39	45.02
59 D 1	8NP4	RCA	59.30	56.53	53.70	.....
59 D 1	8QP4	RCA	63.00	59.85	56.86	54.02
59 D 1 F	10SP4	RCA	99.35	94.38	.....	.....
59 D 1	12A6	RCA	3.36	3.19	3.03	2.43
59 D 1	12AT7WA	RCA	2.53	2.41	2.27	1.82
59 D 1	12AT7WB	RCA	2.53	2.41	2.29	2.18
59 D 4	12AU7WA/6189	AMP	3.70	3.52	3.34	3.17
59 D 1	12SW7	RCA	1.49	1.42	1.35	1.29
59 D 7 T	X-13	BOM	335.00	.....	.....	.....
59 D 11	ELC16H	ELEC	62.00	58.90	.....	.....
59 D 11	ELC16J	ELEC	52.50	49.88	.....	.....
59 D 1	C16J/5665	RCA	52.50	49.88	.....	.....
59 D 1	17DWP4	RCA	31.00	29.45	.....	.....
59 D 10	NLKY21A	NAT	32.10	30.50	28.98	.....
59 D 9	RX21A	EIM	30.90	29.36	.....	.....
59 D 1	21EYP4	RCA	44.60	42.37	40.25	38.24
59 D 9	25T	EIM	43.00	40.85	.....	.....
59 D 1	26A6	RCA	3.70	3.52	3.35	3.19
59 D 1	26A7GT	RCA	7.70	7.32	6.95	6.60
59 D 4	27GB5	AMP	1.85	.....	.....	.....
59 D 12	28D7	SYL	4.95	4.70	4.47	3.58
59 D 4	EL34(6CA7)	AMP	2.68	2.55	2.41	.....
59 D 4	EL34/6CA7 MP	AMP	5.60	.....	.....	.....
59 D 4	GZ34/5AR4	AMP	2.62	2.49	2.37	2.25
59 D 9	35T	EIM	47.00	44.65	.....	.....
59 D 4	EL37	AMP	5.43	5.16	4.90	4.66
59 D 4	EF40	AMP	3.80	3.61	3.43	3.26
59 D 4 F	58AVP	AMP	555.00	.....	.....	.....
59 D 8 T	V-58	VAR	404.00	.....	.....	.....
59 D 4	DM70(1M3)	AMP	See 1M3/DM70			
59 D 4	Z70U/7710	AMP	1.95	.....	.....	.....
59 D 4	75C1	AMP	5.65	.....	.....	.....
59 D 4	E80CC	AMP	Use 6085			
59 D 4	E80CF	AMP	Use 7643			
59 D 4	EABC80(6AK8)	AMP	1.88	1.79	1.70	1.62
59 D 4	EBF80(6N8)	AMP	2.45	2.33	2.21	2.10
59 D 4	ECF80(6BL8)	AMP	1.35	1.28	1.22	1.16
59 D 4	EF80(6BX6)	AMP	2.28	2.17	2.06	1.96
59 D 4	EZ80(6V4)	AMP	.75	.71	.67	.64

Dept.	Stock No. Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 4	ECC81(12AT7)	AMP	1.93	1.83	1.74	1.65
59 D 4	ECH81(6AJ8)	AMP	1.38	1.31	1.24	1.18
59 D 4	EZ81/6CA4	AMP	1.48	1.41	1.34	1.27
59 D 4	ECC82(12AU7A)	AMP	1.28	1.22	1.16	1.10
59 D 4	ECF82	AMP	3.83	3.64	3.46	3.29
59 D 4	ECL82(6BM8)	AMP	1.45	1.38	1.31	1.24
59 D 4	UCL82(50BM8)	AMP	2.18	2.07	1.97	1.87
59 D 1	83	RCA	1.89	1.80	1.71	1.37
59 D 4	ECC83(12AX7A)	AMP	1.40	1.33	1.26	1.20
59 D 4	EL84(6BQ5)	AMP	1.63	1.55	1.47	1.40
59 D 4	EL84MP(6BQ5)	AMP	4.55	4.32	4.10	3.90
59 D 4	EM84(6FG6)	AMP	1.65	1.57	1.49	1.42
59 D 4	UL84(45B-5)	AMP	1.40	1.33	1.26	1.20
59 D 4	85A1/OE3	AMP	7.25	6.96	6.67	6.09
59 D 4	85A2/OG3	AMP	2.30	2.19	2.07	1.96
59 D 4	ECC85(6AQ8)	AMP	1.50	1.43	1.35	1.28
59 D 4	EF85(6BY7)	AMP	1.68	1.60	1.52	1.44
59 D 4	ECL86	AMP	1.53	1.45	1.38	1.31
59 D 4	EF86(6267)	AMP	1.40	1.33	1.26	1.20
59 D 4	EL86(6CW5)	AMP	1.38	1.31	1.24	1.18
59 D 4	UF86	AMP	2.65	2.52	2.39	2.27
59 D 4	E88CC	AMP	Use 6922			
59 D 4	ECC88(6DJ8)	AMP	See 6DJ8/ECC88			
59 D 4	EBF89(6DC8)	AMP	1.53	1.46	1.38	1.31
59 D 4	EF89(6DA6)	AMP	2.10	2.00	1.90	1.81
59 D 4	90C1	AMP	2.42	2.30	2.19	2.08
59 D 4	90NB3	AMP	32.00	30.40	28.88	27.44
59 D 4	EZ90(6X4)	AMP	1.10	1.05	1.00	.95
59 D 4	EF91	AMP	3.53	3.35	3.18	3.02
59 D 4	EF95(6AK5)	AMP	2.25	2.14	2.03	1.93
59 D 4	EL95(6DL5)	AMP	1.48	1.41	1.34	1.27
59 D 9	100TH	EIM	26.00	24.70	.....	.....
59 D 13 F	102A	ML	174.00	.....	.....	.....
59 D 1	105	RCA	59.00	56.05	52.25	49.90
59 D 4	AX105/FG105	AMP	75.00	71.25	67.69	.....
59 D 2	FG105	RAY	59.00	56.05	.....	.....
59 D 9	175A	EIM	60.00	57.00	.....	.....
59 D 4	E180F	AMP	Use 6688			
59 D 8 T	VA218	VAR	191.00	.....	.....	.....
59 D 8 T	VA218B	VAR	180.00	.....	.....	.....
59 D 8 T	VA220C	VAR	186.00	.....	.....	.....
59 D 8 T	VA221C	VAR	191.00	.....	.....	.....
59 D 8 T	VA221E	VAR	191.00	.....	.....	.....
59 D 8 T	VA222E	VAR	191.00	.....	.....	.....
59 D 8 T	VA222F	VAR	191.00	.....	.....	.....
59 D 9 T	250R	EIM	42.00	.....	.....	.....
59 D 9 T	250TH	EIM	45.00	.....	.....	.....
59 D 9	254W	EIM	46.00	43.70	.....	.....
59 D 4	HF300	AMP	40.50	.....	.....	.....
59 D 9	304TL	EIM	83.00	78.90	.....	.....
59 D 12	SA309	SYL	20.40	.....	.....	.....
59 D 13 F	356/5771	ML	700.00	.....	.....	.....
59 D 10	NL393A	NAT	13.25	12.59	.....	.....
59 D 1	407A	RCA	5.90	5.61	5.33	5.07
59 D 12	GB407A	SYL	5.90	5.61	5.31	5.01
59 D 1	408A	RCA	4.95	4.71	4.48	4.26
59 D 12	GB408A	SYL	4.95	4.70	4.45	4.21
59 D 1	417A	RCA	See 5842/417A			
59 D 9 Z	450TH	EIM	103.00	.....	.....	.....
59 D 4	Z502S	AMP	21.00	19.95	.....	.....
59 D 2	CK510AX	RAY	5.20	4.94	4.69	4.45
59 D 2	CK512AX	RAY	4.35	4.13	3.82	3.63
59 D 2	CK526AX	RAY	7.30	6.94	6.57	.....
59 D 2	QKK531	RAY	68.00	.....	.....	.....
59 D 2	CK533AX	RAY	4.40	4.18	3.97	.....
59 D 2	QKK549	RAY	68.00	.....	.....	.....
59 D 4	Z550M	AMP	See ZM1050/8453			
59 D 1	575A	RCA	20.60	19.57	18.59	.....
59 D 1	579B	RCA	20.50	19.48	18.45	.....
59 D 9	592/3-200A3	EIM	63.00	59.83	.....	.....
59 D 10	NL604	NAT	11.80	11.21	.....	.....
59 D 1	604/7014	RCA	11.80	11.21	10.65	10.12
59 D 10	NL604L	NAT	13.00	12.35	.....	.....
59 D 10	NL606	NAT	21.40	20.33	.....	.....
59 D 10	NL606L	NAT	23.50	22.33	.....	.....
59 D 10	NL615	NAT	10.05	9.55	9.05	8.54
59 D 1	615/7018	RCA	10.05	9.55	9.07	8.62
59 D 10	NL616	NAT	12.50	11.87	11.29	10.63
59 D 10	NL623	NAT	13.35	12.68	12.02	11.34
59 D 1	627	RCA	27.50	.....	.....	.....
59 D 1	632B	RCA	33.00	31.35	29.70	28.05
59 D 10	NL635L/7020	NAT	13.50	12.88	.....	.....
59 D 10	NL635P/6930	NAT	14.15	13.44	.....	.....
59 D 10	NL649/5834	NAT	12.40	11.80	11.21	.....
59 D 10	NL660L/7786	NAT	13.50	12.83	.....	.....
59 D 10	NL664L	NAT	27.50	26.13	24.75	.....
59 D 1	672A	RCA	39.85	37.86	.....	.....
59 D 1	673	RCA	20.60	19.57	.....	.....
59 D 1	676	RCA	63.80	.....	.....	.....

Please Specify Department No. and Tube Type No. When Ordering

Special-Purpose Tube Directory (Cont'd)

Stock No. Dept.	Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1	677	RCA	63.80	.....	.....	.....
59 D 10	NL678	NAT	49.50	47.03	44.55	.....
59 D 10	NL710/6011	NAT	12.70	12.06	11.43	.....
59 D 1	710/6011	RCA	12.00	11.40	10.83	10.29
59 D 10	NL710L/7518	NAT	14.00	13.49	12.78	.....
59 D 10	NL714	NAT	10.00	9.50	.....	.....
59 D 1	714/7021	RCA	10.00	9.50	9.03	8.56
59 D 10	NL716	NAT	12.50	11.88	.....	.....
59 D 10	NL740L/7022	NAT	24.35	22.93	.....	.....
59 D 10	NL740P/6857	NAT	24.35	22.93	21.78	.....
59 D 10	NL760	NAT	28.10	26.70	.....	.....
59 D 1	760/6858	RCA	28.10	26.70	25.37	24.10
59 D 10	NL760L	NAT	29.40	27.93	.....	.....
59 D 10	NL760P	NAT	29.80	27.93	.....	.....
59 D 10	NL770L	NAT	49.80	47.31	.....	.....
59 D 10	NL803	NAT	8.00	7.60	.....	.....
59 D 1	807	RCA	4.20	3.99	3.79	3.60
59 D 10	NL809	NAT	17.35	16.48	.....	.....
59 D 1	810	RCA	30.75	29.21	.....	.....
59 D 1	811A	RCA	7.75	.....	.....	.....
59 D 1	812A	RCA	7.20	.....	.....	.....
59 D 1	813	RCA	25.85	24.56	23.33	.....
59 D 1	816	RCA	4.50	.....	.....	.....
59 D 1	828	RCA	37.00	35.15	.....	.....
59 D 1	829B	RCA	19.40	18.43	17.51	.....
59 D 1	832A	RCA	16.30	15.49	14.72	.....
59 D 1	833A	RCA	69.95	66.45	63.13	59.97
59 D 1	836	RCA	14.75	14.01	13.31	12.65
59 D 10	NL840/8754	NAT	8.00	7.60	.....	.....
59 D 10	NL841	NAT	8.40	7.98	.....	.....
59 D 1	845	RCA	35.20	33.44	31.77	.....
59 D 1	866A	RCA	3.75	3.56	3.38	.....
59 D 1	868	RCA	6.85	6.50	6.18	5.87
59 D 1 X	869B	RCA	138.00	.....	.....	.....
59 D 9 X	869BL	EIM	138.00	.....	.....	.....
59 D 1	872A	RCA	10.70	.....	.....	.....
59 D 1	884	RCA	2.28	2.17	2.05	1.94
59 D 1	891R	RCA	430.00	408.50	388.08	.....
59 D 10	NL900	NAT	8.40	7.98	.....	.....
59 D 10	NL901	NAT	8.75	7.98	.....	.....
59 D 1	902A	RCA	21.00	.....	.....	.....
59 D 1	917	RCA	9.55	9.07	8.62	8.19
59 D 1	918	RCA	6.85	6.51	6.18	5.87
59 D 1	919	RCA	10.15	9.64	.....	.....
59 D 1	920	RCA	10.55	10.03	9.53	9.06
59 D 1	921	RCA	5.75	5.46	.....	.....
59 D 1	922	RCA	3.75	.....	.....	.....
59 D 1	923	RCA	5.50	5.23	.....	.....
59 D 1	925	RCA	5.95	5.65	.....	.....
59 D 1	926	RCA	5.75	5.46	.....	.....
59 D 1	927	RCA	7.15	6.79	.....	.....
59 D 1	929	RCA	3.65	3.47	.....	.....
59 D 1	930	RCA	5.60	5.32	5.05	4.80
59 D 1	931A	RCA	12.10	11.50	.....	.....
59 D 1	931VA	RCA	12.75	12.11	.....	.....
59 D 1	934	RCA	7.00	6.65	.....	.....
59 D 1	935	RCA	15.35	14.58	.....	.....
59 D 1	955	RCA	7.05	6.70	.....	.....
59 D 1	959	RCA	13.85	13.16	12.51	11.89
59 D 1	991	RCA	1.62	1.54	1.47	1.41
59 D 9 Z	1000T	EIM	172.00	.....	.....	.....
59 D 4	XP1010	AMP	135.00	.....	.....	.....
59 D 2	CK1020	RAY	20.69	19.65	18.67	17.47
59 D 2	CK1021	RAY	20.69	19.65	18.67	17.47
59 D 2	CK1026	RAY	4.80	4.56	4.32	4.08
59 D 4	XP1030	AMP	135.00	.....	.....	.....
59 D 4	ZM1030	AMP	9.95	9.95	9.95	8.00
59 D 4	ZM1050/8453	AMP	14.50	13.77	.....	.....
59 D 4	XP1110	AMP	135.00	.....	.....	.....
59 D 12	R1131C	SYL	21.60	20.52	19.44	.....
59 D 18	1236C	THER	13.00	12.50	10.40	9.50
59 D 12	GB1252/6U8A	SYL	2.00	1.90	.....	.....
59 D 1	1612	RCA	5.77	5.48	.....	.....
59 D 1	1613	RCA	3.30	3.14	2.99	2.84
59 D 1	1614	RCA	4.93	4.68	4.43	4.19
59 D 1	1616	RCA	17.85	16.96	.....	.....
59 D 1	1619	RCA	6.23	5.92	.....	.....
59 D 1	1620	RCA	7.55	7.17	6.80	6.42
59 D 1	1621	RCA	3.85	3.66	.....	.....
59 D 1	1622	RCA	5.35	5.08	4.82	4.55
59 D 1	1624	RCA	12.50	11.88	11.29	10.73
59 D 1	1625	RCA	6.30	5.99	5.69	5.41
59 D 1	1629	RCA	2.04	1.94	1.84	1.74
59 D 1	1635	RCA	4.20	3.99	.....	.....
59 D 1	1946	RCA	16.15	.....	.....	.....
59 D 1	1947	RCA	47.00	44.65	42.42	40.30
59 D 1	1949	RCA	23.75	22.56	21.43	.....
59 D 1	2022	RCA	5.50	.....	.....	.....
59 D 1	2050	RCA	2.37	2.25	2.13	2.01
59 D 1	2050A	RCA	2.03	1.93	1.83	1.73
59 D 2	2050 W	RAY	7.50	7.13	6.75	6.38
59 D 1	2076/5R4GYB	RCA	2.11	2.00	1.90	1.81
59 D 4 Z	ZB3200	AMP	900.00	.....	.....	.....
59 D 10	NL-4021	NAT	See NL8052/4021			
59 D 1	4028A	RCA	32.35	30.73	29.19	27.73
59 D 1	4055	RCA	32.90	31.26	29.70	28.22
59 D 1	4058	RCA	17.60	16.72	15.89	15.10
59 D 4	4065	AMP	31.50	29.90	28.30	.....
59 D 4	4152	AMP	9.20	8.74	.....	.....
59 D 12	CT4251/8035	SYL	See 8035/CT4251			
59 D 1	4409	RCA	5.30	5.04	4.79	4.55
59 D 1	4471	RCA	19.00	18.05	17.15	16.29
59 D 1	4472	RCA	24.60	23.37	22.20	21.09
59 D 1	4473	RCA	93.85	89.45	85.60	.....
59 D 1	4478	RCA	36.00	34.20	.....	.....
59 D 1	4490	RCA	36.05	34.25	32.54	30.92
59 D 1	4491	RCA	39.85	37.86	.....	.....
59 D 1	4499	RCA	28.00	26.60	.....	.....
59 D 1	4510	RCA	35.70	33.92	32.23	30.62
59 D 1	4526	RCA	610.00	.....	.....	.....
59 D 1	4604	RCA	9.00	.....	.....	.....
59 D 1	4621	RCA	125.00	118.75	112.82	107.18
59 D 1	4652/8042	RCA	11.65	11.07	10.52	9.99
59 D 4	4654	AMP	7.75	7.37	.....	.....
59 D 1	4654/5762	RCA	430.00	408.50	.....	.....
59 D 4	4662	AMP	5.00	4.75	4.22	.....
59 D 4	4699	AMP	8.20	7.79	7.40	.....
59 D 4	5544	AMP	44.00	.....	.....	.....
59 D 4	5545	AMP	48.75	.....	.....	.....
59 D 1	5550	RCA	49.00	.....	.....	.....
59 D 1	5551A	RCA	65.00	.....	.....	.....
59 D 1 Z	5552A	RCA	99.00	.....	.....	.....
59 D 12Z	5553B	SYL	245.00	.....	.....	.....
59 D 1	5556	RCA	57.50	54.63	51.90	48.85
59 D 1	5557	RCA	9.50	9.02	8.55	.....
59 D 1	5558	RCA	17.50	16.12	.....	.....
59 D 1	5559	RCA	23.00	.....	.....	.....
59 D 1	5560	RCA	33.00	31.35	29.70	.....
59 D 1	5561	RCA	59.00	.....	.....	.....
59 D 1 Z	5563A	RCA	32.90	.....	.....	.....
59 D 13 F	5575/100	ML	225.00	.....	.....	.....
59 D 1	5581	RCA	6.20	5.89	5.60	5.32
59 D 1	5582	RCA	7.45	7.08	6.73	6.39
59 D 1	5583	RCA	9.30	8.84	8.40	.....
59 D 13 F	5604	ML	570.00	.....	.....	.....
59 D 13 Z	5606	ML	288.00	.....	.....	.....
59 D 1	5636	RCA	6.10	5.80	5.51	5.23
59 D 1	5639	RCA	5.25	4.99	4.74	4.50
59 D 1	5642	RCA	3.53	3.38	.....	.....
59 D 4	5651	AMP	1.78	1.69	1.60	1.51
59 D 1	5651A	RCA	1.78	1.69	1.60	1.51
59 D 1	5651 WA	RCA	3.75	3.56	3.38	.....
59 D 1	5652	RCA	8.60	8.17	7.75	7.37
59 D 1	5653	RCA	5.35	5.08	4.83	4.59
59 D 1	5654	RCA	2.41	2.28	2.16	2.04
59 D 2	CK5656	RAY	16.56	15.73	.....	.....
59 D 1	5663	RCA	2.30	2.19	2.08	1.98
59 D 10	5665/C16J	NAT	52.50	49.88	.....	.....
59 D 13Z	5667	ML	370.00	.....	.....	.....
59 D 1	5670	RCA	2.45	2.33	2.21	2.08
59 D 1 F	5671	RCA	2310.00	.....	.....	.....
59 D 2	CK5672	RAY	2.27	2.16	.....	.....
59 D 1	5672	RCA	2.27	2.16	2.06	1.96
59 D 1	5675	RCA	6.90	6.56	6.23	5.92
59 D 2	CK5676	RAY	3.05	2.90	.....	.....
59 D 1	5678	RCA	2.30	2.19	2.08	1.98
59 D 10	NL5684/C3J/A	NAT	13.10	12.45	11.79	.....
59 D 4	5685/C6JA	AMP	29.00	.....	.....	.....
59 D 1	5686	RCA	3.37	3.20	3.03	2.86
59 D 1	5687	RCA	4.05	3.84	3.65	3.45
59 D 2	CK5687 WA	RAY	5.65	5.37	5.10	4.85
59 D 1	5691	RCA	8.75	8.31	7.87	7.43
59 D 1	5692	RCA	8.25	7.83	7.43	7.10
59 D 1	5693	RCA	6.60	6.27	5.94	5.61
59 D 1	5696	RCA	1.95	1.85	1.75	1.66
59 D 2	CK5702	RAY	4.20	3.99	.....	.....
59 D 2	CK5702 WA	RAY	6.48	6.15	.....	.....
59 D 2	CK5703	RAY	3.20	2.90	.....	.....
59 D 2	CK5703 WA	RAY	7.07	6.71	.....	.....
59 D 1	5718	RCA	3.65	3.47	.....	.....
59 D 1	5719	RCA	3.15	2.99	2.84	2.70
59 D 2	RK5721	RAY	116.00	.....	.....	.....
59 D 1	5725	RCA	3.15	3.00	2.85	2.71
59 D 1	5725/6AS6 W	RCA	3.12	2.97	2.80	2.66
59 D 1	5726	RCA	1.55	1.47	1.40	1.32
59 D 1	5727	RCA	2.90	2.76	2.61	2.47
59 D 1	5734	RCA	22.05	20.95	19.91	18.92
59 D 12U	5736	SYL	195.00	.....	.....	.....

Special-Purpose Tube Directory (Cont'd)

Stock No. Dept.	Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1	5749	RCA	2.20	2.09	1.98	1.87
59 D 1	5750	RCA	3.45	3.28	3.11	2.93
59 D 1	5751	RCA	2.55	2.42	2.30	2.17
59 D 2	CK5755	RAY	9.30	8.84	.....	.....
59 D 1 U	5762	RCA	230.00	.....	.....	.....
59 D 1	5763	RCA	2.45	2.33	2.21	2.08
59 D 1 F	5771	RCA	700.00	665.00	.....	.....
59 D 1	5783	RCA	4.19	3.98	3.78	3.59
59 D 2	CK5784	RAY	5.00	4.75	.....	.....
59 D 1	5814A	RCA	2.35	2.23	2.12	2.00
59 D 1	5819	RCA	78.65	74.72	.....	.....
59 D 1 F	5820A	RCA	995.00	.....	.....	.....
59 D 1	5823	RCA	1.72	1.63	1.55	1.46
59 D 1	5824	RCA	3.60	3.42	3.24	3.06
59 D 1	5825	RCA	33.00	.....	.....	.....
59 D 2	RK5837	RAY	81.00	.....	.....	.....
59 D 1	5840	RCA	5.35	5.08	4.82	4.55
59 D 20	5841	VIC	12.00	.....	.....	.....
59 D 4	5842	AMP	7.35	6.98	6.62	6.25
59 D 1	5842/417A	RCA	7.35	6.98	6.62	6.25
59 D 1	5844	RCA	2.40	2.28	2.16	2.05
59 D 12	5845	SYL	9.95	9.45	8.96	.....
59 D 4	5847	AMP	9.55	8.20	7.65	.....
59 D 1	5847/404A	RCA	9.55	8.20	7.65	.....
59 D 12T	5855	SYL	85.00	.....	.....	.....
59 D 4	5861/EC55	AMP	37.50	.....	.....	.....
59 D 4	5866A	AMP	Use 7986/5866A			
59 D 4	5867A	AMP	32.00	.....	.....	.....
59 D9	5867A	EIM	32.00	.....	.....	.....
59 D 4	5868	AMP	65.65	.....	.....	.....
59 D 4	5869	AMP	31.50	.....	.....	.....
59 D 4 Z	5870	AMP	112.12	.....	.....	.....
59 D 1	5876A	RCA	6.90	6.56	6.23	5.92
59 D 2	CK5879	RAY	1.95	1.85	1.76	.....
59 D 1	5881	RCA	3.10	2.95	2.80	2.66
59 D 2	CK5886	RAY	5.00	4.75	.....	.....
59 D 2	CK5889	RAY	22.70	21.57	20.49	19.47
59 D 1	5893	RCA	18.45	17.53	16.65	15.82
59 D 4	5894	AMP	29.00	.....	.....	.....
59 D 4	5894B/8737	AMP	27.50	26.03	.....	.....
59 D 1	5896	RCA	3.80	3.61	3.43	3.26
59 D 1	5899	RCA	5.55	5.27	5.00	4.72
59 D 1	5902	RCA	4.80	4.56	4.32	4.08
59 D 1	5915	RCA	1.62	1.54	1.46	1.38
59 D 4 F	5924A	AMP	330.00	313.50	.....	.....
59 D 12	GB-5933	SYL	12.35	11.73	.....	.....
59 D 1	5963	RCA	1.36	1.29	1.22	1.16
59 D 1	5964	RCA	1.55	1.47	1.40	1.32
59 D 1	5965	RCA	1.92	1.82	1.73	1.63
59 D 2	CK5965A	RAY	1.90	1.81	1.71	1.62
59 D 2	RK5976	RAY	68.00	.....	.....	.....
59 D 10	NL5992	NAT	15.75	14.96	.....	.....
59 D 1	6005	RCA	3.23	3.07	2.91	2.75
59 D 4	6007	AMP	2.15	2.04	1.94	1.84
59 D 4	6008	AMP	3.20	.....	.....	.....
59 D 1	6012	RCA	7.65	7.27	6.89	6.50
59 D 1	6021	RCA	3.50	3.33	3.15	2.98
59 D 1	6072	RCA	3.90	3.71	3.51	3.32
59 D 2	CK6072A	RAY	3.88	3.69	3.51	3.34
59 D 1	6073	RCA	3.00	2.85	.....	.....
59 D 1	6073/OA2	RCA	3.35	3.18	3.02	2.87
59 D 1	6074	RCA	3.45	3.28	3.11	.....
59 D 1	6074/OB2	RCA	3.70	3.52	3.34	3.17
59 D 4 Z	6076	AMP	338.00	.....	.....	.....
59 D 1	6080	RCA	5.33	5.06	4.80	4.53
59 D 1	6080WA	RCA	10.80	.....	.....	.....
59 D 1	6082	RCA	5.60	5.32	.....	.....
59 D 4	6083	AMP	25.00	.....	.....	.....
59 D 4	6084	AMP	3.30	.....	.....	.....
59 D 4	6085	AMP	3.30	.....	.....	.....
59 D 2	CK6087/5Y3WGTB	RAY	5.75	5.46	5.19	5.03
59 D 2	CK6088	RAY	3.50	3.33	3.16	3.00
59 D 1	6101	RCA	5.35	5.08	.....	.....
59 D 1	6111	RCA	3.70	3.52	3.33	3.15
59 D 1	6112	RCA	4.15	3.94	3.74	3.53
59 D 1	6130/3C45	RCA	25.75	.....	.....	.....
59 D 1	6136	RCA	2.70	2.57	2.44	.....
59 D 12	6146A	SYL	4.35	4.13	3.92	3.70
59 D 1	6146A	RCA	4.30	4.09	3.89	3.70
59 D 1	6146B/8298A	RCA	5.15	4.89	4.65	4.42
59 D 1	6146W	RCA	6.60	6.27	5.96	5.66
59 D 1	6155	RCA	36.00	34.20	.....	.....
59 D 9	6155	EIM	41.75	39.66	.....	.....
59 D 4	6155U	AMP	38.63	36.70	.....	.....
59 D 4	6156	AMP	42.60	.....	.....	.....
59 D 1	6159B	RCA	5.05	4.80	4.56	4.33
59 D 1	6159W	RCA	9.00	8.55	8.12	7.71
59 D 1 T	6161	RCA	135.00	128.25	.....	.....
59 D 1 Z	6166	RCA	825.00	.....	.....	.....

Stock No. Dept.	Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1 F	6166A/7007	RCA	975.00	.....	.....	.....
59 D 1	6173	RCA	15.20	.....	.....	.....
59 D 1 F	6181	RCA	1280.00	.....	.....	.....
59 D 1	6186/6AG5WA	RCA	3.85	3.66	.....	.....
59 D 1	6189	RCA	3.70	.....	.....	.....
59 D 1	6197	RCA	2.30	2.19	2.07	1.96
59 D 1	6199	RCA	50.40	47.88	.....	.....
59 D 1	6201	RCA	2.95	2.80	2.66	2.51
59 D 1	6202	RCA	2.69	2.56	2.43	2.31
59 D 1	6211	RCA	2.15	2.04	1.94	1.83
59 D 4	6211A	AMP	3.40	3.23	3.06	2.89
59 D 12	6216	SYL	4.15	3.94	3.74	3.53
59 D 4	6227	AMP	3.95	.....	.....	.....
59 D 4	6252	AMP	28.40	26.98	25.63	.....
59 D 1	6263A	RCA	13.55	12.87	12.23	11.62
59 D 1	6264A	RCA	14.35	13.64	12.96	12.32
59 D 2	CK6265	RAY	4.10	3.90	3.69	3.49
59 D 4	6267/EF86	AMP	1.30	1.23	1.17	1.10
59 D 4	6279	AMP	58.50	.....	.....	.....
59 D 6	6291	DUM	63.00	.....	.....	.....
59 D 6	6292	DUM	63.00	.....	.....	.....
59 D 1	6293	RCA	5.50	5.23	4.97	4.72
59 D 7	6312	BOM	166.00	.....	.....	.....
59 D 1	6328	RCA	14.45	13.73	13.04	12.39
59 D 1	6336A	RCA	19.04	18.08	17.14	16.18
59 D 1	6342A	RCA	60.90	.....	.....	.....
59 D 1	6350	RCA	1.85	1.76	1.67	1.57
59 D 4	6354	AMP	2.55	.....	.....	.....
59 D 4	6360A	AMP	6.25	5.94	5.64	5.36
59 D 1	6360A	RCA	6.25	5.94	5.65	5.37
59 D 6	6362	DUM	133.00	.....	.....	.....
59 D 6 T	6363	DUM	123.50	.....	.....	.....
59 D 4	6375/DC70	AMP	8.40	.....	.....	.....
59 D 1	6386	RCA	8.00	7.60	7.22	6.85
59 D 2	6397	RAY	8.30	7.89	6.64	6.27
59 D 1	6405/1640	RCA	9.00	8.55	8.12	7.71
59 D 1	6417	RCA	3.33	3.16	.....	.....
59 D 2	CK6418	RAY	3.20	3.04	2.88	2.72
59 D13	6442	ML	39.00	.....	.....	.....
59 D 4	6463	AMP	3.50	3.33	3.15	2.97
59 D 6	6467	DUM	63.00	.....	.....	.....
59 D 12	6476A	SYL	14.95	.....	.....	.....
59 D 2	CK6485	RAY	2.05	.....	.....	.....
59 D 4	6508	AMP	114.00	.....	.....	.....
59 D 1 F	6521	RCA	725.00	.....	.....	.....
59 D 1 F	6521/R	RCA	725.00	.....	.....	.....
59 D 1	6524	RCA	25.90	24.61	23.38	22.21
59 D 2	CK6528	RAY	21.55	20.47	19.40	18.32
59 D 1	6550	RCA	4.59	4.36	4.13	3.90
59 D 1	6550VI	RCA	9.25	.....	.....	.....
59 D 9	6569	EIM	43.00	40.90	.....	.....
59 D 1	6570	RCA	12.10	11.50	10.93	10.38
59 D 1	6626/OA2WA	RCA	3.35	3.18	3.02	2.85
59 D 1	6655A	RCA	63.70	60.52	.....	.....
59 D 1	6660/6BA6	RCA	1.01	.....	.....	.....
59 D 1	6661/6BH6	RCA	1.34	1.27	1.21	1.14
59 D 1	6662/6BJ6	RCA	1.29	1.23	1.17	1.11
59 D 1	6663/6AL5	RCA	.92	.87	.....	.....
59 D 1	6664/6AB4	RCA	1.12	1.06	1.01	.96
59 D 1	6669/6AQ5A	RCA	1.06	1.01	.96	.91
59 D 1	6676/6CB6A	RCA	1.06	1.01	.96	.91
59 D 1	6677/6CL6	RCA	1.85	1.76	1.67	1.57
59 D 1	6678/6U8A	RCA	1.62	1.54	1.46	1.38
59 D 1	6679/12AT7	RCA	1.50	1.43	1.35	1.28
59 D 1	6680/12AU7A	RCA	1.22	1.16	1.10	1.04
59 D 1	6681/12AX7A	RCA	1.26	1.20	1.14	1.08
59 D 4	6686	AMP	5.70	.....	.....	.....
59 D 4	6688	AMP	8.75	8.31	7.89	.....
59 D 4	6688A	AMP	8.75	8.31	7.89	.....
59 D 1	6688A	RCA	6.80	6.46	6.14	5.84
59 D 4	6688B	AMP	11.25	.....	.....	.....
59 D 4	6689	AMP	3.85	.....	.....	.....
59 D 9 F	6696A	EIM	1105.00	.....	.....	.....
59 D 9 F	6697A	EIM	1330.00	.....	.....	.....
59 D 13	ML-6771	ML	71.90	.....	.....	.....
59 D 9	6775	EIM	53.00	50.35	.....	.....
59 D 12	6802	SYL	11.43	.....	.....	.....
59 D 12	6807	SYL	32.25	.....	.....	.....
59 D 1	6810A	RCA	210.00	.....	.....	.....
59 D 1	6816	RCA	51.80	.....	.....	.....
59 D 19	6842 (USAF)	NU	15.00	.....	.....	.....
59 D 19	6842 (COM)	NU	14.30	14.00	13.65	.....
59 D 20	6842	VIC	17.60	15.85	.....	.....
59 D 10	NL6844A	NAT	11.00	.....	.....	.....
59 D 1	6850	RCA	25.90	.....	.....	.....
59 D 1	6883	RCA	4.25	4.04	3.84	3.65
59 D 1	6883B/8032A/8552	RCA	5.30	5.03	4.78	4.54
59 D 1	6884	RCA	39.20	.....	.....	.....
59 D 1	6887	RCA	1.40	1.33	1.27	1.21

Please Specify Department No. and Tube Type No. When Ordering

Special-Purpose Tube Directory (Cont'd)

Stock No. Dept.	Tube Type	Mfr.	EACH 1-4	5-18	19-49	50-Up
59 D 1X	6894	RCA	25.90	24.60	.....	.....
59 D 10	6895	NAT	25.00	23.75	.....	.....
59 D 1	NL6895	RCA	25.90	24.61	23.38	22.20
59 D 1	6897	RCA	34.60	32.87	.....	.....
59 D 4	6907	AMP	27.00	25.65	24.37	23.15
59 D 2	CK6909	RAY	17.20	.....	.....	.....
59 D 12	6910	SYL	13.37	.....	.....	.....
59 D 1	6922/E88CC	RCA	4.87	4.35	3.95	3.48
59 D 4	6922/E88CC	AMP	4.87	4.25	4.00	3.73
59 D 1	6939	RCA	11.37	10.80	10.23	9.66
59 D 1	6953	RCA	8.60	8.17	7.76	7.37
59 D 4	6960	AMP	186.00	.....	.....	.....
59 D 4	6977	AMP	2.50	2.38	2.26	2.15
59 D 1	6977	RCA	2.48	2.36	2.13	2.03
59 D 4	6979	AMP	46.00	.....	.....	.....
59 D 10	NL6989/C6J/KL	NAT	29.45	27.98	.....	.....
59 D 10	NL6989-NE	NAT	33.90	32.21	.....	.....
59 D 13Z	7007	ML	1020.00	.....	.....	.....
59 D 10	NL7009	NAT	19.00	.....	.....	.....
59 D 4	7025	AMP	1.40	1.33	1.26	1.19
59 D 1	7034/4X150A	RCA	23.15	21.20	20.14	19.14
59 D 10	NL7037	NAT	26.00	24.70	.....	.....
59 D 1T	7038	RCA	175.00	.....	.....	.....
59 D 1	7043	RCA	8.15	7.74	7.35	6.98
59 D 1	7044	RCA	2.70	2.57	2.44	2.32
59 D 1	7054	RCA	1.54	1.46	1.39	1.30
59 D 1	7055	RCA	1.00	.95	.....	.....
59 D 1	7056	RCA	.92	.87	.83	.78
59 D 1	7057	RCA	1.95	1.85	1.76	1.67
59 D 1	7058	RCA	1.26	1.20	1.14	1.08
59 D 1	7059	RCA	1.48	1.41	1.33	1.26
59 D 1	7060	RCA	1.75	1.66	1.58	1.49
59 D 1	7061	RCA	1.16	1.10	1.05	.....
59 D 4	7062	AMP	2.75	2.62	.....	.....
59 D 1	7094	RCA	41.15	.....	.....	.....
59 D 10	NL7094	NAT	45.00	.....	.....	.....
59 D 1T	7102	RCA	115.00	.....	.....	.....
59 D 1	7117	RCA	13.10	12.45	.....	.....
59 D 4	7119	AMP	4.05	3.85	3.66	3.48
59 D 4X	7136	AMP	36.00	.....	.....	.....
59 D 10	NL7153	NAT	14.50	13.78	.....	.....
59 D 1	7167	RCA	1.41	1.33	1.26	1.20
59 D 4	7189	AMP	1.55	1.47	1.40	1.33
59 D 1	7213	RCA	400.00	380.00	.....	.....
59 D 19	7234	NU	15.65	15.35	.....	.....
59 D 19	7235	NU	10.00	9.80	9.65	.....
59 D 1	7258	RCA	1.82	1.73	1.64	1.56
59 D 1	7262A	RCA	215.00	.....	.....	.....
59 D 1	7263A	RCA	430.00	.....	.....	.....
59 D 1	7265	RCA	380.00	.....	.....	.....
59 D 1	7271	RCA	42.00	.....	.....	.....
59 D 9	7289/3CX100A5	EIM	(See 3CX100A5)			
59 D 4	7308	AMP	5.20	4.65	4.33	3.83
59 D 1	7308	RCA	5.20	4.94	4.70	4.47
59 D 12F	7325	SYL	170.00	.....	.....	.....
59 D 1	7360	RCA	3.77	3.58	3.39	.....
59 D 4	7377	AMP	27.50	.....	.....	.....
59 D 1	7457	RCA	63.90	60.71	57.67	54.79
59 D 4F	7459	AMP	335.00	318.25	.....	.....
59 D 4	7534	AMP	21.00	.....	.....	.....
59 D 1	7551	RCA	3.37	3.20	3.03	.....
59 D 1F	7554	RCA	39.20	37.24	.....	.....
59 D 1	7558	RCA	3.49	3.32	3.14	2.97
59 D 4	7580W/4CX250R	AMP	44.50	42.28	40.17	38.17
59 D 1	7586	RCA	3.35	3.18	3.02	2.85
59 D 1	7587	RCA	5.20	4.94	4.68	4.42
59 D 4	7609	AMP	31.50	29.93	28.43	.....
59 D 4	7643	AMP	4.95	.....	.....	.....
59 D 1	7651	RCA	260.00	.....	.....	.....
59 D 4	7693	AMP	3.95	.....	.....	.....
59 D 4	7694	AMP	3.95	.....	.....	.....
59 D 13	7698	ML	88.50	.....	.....	.....
59 D 4	7699	AMP	15.00	.....	.....	.....
59 D 1	7717/6CY5	RCA	1.39	1.32	1.25	1.19
59 D 4	7722/E280F	AMP	8.75	.....	.....	.....
59 D 10	NL 7723-NE	NAT	13.10	12.45	.....	.....
59 D 1	7724/14GT8	RCA	1.48	1.41	1.34	1.28
59 D 1	7735A	RCA	150.00	.....	.....	.....
59 D 1	7735B	RCA	175.00	.....	.....	.....
59 D 4	7737	AMP	8.35	.....	.....	.....
59 D 1T	7767	RCA	135.00	.....	.....	.....
59 D 10	NL7786-NE	NAT	15.50	.....	.....	.....
59 D 4	7788	AMP	10.20	9.69	9.21	8.75
59 D 1	7843	RCA	33.60	31.92	30.32	28.80
59 D 4	7854	AMP	33.40	.....	.....	.....
59 D 1	7895	RCA	3.35	3.18	3.02	2.85
59 D 1	7898	RCA	1.34	1.27	1.21	1.14
59 D 4U	7900	AMP	325.00	.....	.....	.....
59 D 1	7905	RCA	3.85	3.68	3.47	3.27
59 D 12	7963	SYL	8.00	7.60	.....	.....
59 D 10	NL7977/4032	NAT	19.00	.....	.....	.....
59 D 12	7984	SYL	5.35	5.08	4.82	4.54
59 D 4	7986/5866A	AMP	28.50	.....	.....	.....
59 D 1	8000	RCA	26.25	24.94	23.69	22.51
59 D 1	8005	RCA	19.10	.....	.....	.....
59 D 1	8008	RCA	11.50	10.93	10.38	9.86
59 D 4	8008A	AMP	11.50	10.93	10.38	.....
59 D 1	8013A	RCA	21.45	20.38	19.36	18.39
59 D 1	8020	RCA	23.50	22.33	.....	.....
59 D 4	8020AX	AMP	24.00	.....	.....	.....
59 D 1	8032	RCA	4.90	4.66	4.43	4.21
59 D 12	8035	SYL	11.10	.....	.....	.....
59 D 10	NL8037/5031	NAT	15.75	14.96	.....	.....
59 D 4	8042	AMP	12.00	.....	.....	.....
59 D 1U	8055	RCA	170.00	161.50	.....	.....
59 D 1	8056	RCA	5.00	4.75	4.50	4.25
59 D 1	8058	RCA	14.95	14.20	13.49	12.81
59 D 1	8072	RCA	19.70	.....	.....	.....
59 D 1	8077/7054	RCA	1.40	1.33	1.26	1.20
59 D 10	NL8091	NAT	22.50	.....	.....	.....
59 D 4	8117A	AMP	35.25	.....	.....	.....
59 D 1	8121	RCA	33.60	.....	.....	.....
59 D 1	8122	RCA	35.00	.....	.....	.....
59 D 1	8134	RCA	210.00	.....	.....	.....
59 D 1	8134/VI	RCA	370.00	.....	.....	.....
59 D 1	8156	RCA	3.89	3.70	3.52	3.34
59 D 4	8163	AMP	34.00	.....	.....	.....
59 D 1	8165/4-65A	RCA	29.50	28.02	26.63	.....
59 D 9Z	8166/4-1000A	EIM	See 4-1000A/8166			
59 D 1	8167/4CX300A	RCA	54.00	51.30	48.74	46.30
59 D 1	8168/4CX1000A	RCA	200.00	190.00	180.50	171.48
59 D 1Z	8170/4CX5000A	RCA	495.00	470.25	.....	.....
59 D 1Z	8171/4CX10000D	RCA	575.00	546.25	.....	.....
59 D 1	8203	RCA	3.80	3.61	3.42	3.23
59 D 4	8223	AMP	5.25	.....	.....	.....
59 D 1	8226	RCA	80.05	76.05	72.25	68.64
59 D 4	8228	AMP	2.90	2.68	2.44	2.15
59 D 4	8233	AMP	16.25	15.44	14.67	.....
59 D 1Z	8239/3X3000F1	RCA	245.00	.....	.....	.....
59 D 4	8254/EC1000	AMP	19.25	.....	.....	.....
59 D 4	8255/E88C	AMP	5.25	4.99	4.74	.....
59 D 4Z	8270	AMP	87.00	.....	.....	.....
59 D 1F	8281/4CX15000A	RCA	695.00	660.25	627.24	.....
59 D 9T	8295/172	EIM	180.00	.....	.....	.....
59 D 12	8353	SYL	11.10	.....	.....	.....
59 D 1	8393	RCA	3.45	3.27	3.11	2.93
59 D 10	NL8421/5092	NAT	15.75	.....	.....	.....
59 D 10	NL8422/5991	NAT	15.75	.....	.....	.....
59 D 10	NL8423/6091	NAT	19.00	18.05	.....	.....
59 D 9T	8432	EIM	164.00	.....	.....	.....
59 D 4	8436/EC158	AMP	375.00	.....	.....	.....
59 D 1	8438/4-400A	RCA	48.00	.....	.....	.....
59 D 4	8458	AMP	9.75	.....	.....	.....
59 D 1	8462	RCA	40.00	.....	.....	.....
59 D 1F	8480	RCA	760.00	.....	.....	.....
59 D 1F	8480/VI	RCA	1140.00	.....	.....	.....
59 D 10	NL8502/4021	NAT	33.00	31.35	.....	.....
59 D 1	8507A	RCA	190.00	.....	.....	.....
59 D 9	8560A	EIM	46.50	44.21	42.00	39.90
59 D 1Z	8572A	RCA	215.00	204.25	.....	.....
59 D 4	8621/4CX250FG	AMP	38.00	.....	.....	.....
59 D 1	8627A	RCA	14.15	13.45	12.78	12.15
59 D 19	8632	NU	20.00	19.00	18.05	17.15
59 D 1F	8673/S	RCA	1800.00	.....	.....	.....
59 D 1	9001	RCA	5.38	5.11	4.84	4.57
59 D 1	9002	RCA	4.14	3.93	3.73	3.25
59 D 1	9003	RCA	5.38	5.11	4.84	4.57
59 D 1	9005	RCA	8.05	7.65	7.27	6.91
59 D 1	9006	RCA	2.70	2.57	2.45	2.33
59 D 10	NL50911	NAT	15.75	14.96	.....	.....

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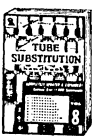
23 D 7676 EG.....1.75



TUBE SUBSTITUTION HANDBOOK. By the Howard W. Sams Engineering Staff. Lists over 10,000 direct substitutions. European tube section. 128 pages. Size, 5½x8½". Shpg. wt., 5 oz.
23 D 7277 EG.....1.75

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	**OZ4**	1.70	1.53	1.36	1.22
25 D 28	**OZ4A**	1.70	1.53	1.36	1.22
25 D 28	**1A3**	3.33	2.99	2.66	2.39
25 D 28	**1A5GT**	2.00	1.80	1.60	1.44
25 D 28	**1AD2**	1.70	1.53	1.36	1.22
25 D 28	**1AY2**	1.30	1.17	1.04	.94
25 D 28	**1BC2**	1.63	1.46	1.30	1.17
25 D 28	**1BH2**	1.53	1.38	1.22	1.10
	1B3GT	Use 1G3GT/1B3GT			
25 D 28	**1G3GT/1B3GT**	1.70	1.53	1.36	1.22
25 D 28	**1K3/1J3**	1.70	1.53	1.36	1.22
25 D 28	**1L6**	6.28	5.65	5.02	4.52
25 D 28	**1N5GT**	2.45	2.21	1.96	1.76
25 D 28	**1R5**	2.23	2.00	1.78	1.60
25 D 28	**1S2A/DY87**	1.28	1.15	1.02	.92
25 D 28	**1S4**	2.05	1.85	1.64	1.48
25 D 28	**1S5**	1.70	1.53	1.36	1.22
25 D 28	**1T4**	1.93	1.73	1.54	1.39
25 D 28	**1U4**	1.93	1.73	1.54	1.39
25 D 28	**1U5**	1.70	1.53	1.36	1.22
25 D 28	**1V2**	1.28	1.15	1.02	.92
	1X2A	Use 1X2B/1X2A			
25 D 28	**1X2B/1X2A**	1.85	1.67	1.48	1.33
25 D 28	**2A3**	4.95	4.46	3.96	3.56
25 D 28	**2AF4B/2DZ4**	2.05	1.85	1.64	1.48
25 D 28	**2AH2**	1.70	1.53	1.36	1.22
25 D 28	**2AS2**	1.65	1.49	1.32	1.18
25 D 28	**2AV2**	1.43	1.28	1.14	1.03
25 D 28	**2BJ2**	2.10	1.89	1.68	1.51
25 D 28	**2BN4A**	1.78	1.60	1.42	1.28
25 D 28	**2BU2**	2.01	1.76	1.56	1.40
25 D 28	**2CN3A**	1.63	1.46	1.30	1.17
25 D 28	**2CW4**	2.45	2.21	1.96	1.76
25 D 28	**2CY5**	2.20	1.98	1.76	1.58
25 D 28	**2DS4**	2.45	2.21	1.96	1.76
25 D 28	**2DV4**	3.23	2.90	2.58	2.32
	2DZ4	Use 2AF4B/2DZ4			
25 D 28	**2EG4**	2.45	2.21	1.96	1.76
25 D 28	**2EN5**	1.60	1.44	1.28	1.15
25 D 28	**2ER5**	1.85	1.67	1.48	1.33
25 D 28	**2FH5**	1.85	1.67	1.48	1.33
	2FQ5A	Use 2GK5/2FQ5A			
25 D 28	**2FS5**	2.43	2.18	1.94	1.75
25 D 28	**2GK5/2FQ5A**	2.10	1.89	1.68	1.51
25 D 28	**2GU5**	2.25	2.03	1.80	1.62
25 D 28	**2HA5**	1.93	1.73	1.54	1.39
25 D 28	**2HQ5**	1.93	1.73	1.54	1.39
25 D 28	**3A2**	2.75	2.48	2.20	1.98
25 D 28	**3A3A/3B2**	1.60	1.44	1.28	1.15
25 D 28	**3AF4A/3DZ4**	2.05	1.85	1.64	1.48
25 D 28	**3AL5**	1.35	1.21	1.08	.97
25 D 28	**3AT2**	1.70	1.53	1.36	1.22
25 D 28	**3AU6**	1.48	1.33	1.18	1.06
25 D 28	**3AV6**	1.48	1.33	1.18	1.06
25 D 28	**3AW2**	1.60	1.44	1.28	1.15
	3AW3	Use 3A3A/3B2			
	3B2	Use 3A3A/3B2			
25 D 28	**3BA6**	1.18	1.06	.94	.85
25 D 28	**3BC5/3CE5**	1.35	1.21	1.08	.97
25 D 28	**3BL2**	1.77	1.60	1.42	1.28
25 D 28	**3BM2**	1.80	1.62	1.44	1.30

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	**3BN2**	1.73	1.55	1.38	1.24
25 D 28	**3BN4A**	1.70	1.53	1.36	1.22
25 D 28	**3BN6**	2.38	2.14	1.90	1.71
25 D 28	**3BS2A**	1.62	1.46	1.30	1.17
25 D 28	**3BU8/3GS8**	2.45	2.21	1.96	1.76
25 D 28	**3BY6**	1.50	1.35	1.20	1.08
25 D 28	**3BZ6**	1.65	1.49	1.32	1.19
25 D 28	**3CA3**	1.60	1.44	1.28	1.15
25 D 28	**3CB6/3CF6**	1.48	1.33	1.18	1.06
	3CE5	Use 3BC5/3CE5			
	3CF6	Use 3CB6/3CF6			
25 D 28	**3CN3A**	1.60	1.44	1.28	1.15
25 D 28	**3CS6**	1.85	1.67	1.48	1.33
25 D 28	**3CU3A**	2.33	2.09	1.86	1.67
25 D 28	**3CX3**	1.75	1.57	1.40	1.26
25 D 28	**3CY5**	1.95	1.76	1.56	1.40
25 D 28	**3CZ3**	2.02	1.82	1.66	1.50
25 D 28	**3DC3**	2.33	2.09	1.86	1.67
25 D 28	**3DG4**	2.60	2.34	2.08	1.87
25 D 28	**3DK6**	1.48	1.33	1.18	1.06
25 D 28	**3DT6A**	1.63	1.46	1.30	1.17
	3DZ4	Use 3AF4A/3DZ4			
25 D 28	**3EA5**	1.78	1.60	1.42	1.28
25 D 28	**3EH7/XF183**	1.28	1.15	1.02	.92
25 D 28	**3EJ7/XF184**	1.28	1.15	1.02	.92
25 D 28	**3ER5**	2.23	2.00	1.78	1.60
25 D 28	**3FH5**	1.63	1.46	1.30	1.17
25 D 28	**3FS5**	2.15	1.94	1.72	1.55
25 D 28	**3GK5**	2.10	1.89	1.68	1.51
	3GS8	Use 3BU8/3GS8			
25 D 28	**3HM5/3HA5**	1.93	1.73	1.54	1.39
25 D 28	**3HQ5**	2.63	2.36	2.10	1.89
25 D 28	**3JC6A**	2.20	1.98	1.76	1.58
25 D 28	**3KT6**	1.90	1.71	1.52	1.37
25 D 28	**3Q4**	1.68	1.51	1.34	1.21
25 D 28	**3Q5GT**	2.93	2.63	2.34	2.11
25 D 28	**3S4**	1.70	1.53	1.36	1.22
25 D 28	**3V4**	1.88	1.69	1.50	1.35
25 D 28	**4AU6**	1.70	1.53	1.36	1.22
25 D 28	**4AV6**	1.48	1.33	1.18	1.06
25 D 28	**4BC8**	2.00	1.80	1.60	1.44
25 D 28	**4BL8/XCF80**	1.20	1.08	.96	.86
25 D 28	**4BN6**	2.03	1.82	1.62	1.46
25 D 28	**4BQ7A**	2.45	2.21	1.96	1.76
25 D 28	**4BS8**	2.13	1.91	1.70	1.53
25 D 28	**4BU8/4GS8**	2.23	2.00	1.78	1.60
25 D 28	**4BZ6**	1.48	1.33	1.18	1.06
25 D 28	**4BZ7**	2.45	2.21	1.96	1.76
25 D 28	**4CB6**	1.43	1.28	1.14	1.03
25 D 28	**4CS6**	1.70	1.53	1.36	1.22
25 D 28	**4DE6**	1.48	1.33	1.18	1.06
25 D 28	**4DK6**	1.70	1.53	1.36	1.22
25 D 28	**4DT6A**	1.63	1.46	1.30	1.17
25 D 28	**4EH7/LF183**	1.78	1.60	1.42	1.28
25 D 28	**4EJ7/LF184**	1.78	1.60	1.42	1.28
25 D 28	**4ES8/XCC189**	2.75	2.49	2.20	1.98
25 D 28	**4EW6**	1.45	1.31	1.16	1.04
25 D 28	**4GK5**	1.95	1.76	1.56	1.40
25 D 28	**4GM6**	1.10	.99	.88	.79
	4GS8	Use 4BU8/4GS8			
25 D 28	**4GX7**	2.00	1.80	1.60	1.44
25 D 28	**4HA5/PC900**	1.18	1.06	.94	.85
25 D 28	**4HA7**	1.53	1.37	1.22	1.10
25 D 28	**4HC7**	1.53	1.37	1.22	1.10

Receiving Tubes (Cont'd)

RCA

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	4HM6	1.55	1.40	1.24	1.12
25 D 28	4HQ5	2.30	2.07	1.84	1.66
25 D 28	4HS8	1.85	1.67	1.48	1.33
25 D 28	4HT6	1.28	1.15	1.02	.92
25 D 28	4JC6A	2.30	2.07	1.84	1.66
25 D 28	4JD6	2.30	2.07	1.84	1.66
25 D 18	4JH6	1.70	1.53	1.36	1.22
25 D 28	4KE8	3.03	2.72	2.42	2.18
25 D 28	4LJ8	2.05	1.85	1.64	1.48
25 D 28	5AM8	2.45	2.21	1.96	1.76
25 D 28	5AN8	2.60	2.34	2.08	1.87
25 D 28	5AQ5	1.48	1.33	1.18	1.06
25 D 28	5AR4/GZ34	2.13	1.91	1.70	1.53
25 D 28	5AS4A	1.73	1.55	1.38	1.24
25 D 28	5AS8	2.20	1.98	1.76	1.58
25 D 28	5AT8	2.23	2.00	1.78	1.60
	5AU4		Use 5V3A/5AU4		
25 D 28	5AV8	2.03	1.83	1.62	1.46
25 D 28	5AZ4	2.65	2.39	2.12	1.91
25 D 28	5B8	2.75	2.48	2.20	1.98
25 D 28	5BC3A	1.70	1.53	1.36	1.22
25 D 28	5BE8	1.55	1.40	1.24	1.12
25 D 28	5BK7A	2.08	1.87	1.66	1.49
25 D 28	5BQ7A	2.15	1.94	1.72	1.55
25 D 28	5BR8	2.45	2.21	1.96	1.76
25 D 28	5BT8	1.55	1.40	1.24	1.12
25 D 28	5BW8	1.60	1.44	1.28	1.15
25 D 28	5CG8	1.85	1.67	1.48	1.33
25 D 28	5CL8A	2.45	2.21	1.96	1.76
25 D 28	5CQ8	2.05	1.85	1.65	1.48
25 D 28	5CZ5	2.23	2.00	1.78	1.60
25 D 28	5DJ4	1.78	1.60	1.42	1.28
25 D 28	5EA8	2.53	2.27	2.02	1.82
25 D 28	5ES8/YCC189	2.75	2.47	2.20	1.98
25 D 28	5EU8	2.00	1.80	1.60	1.44
25 D 28	5EW6	1.70	1.53	1.36	1.22
25 D 28	5FG7	2.03	1.82	1.62	1.46
25 D 28	5FV8	1.63	1.47	1.30	1.17
25 D 28	5GH8A	2.30	2.07	1.84	1.66
	5GJ7		Use 5GJ7/LCF801		
25 D 28	5GJ7/LCF801	1.48	1.33	1.18	1.06
25 D 28	5GM6	1.63	1.46	1.30	1.17
25 D 28	5GX6	1.23	1.10	1.98	.88
25 D 28	5GX7	2.00	1.80	1.60	1.44
25 D 28	5HA7	1.53	1.37	1.22	1.10
25 D 28	5HB7	1.70	1.53	1.36	1.22
25 D 28	5HG8/LCF86	1.85	1.67	1.48	1.34
25 D 28	5HZ6	1.63	1.46	1.30	1.17
25 D 28	5JK6	1.93	1.73	1.54	1.39
25 D 28	5J6	1.85	1.67	1.48	1.33
25 D 28	5JL6	1.93	1.73	1.54	1.39
25 D 28	5KD8	1.25	1.13	1.00	.90
25 D 28	5KE8	2.90	2.61	2.32	2.09
25 D 28	5KZ8	1.28	1.15	1.02	.92
25 D 28	5LJ8	2.05	1.85	1.64	1.48
25 D 28	5MB8	1.83	1.64	1.46	1.31
25 D 28	5T8	2.23	2.01	1.78	1.60
25 D 28	5U4G	1.38	1.24	1.10	.99
25 D 28	5U4GB	1.38	1.24	1.10	.99
25 D 28	5U8	2.13	1.91	1.70	1.53
25 D 28	5U9/LCF201	1.48	1.33	1.18	1.06
25 D 28	5V3A/5AU4	2.08	1.87	1.66	1.47
25 D 28	5V4GA	2.15	1.94	1.72	1.55
25 D 28	5V6GT	1.85	1.67	1.48	1.33
25 D 28	5X8	2.08	1.87	1.66	1.49
25 D 28	5Y3GT	1.30	1.17	1.04	.94
25 D 28	5Y4GA	1.23	1.10	.98	.88
25 D 28	5Y4GT	1.70	1.53	1.36	1.22
25 D 28	5Z3	2.23	2.00	1.78	1.60
	5Z4		Use 5Y3GT		
25 D 28	6A7	4.00	3.60	3.20	2.88
25 D 28	6A8	3.55	3.20	2.84	2.56
25 D 28	6AB4	1.80	1.62	1.44	1.30
25 D 28	6AC7	2.88	2.59	2.30	2.07
25 D 28	6AC10	2.13	1.91	1.70	1.53
25 D 28	6AD10	3.55	3.20	2.84	2.56
25 D 28	6AF3	1.78	1.60	1.42	1.28
25 D 28	6AF4	2.23	2.00	1.78	1.60
25 D 28	6AF4A	2.23	2.00	1.78	1.60
25 D 28	6AF6G	3.15	2.84	2.52	2.27
25 D 28	6AF9	1.78	1.60	1.42	1.28
25 D 28	6AF11	2.60	2.34	2.08	1.87
25 D 28	6AG5	1.90	1.71	1.52	1.37
25 D 28	6AG7	3.43	3.08	2.74	2.47
25 D 28	6AG9	2.83	2.54	2.26	2.03
25 D 28	6AG11	2.08	1.87	1.66	1.49
25 D 28	6AH4GT	1.63	1.46	1.30	1.17
25 D 28	6AH6	2.45	2.21	1.96	1.76
25 D 28	6AH9	2.38	2.14	1.90	1.71
25 D 28	6AK5/EF95	2.38	2.14	1.90	1.71
25 D 28	6AK8/EABC80	1.65	1.49	1.32	1.19
25 D 28	6AL3/EY88	1.30	1.17	1.04	.94
25 D 28	6AL5	1.35	1.21	1.08	.97
25 D 28	6AL7GT	3.48	3.13	2.78	2.50
25 D 28	6AL11	2.38	2.14	1.90	1.71
25 D 28	6AM4	2.78	2.50	2.22	2.00
25 D 28	6AM8A	2.03	1.82	1.62	1.46
25 D 28	6AN4	3.08	2.77	2.46	2.21
25 D 28	6AN8A	2.33	2.09	1.86	1.67
25 D 28	6AQ5A	1.48	1.33	1.18	1.06
25 D 28	6AQ6	1.63	1.46	1.30	1.17
25 D 28	6AQ7GT	2.35	2.12	1.88	1.69
25 D 28	6AQ8/ECC85	1.50	1.35	1.20	1.08
25 D 28	6AR5	1.23	1.10	.98	.88
25 D 28	6AR8	2.43	2.18	1.94	1.75
25 D 28	6AR11	2.25	2.03	1.80	1.62
25 D 28	6AS5	1.88	1.69	1.50	1.35
25 D 28	6AS8	2.43	2.18	1.94	1.75
25 D 28	6AS11	2.55	2.30	2.04	1.84
25 D 28	6AT6	1.20	1.08	.96	.86
25 D 28	6AT8A	2.60	2.34	2.08	1.87
25 D 28	6AU4GTA	2.20	1.98	1.76	1.58
25 D 28	6AU5GT	2.60	2.34	2.08	1.87
25 D 28	6AU6A	1.33	1.19	1.06	.95
25 D 28	6AU8A	2.60	2.34	2.08	1.87
25 D 28	6AV5GA	2.60	2.34	2.08	1.87
25 D 28	6AV6	.98	.88	.78	.70
25 D 28	6AV11	2.20	1.98	1.76	1.58
25 D 28	6AW8A	2.00	1.80	1.60	1.44
25 D 28	6AX3	1.45	1.31	1.16	1.04
25 D 28	6AX4GTB	1.70	1.53	1.36	1.22
25 D 28	6AX5GT	1.93	1.73	1.54	1.39
25 D 28	6AX8	1.75	1.58	1.40	1.26
25 D 28	6AY3B	1.70	1.53	1.36	1.22
25 D 28	6AY11	2.25	2.03	1.80	1.62
25 D 28	6AZ8	2.75	2.48	2.20	1.98
25 D 28	6B8	3.43	3.08	2.74	2.47
25 D 28	6B10	1.90	1.71	1.52	1.37
25 D 28	6BA3	1.53	1.37	1.22	1.10
25 D 28	6BA6/EF93	1.35	1.21	1.08	.97
25 D 28	6BA7	2.93	2.63	2.34	2.11
25 D 28	6BA8A	2.33	2.09	1.86	1.67
25 D 28	6BA11	2.23	2.00	1.78	1.60
25 D 28	6BC4	2.75	2.48	2.20	1.98
25 D 28	6BC5/6CE5	1.63	1.46	1.30	1.17
25 D 28	6BC7	1.80	1.62	1.44	1.30
25 D 28	6BC8/6BZ8	2.23	2.00	1.78	1.60
25 D 28	6BD6	1.18	1.06	.94	.85
25 D 28	6BD11	2.78	2.50	2.22	2.00
25 D 28	6BE3/6BZ3	1.88	1.69	1.50	1.35
25 D 28	6BE6	1.70	1.53	1.36	1.22
25 D 28	6BF5	1.68	1.51	1.34	1.21
25 D 28	6BF6	1.43	1.28	1.14	1.03
25 D 28	6BF11	2.53	2.28	2.02	1.82
25 D 28	6BG6G	3.23	2.90	2.58	2.32
25 D 28	6BH3A	1.40	1.26	1.12	1.01
25 D 28	6BH6	1.80	1.62	1.44	1.30
25 D 28	6BH8	2.30	2.07	1.84	1.66
25 D 28	6BH11	2.35	2.12	1.88	1.69
25 D 28	6BJ3	1.40	1.26	1.12	1.01
25 D 28	6BJ6	1.80	1.62	1.44	1.30
25 D 28	6BJ7	1.48	1.33	1.18	1.06
25 D 28	6BJ8	2.23	2.00	1.78	1.60
25 D 28	6BK4B	3.78	3.40	3.02	2.72
25 D 28	6BK5	1.75	1.58	1.40	1.26
25 D 28	6BK7B	2.23	2.00	1.78	1.60
25 D 28	6BL7GTA	2.80	2.52	2.24	2.02
25 D 28	6BL8/ECF80	1.35	1.21	1.08	.97
25 D 28	6BM8/ECL82	1.45	1.31	1.16	1.04
25 D 28	6BN4A	2.00	1.80	1.60	1.44
25 D 28	6BN6/6KS6	2.05	1.85	1.64	1.48
25 D 28	6BN8	1.85	1.67	1.48	1.33
25 D 28	6BN11	2.25	2.03	1.80	1.62
25 D 28	6BQ5/EL84	1.78	1.60	1.42	1.28
25 D 28	6BQ6GTB/6CU6	2.45	2.21	1.96	1.76
25 D 28	6BQ7A	2.28	2.05	1.82	1.64
25 D 28	6BR8A	2.35	2.12	1.88	1.69
25 D 28	6BS3A	1.85	1.67	1.48	1.33
25 D 28	6BS8	2.45	2.21	1.96	1.76
25 D 28	6BU8	2.28	2.05	1.82	1.64
25 D 28	6BV8	1.65	1.49	1.32	1.18
25 D 28	6BV11	2.48	2.23	1.98	1.78
25 D 28	6BW4	1.38	1.24	1.10	.99
25 D 28	6BW8	1.68	1.51	1.34	1.20
25 D 28	6BW11	2.20	1.98	1.76	1.58
25 D 28	6BX7GT	2.80	2.52	2.24	2.02
25 D 28	6BY5GA	2.40	2.16	1.92	1.73
25 D 28	6BY6	1.70	1.53	1.36	1.22
25 D 28	6BY8	1.35	1.21	1.08	.97

RECEIVING TUBES CONTINUED ON NEXT PAGE

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	6BZ6	1.35	1.21	1.08	.97
25 D 28	6BZ7	2.23	2.00	1.78	1.60
25 D 28	6BZ8	2.10	1.89	1.68	1.51
25 D 28	6C4	1.48	1.33	1.18	1.06
25 D 28	6C5	2.68	2.41	2.14	1.93
25 D 28	6C6	3.93	3.54	3.14	2.83
25 D 28	6C9	2.75	2.48	2.20	1.98
25 D 28	6C10	1.85	1.67	1.48	1.33
25 D 28	6CA4	1.63	1.46	1.30	1.17
25 D 28	6CA5	1.50	1.35	1.20	1.08
25 D 28	6CA7/EL34	2.68	2.41	2.14	1.93
25 D 28	6CB5A	4.68	4.21	3.74	3.37
25 D 28	6CB6A/6CF6	1.43	1.28	1.14	1.03
25 D 28	6CD6GA	3.10	2.79	2.48	2.23
	6CE3	Use 6CG3/6CE3/6CD3			
	6CE5	Use 6BC5/6CE5			
	6CF6	Use 6CB6A/6CF6			
25 D 28	6CG3/6CE3/6CD3	1.85	1.67	1.48	1.33
	6CG7	Use 6F 7/6CG7			
25 D 28	6CG8A	1.93	1.73	1.54	1.39
25 D 28	6CH8	2.80	2.52	2.24	2.02
25 D 28	6CJ3/6CH3	1.80	1.62	1.44	1.30
25 D 28	6CK3	1.85	1.67	1.48	1.33
25 D 28	6CK4	1.78	1.60	1.42	1.28
25 D 28	6CL3	1.75	1.58	1.40	1.26
25 D 28	6CL6	2.08	1.87	1.66	1.49
25 D 28	6GL8A	2.08	1.87	1.66	1.49
25 D 28	6CM3	2.45	2.21	1.96	1.76
25 D 28	6CM6	1.93	1.73	1.54	1.39
25 D 28	6CM7	1.80	1.62	1.44	1.30
25 D 28	6CM8	2.03	1.82	1.62	1.46
25 D 28	6CN7	2.23	2.00	1.78	1.60
25 D 28	6CQ4	1.78	1.60	1.42	1.28
25 D 28	6CQ8	2.05	1.85	1.64	1.48
25 D 28	6CR6	1.48	1.33	1.18	1.06
25 D 28	6CS6	1.65	1.49	1.32	1.18
25 D 28	6CS7	1.88	1.69	1.50	1.35
25 D 28	6CU5	1.78	1.60	1.42	1.28
	6CU6	Use 6BQ6GTB/6CU6			
25 D 28	6CU8	2.30	2.07	1.84	1.66
25 D 28	6CW4	2.45	2.21	1.96	1.76
25 D 28	6CW5/EL86	1.38	1.24	1.10	.99
25 D 28	6CX8	2.60	2.34	2.08	1.87
25 D 28	6CY5	2.13	1.91	1.70	1.53
25 D 28	6CY7	1.53	1.37	1.22	1.10
25 D 28	6CZ5	2.38	2.14	1.90	1.71
25 D 28	6D10	2.33	2.09	1.86	1.67
25 D 28	6DA4	1.85	1.67	1.48	1.33
25 D 28	6DB5	2.50	2.25	2.00	1.80
25 D 28	6DC6	1.93	1.73	1.54	1.39
25 D 28	6DC8/EBF89	1.53	1.37	1.22	1.10
25 D 28	6DE4	1.63	1.46	1.30	1.17
25 D 28	6DE6	1.48	1.33	1.18	1.06
25 D 28	6DE7	2.23	2.00	1.78	1.60
25 D 28	6DG6GT	1.93	1.74	1.54	1.39
25 D 28	6DK6	1.48	1.33	1.18	1.06
25 D 28	6DL4/EC88	3.98	3.58	3.18	2.86
25 D 28	6DL5/EL95	1.48	1.33	1.18	1.06
25 D 28	6DM4A	1.85	1.67	1.48	1.33
25 D 28	6DN6	3.50	3.15	2.80	2.52
25 D 28	6DN7	2.30	2.07	1.84	1.66
25 D 28	6DQ5	3.93	3.54	3.14	2.83
	6DQ6B	Use 6GW6/6DQ6B			
25 D 28	6DR7	2.30	2.07	1.84	1.66
25 D 28	6DS4	2.45	2.21	1.96	1.76
25 D 28	6DS5	1.83	1.65	1.46	1.31
25 D 28	6DT5	1.78	1.60	1.42	1.28
25 D 28	6DT6A	1.35	1.21	1.08	.97
25 D 28	6DT8	1.88	1.69	1.50	1.35
25 D 28	6DV4	3.23	2.90	2.58	2.32
25 D 28	6DW4B	1.75	1.58	1.40	1.26
25 D 28	6DX8/ECL84	1.45	1.31	1.16	1.04
25 D 28	6DZ4	2.05	1.85	1.64	1.48
25 D 28	6E5	2.83	2.54	2.26	2.03
	6EA5	Use 6CY5			
25 D 28	6EA7	2.85	2.57	2.28	2.05
25 D 28	6EA8	1.78	1.60	1.42	1.28
25 D 28	6EB8	2.53	2.27	2.02	1.82
25 D 28	6EH4A	4.10	3.69	3.28	2.95
25 D 28	6EH5	1.78	1.60	1.42	1.28
25 D 28	6EH7/EF183	1.93	1.73	1.54	1.39
25 D 28	6EH8	1.75	1.58	1.40	1.26
25 D 28	6EJ4A	4.25	3.82	3.40	3.06
25 D 28	6EJ7/EF184	1.78	1.60	1.42	1.28
25 D 28	6EL4	4.17	3.76	3.32	2.99
25 D 28	6EM5	2.00	1.80	1.60	1.44
25 D 28	6EM7	2.85	2.57	2.28	2.05
25 D 28	6EQ7	1.48	1.33	1.18	1.06
25 D 28	6ER5	2.10	1.89	1.68	1.51
25 D 28	6ES5	1.43	1.28	1.14	1.03

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	6ES8/ECC189	2.73	2.45	2.18	1.96
25 D 28	6ET7	2.00	1.80	1.60	1.44
25 D 28	6EU7	1.80	1.62	1.44	1.30
25 D 28	6EU8	1.85	1.67	1.48	1.33
25 D 28	6EV5	1.78	1.60	1.42	1.28
25 D 28	6EV7	1.63	1.46	1.30	1.17
25 D 28	6EW6	1.50	1.35	1.20	1.08
25 D 28	6EW7	3.00	2.70	2.40	2.16
25 D 28	6EZ5	2.53	2.27	2.02	1.82
25 D 28	6EZ8	1.78	1.60	1.42	1.28
25 D 28	6F5	2.93	2.63	2.34	2.11
25 D 28	6F6	3.08	2.77	2.46	2.21
25 D 28	6F6GT	2.90	2.61	2.32	2.09
25 D 28	6F8G	4.23	3.81	3.38	3.04
25 D 28	6FA7	1.48	1.33	1.18	1.06
25 D 28	6FD7	2.85	2.57	2.28	2.05
25 D 28	6FE5	1.70	1.53	1.36	1.22
	6FG6	Use EM84/6FG6			
25 D 28	6FG7	2.08	1.87	1.66	1.49
25 D 28	6FH5	2.28	2.05	1.82	1.64
25 D 28	6FH8	2.20	1.98	1.76	1.58
25 D 28	6FJ7	2.08	1.87	1.66	1.49
25 D 28	6FM7	1.95	1.76	1.56	1.40
25 D 28	6FM8	1.43	1.28	1.14	1.03
25 D 28	6FQ5A	1.93	1.73	1.54	1.39
25 D 28	6FQ7/6CG7	1.23	1.10	.98	.88
25 D 28	6FS5	2.05	1.85	1.64	1.48
25 D 28	6FV6	2.23	2.00	1.78	1.60
25 D 28	6FV8A	2.35	2.12	1.88	1.69
25 D 28	6FW5	1.93	1.73	1.54	1.39
25 D 28	6FY5/EC97	1.38	1.24	1.10	.99
25 D 28	6FY7	1.75	1.58	1.40	1.26
25 D 28	6G11	2.20	1.98	1.76	1.58
25 D 28	6GB5/EL500	1.90	1.71	1.52	1.37
25 D 28	6GC5	2.50	2.25	2.00	1.80
25 D 28	6GE5	2.28	2.05	1.82	1.64
25 D 28	6GF5	1.90	1.71	1.52	1.37
25 D 28	6GF7A	2.43	2.18	1.94	1.75
25 D 28	6GH8A	1.60	1.44	1.28	1.15
25 D 28	6GJ5A	3.08	2.77	2.46	2.21
25 D 28	6GJ7/ECF801	1.55	1.40	1.24	1.12
25 D 28	6GK5	2.08	1.87	1.66	1.49
25 D 28	6GK6	1.70	1.53	1.36	1.22
25 D 28	6GL7	2.90	2.61	2.32	2.09
25 D 28	6GM5	1.53	1.37	1.22	1.10
25 D 28	6GM6	1.63	1.46	1.30	1.17
25 D 28	6GN8	2.30	2.07	1.84	1.66
25 D 28	6GQ7	1.88	1.69	1.50	1.35
25 D 28	6GT5A	3.18	2.86	2.54	2.29
25 D 28	6GU5	2.05	1.85	1.64	1.48
25 D 28	6GU7	1.85	1.67	1.48	1.33
25 D 28	6GV5	2.08	1.87	1.66	1.49
25 D 28	6GV8/ECL85	2.30	2.07	1.84	1.66
25 D 28	6GW6/6DQ6B	2.33	2.09	1.86	1.67
25 D 28	6GW8/ECL86	1.53	1.37	1.22	1.10
25 D 28	6GX6	1.60	1.44	1.28	1.15
25 D 28	6GX7	2.00	1.80	1.60	1.44
25 D 28	6GY5	2.30	2.07	1.84	1.66
25 D 28	6GY6	1.45	1.31	1.16	1.04
25 D 28	6GY8	1.95	1.76	1.56	1.40
25 D 28	6H6	2.85	2.57	2.28	2.05
	6HA5	Use 6HM5/6HA5			
25 D 28	6HB5	2.30	2.07	1.84	1.66
25 D 28	6HB6	2.23	2.00	1.78	1.60
25 D 28	6HB7	2.00	1.80	1.60	1.44
25 D 28	6HE5	2.10	1.89	1.68	1.51
25 D 28	6HF5	4.03	3.62	3.22	2.90
25 D 28	6HF8	2.85	2.57	2.28	2.05
25 D 28	6HG5	1.48	1.33	1.18	1.06
25 D 28	6HG8/ECF86	1.85	1.67	1.48	1.33
25 D 28	6HJ8	1.55	1.40	1.24	1.12
25 D 28	6HK5	1.95	1.76	1.56	1.40
25 D 28	6HL8	1.53	1.37	1.22	1.10
25 D 28	6HM5/6HA5	1.93	1.73	1.54	1.39
25 D 28	6HM6	1.48	1.33	1.18	1.06
25 D 28	6HQ5	2.25	2.03	1.80	1.62
25 D 28	6HR5	1.28	1.15	1.02	.92
25 D 28	6HR6	1.85	1.67	1.48	1.33
25 D 28	6HS5	3.88	3.49	3.10	2.70
25 D 28	6HS6	1.85	1.67	1.48	1.33
25 D 28	6HS8	2.15	1.94	1.72	1.55
25 D 28	6HU6/EM87	2.43	2.18	1.84	1.73
25 D 28	6HV5	3.88	3.49	3.10	2.79
25 D 28	6HZ6	1.50	1.35	1.20	1.08
25 D 28	6J5	2.30	2.07	1.84	1.66
25 D 28	6J5GT	2.05	1.85	1.64	1.48
25 D 28	6J6A	2.03	1.82	1.62	1.46
25 D 28	6J7	2.60	2.34	2.08	1.87
	6J10	Use 6Z10/6J10			
25 D 28	6J11	2.40	2.16	1.92	1.73
25 D 28	6JB6A	2.93	2.63	2.34	2.11
25 D 28	6JC6A	1.98	1.78	1.58	1.42

Receiving Tubes (Cont'd)

RCA

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	6JC8	1.53	1.37	1.22	1.10
25 D 28	6JD6	1.78	1.60	1.42	1.28
25 D 28	6JE6A	4.25	3.82	3.40	3.06
25 D 28	6JE8	1.85	1.67	1.48	1.33
25 D 28	6JF6	3.43	3.08	2.74	2.47
25 D 28	6JG6A	3.25	2.93	2.60	2.34
25 D 28	6JH6	1.48	1.33	1.18	1.06
25 D 28	6JH8	2.85	2.57	2.28	2.05
25 D 28	6JK8	2.03	1.82	1.62	1.46
25 D 28	6JM6A	2.48	2.23	1.98	1.78
25 D 28	6JN6	2.45	2.21	1.96	1.76
25 D 28	6JN8	1.83	1.64	1.46	1.31
25 D 28	6JQ6	1.93	1.73	1.54	1.39
25 D 28	6JR6	3.18	2.86	2.54	2.29
25 D 28	6JS6B	3.65	3.29	2.92	2.63
25 D 28	6JT6A	2.70	2.43	2.16	1.94
25 D 28	6JT8	2.00	1.80	1.60	1.44
25 D 28	6JU6	3.18	2.86	2.54	2.29
25 D 28	6JU8A	1.93	1.73	1.54	1.39
25 D 28	6JV8	2.20	1.98	1.76	1.58
25 D 28	6JW8/ECF802	1.55	1.40	1.24	1.12
25 D 28	6JZ6	2.33	2.10	1.86	1.67
25 D 28	6JZ8	1.78	1.60	1.42	1.28
25 D 28	6K6GT	1.75	1.58	1.40	1.26
25 D 28	6K7	2.95	2.66	2.36	2.12
25 D 28	6K8	3.85	3.47	3.08	2.77
25 D 28	6K11/6Q11	1.90	1.71	1.52	1.37
25 D 28	6KA8	2.25	2.03	1.80	1.62
25 D 28	6KD6	4.25	3.82	3.40	3.06
	6KD8	Use 6U8A/6KD8			
25 D 28	6KE8	2.83	2.55	2.26	2.03
25 D 28	6KL8	1.48	1.33	1.18	1.06
25 D 28	6KM6	4.10	3.69	3.28	2.95
25 D 28	6KM8	1.73	1.55	1.38	1.24
25 D 28	6KN6	3.60	3.24	2.88	2.59
25 D 28	6KR8	2.13	1.91	1.70	1.53
	6KS6	Use 6BN6/6KS6			
25 D 28	6KT6	1.65	1.49	1.32	1.19
25 D 28	6KT8	2.45	2.21	1.96	1.76
25 D 28	6KU8	2.40	2.16	1.92	1.73
25 D 28	6KV8	2.93	2.63	2.34	2.11
25 D 28	6KY8A	3.63	3.27	2.90	2.61
25 D 28	6KZ8	1.85	1.67	1.48	1.33
25 D 28	6L6	4.83	4.34	3.86	3.47
25 D 28	6L6GC	2.63	2.36	2.10	1.89
25 D 28	6L7	3.48	3.13	2.78	2.58
25 D 28	6LB6	4.30	3.87	3.44	3.10
25 D 28	6LB8	2.35	2.12	1.88	1.69
25 D 28	6LC8	2.38	2.14	1.90	1.71
25 D 28	6LE8	3.10	2.79	2.48	2.23
25 D 28	6LF6	4.23	3.80	3.38	3.04
25 D 28	6LF8	2.33	2.09	1.86	1.67
25 D 28	6LH6A	3.85	3.47	3.08	2.77
25 D 28	6LJ6	3.78	3.40	3.02	2.72
25 D 28	6LJ8	2.05	1.85	1.64	1.48
25 D 28	6LM8	2.23	2.00	1.78	1.60
25 D 28	6LN8/LCF80	1.20	1.08	.96	.86
25 D 28	6LQ6/6JE6C	4.25	3.83	3.40	3.06
25 D 28	6LQ8	2.77	2.50	2.22	2.00
25 D 28	6LR6	3.65	3.29	2.92	2.63
25 D 28	6LR8	2.38	2.14	1.90	1.71
25 D 28	6LT8	1.75	1.58	1.40	1.26
25 D 28	6LU8	2.38	2.14	1.90	1.71
25 D 28	6LX8/LCF802	1.30	1.17	1.04	.94
25 D 28	6LY8	1.95	1.76	1.56	1.40
25 D 28	6MB8	1.83	1.64	1.46	1.31
25 D 28	6MD8	2.43	2.18	1.94	1.75
25 D 28	6ME8	2.53	2.27	2.02	1.82
25 D 28	6MF8	2.38	2.14	1.90	1.71
25 D 28	6MG8	1.23	1.10	.98	.88
25 D 28	6MJ8	2.33	2.09	1.86	1.67
25 D 28	6MK8	2.15	1.94	1.72	1.55
25 D 28	6MQ8	1.90	1.71	1.52	1.37
25 D 28	6M11	2.50	2.25	2.00	1.80
25 D 28	6N7	2.53	2.27	2.02	1.82
25 D 28	6N7GY	2.80	2.52	2.24	2.02
25 D 28	6Q7	2.95	2.66	2.36	2.12
25 D 28	6S4A	1.70	1.53	1.36	1.22
25 D 28	6S8GT	2.08	1.87	1.66	1.49
25 D 28	6SA7	2.95	2.66	2.36	2.12
25 D 28	6SA7GT	2.20	1.98	1.76	1.58
25 D 28	6SB7Y	2.98	2.68	2.38	2.14
25 D 28	6SC7	2.68	2.41	2.14	1.93
25 D 28	6SF5	2.50	2.25	2.00	1.80
25 D 38	6SF7	3.15	2.85	2.52	2.27
25 D 28	6SG7	2.80	2.52	2.24	2.02
25 D 28	6SH7	3.08	2.77	2.46	2.21
25 D 28	6SJ7	2.45	2.21	1.96	1.76
25 D 28	6SK7	2.50	2.25	2.00	1.80
25 D 28	6SK7GT	2.75	2.48	2.20	1.89
25 D 28	6SL7GT	2.20	1.98	1.76	1.58
25 D 28	6SN7GTB	1.78	1.60	1.42	1.28

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	6SQ7	2.48	2.23	1.98	1.78
25 D 28	6SR7	2.45	2.21	1.96	1.76
25 D 28	6T4	2.58	2.32	2.06	1.85
25 D 28	6T8A	2.18	1.96	1.74	1.57
25 D 28	6T9	2.20	1.98	1.76	1.58
25 D 28	6T10	2.33	2.09	1.86	1.67
25 D 28	6U5	3.70	3.33	2.96	2.66
25 D 28	6U8A/6KD8	1.73	1.55	1.38	1.24
25 D 28	6U9/ECF201	1.45	1.31	1.16	1.04
25 D 28	6U10	1.90	1.71	1.52	1.37
25 D 28	6V3A	2.28	2.05	1.82	1.64
25 D 28	6V6	3.40	3.06	2.72	2.45
25 D 28	6V6GTA	1.88	1.69	1.50	1.35
25 D 28	6W4GT	1.65	1.49	1.32	1.18
25 D 28	6W6GT	2.05	1.85	1.64	1.48
25 D 28	6X4	1.38	1.24	1.10	.99
25 D 28	6X5GT	1.65	1.49	1.32	1.18
25 D 28	6X8A	1.90	1.71	1.52	1.37
25 D 28	6X9/ECF200	1.48	1.33	1.18	1.06
25 D 28	6Y6GA/6Y6G	2.48	2.23	1.98	1.78
25 D 28	6Y9	1.48	1.33	1.18	1.06
	6Z4	Use 84/6Z4			
25 D 28	6Z10/6J10	2.75	2.48	2.20	1.98
25 D 28	7A7	3.58	3.22	2.86	2.57
25 D 28	7AU7	1.70	1.53	1.36	1.22
25 D 28	7C5	1.68	1.51	1.34	1.21
25 D 28	7C7	1.70	1.53	1.36	1.24
25 D 28	7EY6	1.75	1.58	1.40	1.26
25 D 28	7F7	3.75	3.38	3.00	2.70
25 D 28	7F8	4.13	3.72	3.30	2.97
25 D 28	7HG8/PCF80	1.38	1.24	1.10	.99
25 D 28	7N7	3.55	3.20	2.84	2.56
25 D 28	8AR11	2.18	1.96	1.74	1.57
25 D 28	8AU8	1.93	1.73	1.54	1.39
25 D 28	8AW8A	2.43	2.18	1.94	1.75
25 D 28	8B10	1.75	1.58	1.40	1.26
25 D 28	8BA8A	1.73	1.54	1.38	1.24
25 D 28	8BA11	2.08	1.87	1.66	1.49
25 D 28	8BH8	1.68	1.51	1.34	1.21
25 D 28	8BM11	2.35	2.12	1.88	1.69
25 D 28	8BN8	1.85	1.67	1.48	1.33
25 D 28	8BN11	2.18	1.96	1.74	1.57
25 D 28	8BQ5	1.88	1.69	1.50	1.35
25 D 28	8BQ11	2.15	1.94	1.72	1.55
25 D 28	8BU11	2.50	2.25	2.00	1.80
	8CG7	Use 8FQ7/8CG7			
25 D 28	8CM7	1.35	1.21	1.08	.97
25 D 28	8CN7	1.53	1.37	1.22	1.10
25 D 28	8CS7	2.00	1.80	1.60	1.44
25 D 28	8CW5/XL86	1.28	1.15	1.02	.92
25 D 28	8CX8	2.20	1.98	1.76	1.58
25 D 28	8EB8	2.05	1.85	1.64	1.48
25 D 28	8EM5	1.38	1.24	1.10	.99
25 D 28	8ET7	2.08	1.87	1.66	1.49
25 D 28	8FQ7/8CG7	1.23	1.10	1.98	.88
25 D 28	8GJ7/PCF801	1.45	1.31	1.16	1.04
25 D 28	8GN8	2.08	1.87	1.66	1.49
25 D 28	8GU7	1.60	1.44	1.28	1.15
25 D 28	8JU8A	1.68	1.51	1.34	1.21
25 D 28	8JV8	2.15	1.94	1.72	1.55
25 D 28	8KA8	2.33	2.09	1.86	1.67
25 D 28	8LC8	2.38	2.14	1.90	1.71
25 D 28	8LT8	1.63	1.46	1.30	1.17
25 D 28	9A8/PCF80	1.33	1.19	1.06	.95
25 D 28	9AU7	1.48	1.33	1.18	1.06
25 D 28	9BJ11	2.40	2.16	1.92	1.73
25 D 28	9BR7	1.58	1.42	1.36	1.13
25 D 28	9EA8	1.53	1.37	1.22	1.10
25 D 28	9GV8/XCL85	1.70	1.53	1.36	1.22
25 D 28	9KC6	2.18	1.96	1.74	1.57
25 D 28	9KX6	2.08	1.87	1.66	1.49
25 D 28	9KZ8	1.48	1.33	1.18	1.06
25 D 28	9LA6	2.10	1.89	1.68	1.51
25 D 28	9U8A	1.55	1.40	1.24	1.12
25 D 28	10AL11	2.28	2.06	1.82	1.64
25 D 28	10BQ5	1.38	1.24	1.10	.99
25 D 28	10C8	2.58	2.32	2.08	1.85
25 D 28	10CW5/LL86	1.28	1.15	1.02	.92
25 D 28	10DE7	2.23	2.00	1.78	1.60
25 D 28	10DR7	2.23	2.00	1.78	1.60
25 D 28	10DX8/LCL84	1.38	1.24	1.10	.99
25 D 28	10EG7	2.18	1.96	1.74	1.57
25 D 28	10EM7	2.45	2.21	1.96	1.76
25 D 28	10EW7	2.85	2.57	2.28	2.05
25 D 28	10GF7A	2.38	2.14	1.90	1.71
25 D 28	10GK6	1.73	1.55	1.38	1.24
25 D 28	10GN8	2.23	2.00	1.78	1.60

RECEIVING TUBES CONTINUED ON NEXT PAGE.

RCA Receiving Tubes (Cont'd)

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	10HF8	2.68	2.41	2.14	1.93
25 D 28	10JA8	2.08	1.87	1.66	1.49
25 D 28	10JT8	2.03	1.82	1.62	1.46
25 D 28	10JY8	1.83	1.64	1.46	1.31
25 D 28	10KR8	2.13	1.91	1.70	1.53
25 D 28	10KU8	2.43	2.18	1.94	1.75
25 D 28	10LB8	2.35	2.11	1.88	1.69
25 D 28	10LE8	2.95	2.66	2.36	2.12
25 D 28	10LW8	2.13	1.91	1.70	1.53
25 D 28	10LZ8	2.08	1.87	1.66	1.49
25 D 28	11AR11	2.05	1.85	1.64	1.48
25 D 28	11BQ11	2.05	1.85	1.64	1.48
25 D 28	11BT11	3.25	2.93	3.90	2.34
25 D 28	11CA11	2.83	2.54	2.26	2.03
25 D 28	11CY7	1.80	1.62	1.44	1.30
25 D 28	11FY7	1.70	1.53	1.36	1.22
25 D 28	11HM7	2.63	2.36	2.10	1.89
25 D 28	11JE8	1.93	1.73	1.54	1.39
25 D 28	11KV8	2.95	2.66	2.36	2.12
25 D 28	11LQ8	2.95	2.66	2.36	2.12
25 D 28	11LT8	1.63	1.46	1.30	1.17
25 D 28	11Y9/LFL200	1.85	1.67	1.48	1.33
25 D 28	12AB5	1.93	1.73	1.54	1.39
25 D 28	12AC6	1.05	.95	.84	.76
25 D 28	12AD6	1.75	1.58	1.40	1.26
25 D 28	12AE6A	1.55	1.40	1.24	1.12
25 D 28	12AE10	2.33	2.09	1.86	1.67
25 D 28	12AF3	2.13	1.91	1.70	1.53
25 D 28	12AF5	1.58	1.42	1.26	1.13
25 D 28	12AL5	1.38	1.24	1.10	.99
25 D 28	12AL8	3.08	2.77	2.46	2.21
25 D 28	12AL11	2.83	2.54	2.26	2.03
25 D 28	12AQ5	1.75	1.58	1.40	1.26
25 D 28	12AT6	1.38	1.24	1.10	.99
25 D 28	12AT7/ECC81	1.60	1.44	1.28	1.15
25 D 28	12AU6	1.45	1.31	1.16	1.04
25 D 28	12AU7A/ECC82	1.38	1.24	1.10	.99
25 D 28	12AV5GA	2.73	2.45	2.18	1.96
25 D 28	12AV6	.98	.88	.78	.70
25 D 28	12AV7	2.08	1.87	1.66	1.49
25 D 28	12AW6	1.78	1.60	1.42	1.28
25 D 28	12AX3	1.50	1.35	1.20	1.08
25 D 28	12AX4GTB	1.48	1.33	1.18	1.06
25 D 28	12AX7A/ECC83	1.35	1.21	1.08	.97
25 D 28	12AY3A	1.45	1.31	1.16	1.04
25 D 28	12AY7	2.85	2.57	2.28	2.05
25 D 28	12AZ7A	1.85	1.67	1.48	1.33
25 D 28	12B4A	1.75	1.58	1.40	1.26
25 D 28	12BA6	1.05	.95	.84	.76
25 D 28	12BA7	2.95	2.66	2.36	2.12
25 D 28	12BD6	1.18	1.06	.94	.85
25 D 28	12BE3	1.73	1.55	1.38	1.24
25 D 28	12BE6	1.28	1.15	1.02	.92
25 D 28	12BF6	1.18	1.06	.94	.85
25 D 28	12BF11	3.08	2.77	2.46	2.21
25 D 28	12BH7A	1.75	1.58	1.40	1.26
25 D 28	12BK5	1.88	1.69	1.50	1.35
25 D 28	12BL6	1.85	1.67	1.48	1.33
25 D 28	12BN6	1.83	1.64	1.46	1.31
25 D 28	12BQ6GTB/12CU6	2.23	2.00	1.78	1.60
25 D 28	12BR7	1.53	1.37	1.22	1.10
25 D 28	12BS3A	1.85	1.67	1.48	1.33
25 D 28	12BT3	1.43	1.28	1.14	1.03
25 D 28	12BV7	1.65	1.49	1.32	1.19
25 D 28	12BV11	2.40	2.16	1.92	1.73
25 D 28	12BW4	1.68	1.51	1.34	1.21
25 D 28	12BY7A	1.60	1.44	1.28	1.15
25 D 28	12BZ6	1.20	1.08	.96	.86
25 D 28	12BZ7	2.08	1.87	1.66	1.49
	12C5	Use 12CU5/12C5			
25 D 28	12CA5	1.98	1.78	1.58	1.42
25 D 28	12CL3	1.75	1.58	1.40	1.26
25 D 28	12CN5	1.63	1.46	1.30	1.17
25 D 28	12CR6	1.48	1.33	1.18	1.06
25 D 28	12CU5/12C5	1.95	1.76	1.56	1.40
	12CU6	Use 12BQ6GTB/12CU6			
25 D 28	12CX6	1.38	1.24	1.10	.99
25 D 28	12D4	1.53	1.37	1.22	1.10
25 D 28	12DB5	1.30	1.17	1.04	.94
25 D 28	12DK6	1.15	1.04	.92	.83
	12DQ6B	Use 12GW6/12DQ6B			
25 D 28	12DQ7	1.63	1.46	1.30	1.17
25 D 28	12DS7	2.70	2.43	2.16	1.94
25 D 28	12DT5	1.55	1.40	1.24	1.12
25 D 28	12DT8	2.00	1.80	1.60	1.44
25 D 28	12DW7	1.53	1.37	1.22	1.10
25 D 28	12DY8	3.98	3.58	3.18	2.86
25 D 28	12DZ6	1.80	1.62	1.44	1.30
25 D 28	12ED5	1.35	1.21	1.08	.97

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	12EK6	1.78	1.60	1.42	1.28
25 D 28	12EQ7	1.38	1.24	1.10	.99
25 D 28	12F8	1.63	1.47	1.30	1.17
25 D 28	12FK6	1.28	1.15	1.02	.92
25 D 28	12FM6	1.30	1.17	1.04	.94
25 D 28	12FQ8	2.60	2.34	2.08	1.87
25 D 28	12FV7	1.70	1.53	1.36	1.22
25 D 28	12FX5	1.63	1.46	1.30	1.17
25 D 28	12GC6	2.18	1.96	1.74	1.57
25 D 28	12GE5	2.25	2.03	1.80	1.62
25 D 28	12GJ5A	2.45	2.21	1.96	1.76
25 D 28	12GN7A	2.55	2.30	2.04	1.84
25 D 28	12GT5	2.68	2.41	2.14	1.93
25 D 28	12GW6/12DQ6B	2.48	2.23	1.98	1.78
25 D 28	12H6	2.23	2.01	1.78	1.60
25 D 28	12HE7	3.40	3.06	2.72	2.45
25 D 28	12HG7	2.55	2.30	2.04	1.84
25 D 28	12HL7	2.23	2.16	1.92	1.60
25 D 28	12J5GT	2.40	2.16	1.92	1.73
25 D 28	12J8	2.18	1.96	1.74	1.57
25 D 28	12JB6A	3.10	2.79	2.48	2.23
25 D 28	12JN6	1.95	1.76	1.56	1.40
25 D 28	12JN8	1.85	1.67	1.48	1.33
25 D 28	12JQ6	2.23	2.00	1.78	1.60
25 D 28	12JT6A	2.48	2.23	1.98	1.78
25 D 28	12K5	1.73	1.55	1.38	1.24
25 D 28	12K7GT	3.30	2.97	2.64	2.38
25 D 28	12KL8	1.23	1.10	.98	.88
25 D 28	12L6GT	1.78	1.60	1.42	1.28
25 D 28	12MD8	2.43	2.18	1.94	1.75
25 D 28	12R5	1.68	1.51	1.34	1.21
25 D 28	12SA7	2.95	2.66	2.36	2.12
25 D 28	12SC7	2.60	2.34	2.08	1.87
25 D 28	12SF5	1.93	1.73	1.54	1.39
25 D 28	12SF7	3.10	2.79	2.48	2.23
25 D 28	12SG7	2.35	2.12	1.88	1.69
25 D 28	12SH7	2.70	2.43	2.16	1.94
25 D 28	12SJ7	2.15	1.94	1.72	1.55
25 D 28	12SK7	2.85	2.57	2.28	2.05
25 D 28	12SK7GT	2.23	2.01	1.78	1.60
25 D 28	12SL7GT	2.48	2.23	1.98	1.78
25 D 28	12SN7GTA	1.93	1.73	1.54	1.39
25 D 28	12SQ7	2.48	2.23	1.98	1.78
25 D 28	12T10	2.33	2.09	1.86	1.67
25 D 28	12V6GT	2.23	2.01	1.78	1.60
25 D 28	12W6GT	2.45	2.21	1.96	1.76
25 D 28	12X4	1.13	1.01	.90	.81
25 D 28	13CW4	2.53	2.27	2.02	1.82
25 D 28	13DE7	2.38	2.14	1.90	1.71
25 D 28	13DR7	2.85	2.57	2.28	2.05
25 D 28	13EM7/15EA7	2.93	2.63	2.34	2.11
25 D 28	13FD7	2.85	2.57	2.28	2.05
25 D 28	13FM7	1.70	1.53	1.36	1.22
25 D 28	13GB5/XL500	1.85	1.67	1.48	1.33
25 D 28	13GF7A	2.35	2.12	1.88	1.69
	13J10	Use 13Z10/13J10			
25 D 28	13V10	2.23	2.00	1.78	1.60
25 D 28	13Z10/13J10	2.78	2.50	2.22	2.00
25 D 28	14BL11	2.80	2.52	2.24	2.02
25 D 28	14BR11	3.08	2.77	2.46	2.21
25 D 28	14GT8	1.73	1.55	1.38	1.24
25 D 28	14JG8	1.55	1.40	1.24	1.12
25 D 28	15AF11	2.38	2.14	1.90	1.71
25 D 28	15BD11A	2.65	2.39	2.12	1.91
25 D 28	15CW5/PL84	1.23	1.09	.98	.88
25 D 28	15DQ8/PCL84	1.70	1.53	1.36	1.22
25 D 28	15FM7	1.70	1.53	1.36	1.22
25 D 28	15FY7	1.95	1.76	1.56	1.40
25 D 28	15KY8A	2.90	2.61	2.32	2.09
25 D 28	15LE8	3.83	3.45	3.06	2.75
25 D 28	16A8	1.70	1.53	1.36	1.22
25 D 28	16AK9	2.95	2.66	2.36	2.12
25 D 28	16AQ3/XY88	1.35	1.21	1.08	.97
25 D 28	16BQ11	2.18	1.96	1.74	1.57
25 D 28	16BX11	2.55	2.30	2.04	1.84
25 D 28	16GK6	1.53	1.37	1.22	1.10
25 D 28	16GY5	2.43	2.18	1.94	1.75
25 D 28	17AB10/17X10	2.23	2.00	1.78	1.60
25 D 28	17AX3	1.30	1.17	1.04	.94
25 D 28	17AX4GTA	1.85	1.67	1.48	1.33
25 D 28	17AY3A	1.70	1.53	1.36	1.22
25 D 28	17BE3/17BZ3	1.60	1.44	1.28	1.15
25 D 28	17BF11	2.35	2.12	1.88	1.69
25 D 28	17BH3	1.43	1.28	1.14	1.03
25 D 28	17BQ6GTB	2.60	2.34	2.08	1.87
25 D 28	17BS3A/17DW4A	1.70	1.53	1.36	1.22
	17BZ3	Use 17BE3/17BZ3			
	17C5	Use 17CU5/17C5			
25 D 28	17BW3	1.60	1.44	1.28	1.15
25 D 28	17C9	3.58	3.22	2.86	2.57
25 D 28	17CK3	1.78	1.60	1.42	1.28
25 D 28	17CT3	1.48	1.33	1.18	1.06

Receiving Tubes (Cont'd)

RCA

Dept. No.	Tube Type	MAY BE ASSORTED EACH in Quantities of 1 to 9	10 to 49	50 or More	Not Asst'd 100-Up, EACH
25 D 28	17CU5/17C5	1.70	1.53	1.36	1.22
25 D 28	17D4	2.03	1.82	1.62	1.46
25 D 28	17DE4	1.83	1.64	1.46	1.31
25 D 28	17DM4A	2.03	1.82	1.62	1.46
	17DQ6B	Use 17GW6/17DQ6B			
	17DW4A	Use 17BS3A/17DW4A			
25 D 28	17EW8/HCC85	1.38	1.24	1.10	.99
25 D 28	17GE5	2.18	1.96	1.74	1.57
25 D 28	17GJ5A	3.03	2.72	2.42	2.18
25 D 28	17GT5A	2.78	2.50	2.22	2.00
25 D 28	17GV5	2.10	1.89	1.68	1.51
25 D 28	17GW6/17DQ6B	2.63	2.36	2.10	1.89
25 D 28	17JB6A	2.75	2.48	2.20	1.98
25 D 28	17JG6A	3.15	2.84	2.52	2.27
25 D 28	17JM6A	2.48	2.23	1.98	1.78
25 D 28	17JN6	2.25	2.03	1.80	1.62
25 D 28	17JT6A	2.30	2.07	1.84	1.66
25 D 28	17JZ8	1.78	1.60	1.42	1.28
25 D 28	17KV6	3.93	3.54	3.14	2.83
	17LD8	Use 15KY8A			
	17X10	Use 17AB10/17X10			
25 D 28	18AJ10	2.20	1.98	1.76	1.58
22 D 28	18FW6A	1.23	1.10	.98	.88
25 D 28	18FX6A	1.48	1.33	1.18	1.06
25 D 28	18FY6A	1.48	1.33	1.18	1.06
25 D 28	18GD6A	1.48	1.33	1.18	1.06
25 D 28	19AU4GTA	2.18	1.96	1.74	1.57
25 D 28	19BG6GA	3.33	2.99	2.66	2.39
25 D 28	19CG3	1.70	1.53	1.36	1.22
25 D 28	19CL8A	1.85	1.67	1.48	1.33
25 D 28	19EA8	2.23	2.00	1.78	1.60
25 D 28	19EZ8	2.25	2.03	1.80	1.62
25 D 28	19GQ7	1.90	1.71	1.52	1.37
25 D 28	19HR6	1.23	1.10	.98	.88
25 D 28	19HS6	1.20	1.08	.96	.86
25 D 28	19HV8	1.88	1.69	1.50	1.35
25 D 28	19J6	1.85	1.67	1.48	1.33
25 D 28	19JN8	1.60	1.44	1.28	1.15
25 D 28	19KG8	1.55	1.40	1.24	1.12
25 D 28	19T8	2.45	2.21	1.96	1.76
25 D 28	19X8	2.05	1.85	1.64	1.48
25 D 28	20AQ3/LY88	1.40	1.26	1.12	1.01
25 D 28	20EZ7	1.70	1.53	1.36	1.22
25 D 28	21GY5	2.33	2.09	1.86	1.67
25 D 28	21HB5A	2.38	2.14	1.90	1.71
25 D 28	21JV6	2.33	2.09	1.86	1.67
25 D 28	21JZ6	2.43	2.18	1.94	1.75
25 D 28	21KA6	2.23	2.00	1.78	1.60
25 D 28	21LG6	3.83	3.44	3.06	2.75
25 D 28	21LR8	2.38	2.14	1.90	1.71
25 D 28	21LU8	2.38	2.14	1.90	1.71
25 D 28	22BH3A	1.55	1.40	1.24	1.12
25 D 28	22BW3	1.70	1.53	1.36	1.22
25 D 28	22DE4	2.10	1.89	1.68	1.51
25 D 28	22JF6	3.43	3.08	2.74	2.47
25 D 28	22JG6A	3.10	2.79	2.48	2.23
25 D 28	22JR6	3.00	2.70	2.40	1.08
25 D 28	23JS6A	6.68	6.01	5.34	4.81
25 D 28	22JU6	3.18	2.86	2.54	2.29
25 D 28	22KM6	4.10	3.69	3.28	2.95
25 D 28	23Z9	2.35	2.12	1.88	1.69
25 D 28	24BF11	2.60	2.34	2.08	1.87
25 D 28	24JE6A	4.25	3.83	3.40	3.06
25 D 28	24JZ8	2.25	2.03	1.80	1.62
25 D 28	24LQ6/24JE6C	4.25	3.83	3.40	3.06
25 D 28	25AV5GA	2.83	2.55	2.26	2.03
25 D 28	25AX4GT	1.53	1.37	1.22	1.10
25 D 28	25BK5	1.70	1.53	1.36	1.22
25 D 28	25BQ6GTB/25CU6	2.20	1.98	1.76	1.58
25 D 28	25C5	2.05	1.85	1.64	1.48
25 D 28	25CA5	1.80	1.62	1.44	1.30
25 D 28	25CD6GB	3.20	2.88	2.56	2.30
	25CU6	Use 25BQ6GTB/25CU6			
25 D 28	25DN6	3.30	3.03	2.64	2.38
25 D 28	25EC6	3.08	2.77	2.46	2.21
25 D 28	25EH5	1.85	1.67	1.48	1.33
25 D 28	25F5A	1.93	1.73	1.54	1.39
25 D 28	25L6GT	1.85	1.67	1.48	1.33
25 D 28	25W4GT	1.85	1.67	1.48	1.33
25 D 28	25Z6GT	1.93	1.74	1.54	1.39
25 D 28	27GB5/PL500	1.85	1.67	1.48	1.33
25 D 28	31AL10	2.50	2.25	2.00	1.80
25 D 28	31JS6A	3.65	3.29	2.92	2.63
25 D 28	32ET5A	1.20	1.08	.96	.86
25 D 28	32HQ7	3.10	2.79	2.48	2.23
25 D 28	33GT7	3.48	3.13	2.78	2.50
25 D 28	33GY7A	3.03	2.72	2.42	2.18
25 D 28	33JV6	2.33	2.09	1.86	1.67
25 D 28	34CE3	1.95	1.76	1.56	1.40
25 D 28	34GD5A	1.48	1.33	1.18	1.06
25 D 28	35B5	1.60	1.44	1.28	1.15
25 D 28	35C5	1.35	1.21	1.08	.97
25 D 28	35EH5	1.70	1.53	1.36	1.22
25 D 28	35GL6	1.45	1.31	1.16	1.04
25 D 28	35L6GT	1.93	1.73	1.54	1.39
25 D 28	35W4	.83	.74	.66	.59
25 D 28	35Y4	2.25	2.03	1.80	1.62
25 D 28	35Z4GT	1.28	1.15	1.02	.92
25 D 28	35Z5GT	1.48	1.33	1.18	1.06
25 D 28	36AM3B	1.28	1.15	1.02	.92
25 D 28	38HE7	3.33	2.99	2.66	2.39
25 D 28	38HK7	3.28	2.95	2.62	2.36
25 D 28	40KD6	4.05	3.65	3.24	2.92
25 D 28	42	2.43	2.18	1.94	1.75
25 D 28	42KN6	3.60	3.24	2.88	2.59
25 D 28	43	3.60	3.24	2.88	2.59
25 D 28	50A5	2.93	2.63	2.34	2.11
25 D 28	50B5	1.48	1.33	1.18	1.06
25 D 28	50BM8/UCL82	2.18	1.96	1.74	1.57
25 D 28	50C5	1.28	1.15	1.02	.92
25 D 28	50DC4	1.20	1.08	.96	.86
25 D 28	50EH5	1.50	1.35	1.20	1.08
25 D 28	50FE5	2.23	2.01	1.78	1.60
25 D 28	50FK5	1.10	.99	.88	.79
25 D 28	50HC6	1.20	1.08	.96	.86
25 D 28	50HK6	1.08	.97	.86	.77
25 D 28	50L6GT	2.00	1.80	1.60	1.44
25 D 28	50X6	2.93	2.63	2.34	2.11
25 D 28	50Y6GT	2.18	1.96	1.74	1.57
25 D 28	53HK7	4.18	3.76	3.34	3.01
25 D 28	60FX5	1.48	1.33	1.18	1.06
25 D 28	80	2.40	2.16	1.92	1.73
25 D 28	84/6Z4	2.60	2.34	2.08	1.87
25 D 28	117L7/7GT	7.38	6.64	5.90	5.31
25 D 28	117N7GT	6.43	5.79	5.14	4.63
25 D 28	117Z3	2.25	2.03	1.80	1.62
25 D 28	5879	2.50	2.25	2.00	1.80
25 D 28	6973	2.30	2.07	1.84	1.66
25 D 28	7025	1.55	1.40	1.24	1.12
25 D 28	7027A	3.73	3.35	2.98	2.68
25 D 28	7189	1.93	1.73	1.54	1.39
25 D 28	7199	2.45	2.21	1.96	1.76
25 D 28	7247	1.60	1.44	1.28	1.15
25 D 28	7355	1.83	1.64	1.46	1.31
25 D 28	7408	1.68	1.51	1.34	1.21
25 D 28	7543	1.63	1.46	1.30	1.17
25 D 28	7581A	2.28	2.05	1.82	1.64
25 D 28	7591A	1.40	1.26	1.12	1.01
25 D 28	7695	2.20	1.98	1.76	1.58
25 D 28	7868	2.38	2.14	1.90	1.71
25 D 28	8417	2.83	2.54	2.26	2.03
25 D 28	EM84/6FG6	1.68	1.51	1.34	1.21

Allied also has extensive stocks of special-purpose tubes for use in commercial, industrial, and military equipment. See pages 115 thru 119 for this selection. Make Allied Electronics your headquarters for all your tube needs and you'll save time and money by making complete one-order purchases.

TUBE SUB GUIDE

Haydon/Rider. Over 10,000 direct substitutions, over 15,000 listings. Lists most frequently used foreign tubes. 144 pp. Overall size, 4⅛x5⅞". Shpg. wt. 4 oz.
23 D 7180 E.....1.49

RCA MANUAL 1T-5

Contains characteristics of current transmitting and high voltage rectifier tubes. Shows use in oscillators, amplifiers, etc. Latest edition. Illus. 320 pp. 5⅜x8⅜". Wt. 12 oz.
23 D 7222 E.....1.00

SYLVANIA TUBE MANUAL

12th edition. Contains over 1800 tube types, including new color and black-and-white TV tubes, CRT's, series-string types, etc. 652 pp. 9½x8½". 1½ lbs.
23 D 7132 E.....1.50

New Tube Types Are Stocked As Soon As They Are Released

Our Own Receiving Tubes

Money-saving prices on Allied® receiving tubes. Allied will replace, free of charge, any tube that is defective due to faulty workmanship or material within two years of purchase (not applicable to broken tubes). **Quantity prices apply to assorted tubes.**

Dept. No.	Tube Type	EACH 1-9	10-49	50-Up
25 D 51	OZ4	1.53	1.36	1.22
25 D 51	1G3GT/1B3GT	1.53	1.36	1.22
25 D 51	1K3/1J3	1.53	1.36	1.22
25 D 51	1V2	1.15	1.02	.92
25 D 51	1X2B/1X2A	1.67	1.48	1.33
25 D 51	2CY5	1.98	1.76	1.58
25 D 51	3A3A/3B2	1.44	1.28	1.15
25 D 51	3BZ6	1.49	1.32	1.19
25 D 51	3CB6/3CF6	1.33	1.18	1.06
25 D 51	3CU3	1.69	1.50	1.35
25 D 51	3DK6	1.33	1.18	1.06
25 D 51	3GK5	1.89	1.68	1.51
25 D 51	3HM5/3HA5	1.73	1.54	1.39
25 D 51	3V4	1.53	1.36	1.22
25 D 51	4BZ6	1.33	1.18	1.06
25 D 51	4DT6A	1.46	1.30	1.17
25 D 51	4EH7	1.60	1.42	1.28
25 D 51	5AR4	1.91	1.70	1.53
25 D 51	5AQ5	1.33	1.18	1.06
25 D 51	5CG8	1.67	1.48	1.33
25 D 51	5CL8A	2.21	1.96	1.76
25 D 51	5EA8	2.27	2.02	1.82
25 D 51	5LJ8	1.85	1.64	1.48
25 D 51	5U4GB	1.24	1.03	.99
25 D 51	5U8	1.91	1.70	1.53
25 D 51	5V3GT	1.17	1.04	.94
25 D 51	6AB4	1.62	1.44	1.30
25 D 51	6AF3	1.60	1.42	1.28
25 D 51	6AF4A/6DZ4	2.00	1.78	1.60
25 D 51	6AK5/EF95	2.14	1.90	1.71
25 D 51	6AL3	1.17	1.04	.94
25 D 51	6AL5	1.21	1.08	.97
25 D 51	6AM8A	1.82	1.62	1.46
25 D 51	6AN8A	2.09	1.86	1.67
25 D 51	6AQ5A	1.33	1.18	1.06
25 D 51	6AS5	1.69	1.50	1.35
25 D 51	6AU4GTA	1.98	1.76	1.58
25 D 51	6AU6A	1.19	1.06	.95
25 D 51	6AU8A	2.34	2.08	1.87
25 D 51	6AV6	.88	.78	.70
25 D 51	6AW8A	1.80	1.60	1.44
25 D 51	6AX4GTB	1.53	1.36	1.22
25 D 51	6AY3B	1.53	1.36	1.22
25 D 51	6BA6/EF93	1.21	1.08	.97
25 D 51	6BC8	2.00	1.78	1.60
25 D 51	6BH8	2.07	1.84	1.66
25 D 51	6BJ6	1.62	1.44	1.30
25 D 51	6BK4B	3.40	3.02	2.72
25 D 51	6BK7B	2.00	1.78	1.60
25 D 51	6BL7GTA	2.27	2.02	1.82
25 D 51	6BL8/ECF80	1.21	1.08	.97
25 D 51	6BN4A	1.80	1.60	1.44
25 D 51	6BN6	1.85	1.64	1.48
25 D 51	6BQ5/EL84	1.60	1.42	1.28
25 D 51	6BQ6GTB/6CU6	2.21	1.96	1.76
25 D 51	6BQ7A	2.05	1.82	1.71
25 D 51	6BU8	2.05	1.82	1.71
25 D 51	6BZ6	1.21	1.08	.97
25 D 51	6BZ7	1.87	1.66	1.49
25 D 51	6C4	1.33	1.18	1.06
25 D 51	6CB6A/6CF6	1.28	1.14	1.03
25 D 51	6CD6GA	2.61	2.32	2.09
25 D 51	6CG7	Use 6FQ7/6CG7		
25 D 51	6CG8A	1.73	1.54	1.39
25 D 51	6CL3	1.58	1.40	1.26
25 D 51	6CL6	1.87	1.66	1.49
25 D 51	6CL8A	1.87	1.66	1.49
25 D 51	6CM7	1.62	1.44	1.30
25 D 51	6CQ8	1.85	1.64	1.48
25 D 51	6CU5	1.60	1.42	1.28
25 D 51	6CX8	2.34	2.08	1.87
25 D 51	6CW4	2.21	1.96	1.76
25 D 51	6CY5	1.91	1.70	1.53
25 D 51	6DE4	1.46	1.30	1.17
25 D 51	6DE6	1.33	1.18	1.06
25 D 51	6DK6	1.33	1.18	1.06
25 D 51	6DQ5	3.54	3.14	2.83
25 D 51	6DR7	2.07	1.84	1.66
25 D 51	6DT6A	1.21	1.08	.97
25 D 51	6DW4B	1.58	1.40	1.26
25 D 51	6EA8	1.60	1.42	1.28
25 D 51	6EB8	2.27	2.02	1.82
25 D 51	6EH7/EF183	1.73	1.54	1.39
25 D 51	6EJ7/EF184	1.60	1.42	1.29
25 D 51	6EM5	1.80	1.60	1.44
25 D 51	6EM7	2.57	2.28	2.05
25 D 51	6EW6	1.35	1.20	1.08
25 D 51	6FG7	1.87	1.66	1.49
25 D 51	6FQ7/6CG7	1.10	.98	.87
25 D 51	6GE5	2.05	1.82	1.71
25 D 51	6GF7A	2.18	1.94	1.75
25 D 51	6GH8A	1.44	1.28	1.15
25 D 51	6GK6	1.53	1.36	1.22
25 D 51	6GM6	1.46	1.30	1.17
25 D 51	6GN8	1.94	1.72	1.55
25 D 51	6GU5	1.87	1.66	1.49
25 D 51	6GU7	1.53	1.36	1.22
25 D 51	6GW6/6DQ6B	1.89	1.68	1.51
25 D 51	6GW8/ECL86	1.37	1.22	1.10
25 D 51	6GX7	1.80	1.60	1.44
25 D 51	6GY6	1.44	1.28	1.15
25 D 51	6HM5/6HA5	1.73	1.54	1.39
25 D 51	6HQ5	2.03	1.80	1.62
25 D 51	6HS5	3.49	3.10	2.79
25 D 51	6HS8/6KF8	1.94	1.72	1.55
25 D 51	6HZ6	1.35	1.20	1.08
25 D 51	6J6A	1.82	1.62	1.46
25 D 51	6JC6A	1.78	1.58	1.42
25 D 51	6JE6A	3.82	3.40	3.06
25 D 51	6JH6	1.33	1.18	1.06
25 D 51	6JS6B	3.29	2.93	2.64
25 D 51	6JT8	1.80	1.60	1.44
25 D 51	6JU8A	1.73	1.54	1.39
25 D 51	6K6GT	1.58	1.40	1.26
25 D 51	6KA8	2.03	1.80	1.62
25 D 51	6KY8A	3.26	2.90	2.61
25 D 51	6KZ8	1.67	1.48	1.33
25 D 51	6L6GC	2.36	2.10	1.89
25 D 51	6LB6	3.87	3.44	3.10
25 D 51	6MD8	2.18	1.94	1.75
25 D 51	6S4A	1.53	1.36	1.22
25 D 51	6SL7GT	1.98	1.76	1.58
25 D 51	6SN7GTB	1.60	1.42	1.28
25 D 51	6T8A	1.96	1.74	1.57
25 D 51	6U8A/6KD8	1.55	1.38	1.24
25 D 51	6V6GTA	1.69	1.50	1.35
25 D 51	6W6GT	1.85	1.64	1.48
25 D 51	6X4	1.24	1.03	.99
25 D 51	6X8A	1.71	1.52	1.37
25 D 51	6AU7	1.21	1.08	.97
25 D 51	8AW8A	2.18	1.94	1.75
25 D 51	8B10	1.58	1.40	1.26
25 D 51	8FQ7/8CG7	1.10	.98	.87
25 D 51	10DE7	2.00	1.78	1.60
25 D 51	12AD6/12GA6	1.58	1.40	1.26
25 D 51	12AT7/ECC81	1.44	1.28	1.15
25 D 51	12AU6	1.46	1.30	1.17
25 D 51	12AU7A/ECC82	1.85	1.64	1.48
25 D 51	12AV6	.88	.78	.70
25 D 51	12AX4GTB	1.33	1.18	1.06
25 D 51	12AX7A/ECC83	1.21	1.08	.97
25 D 51	12AZ7A	1.67	1.48	1.33
25 D 51	12BA6	.95	.84	.76
25 D 51	12BE6	1.15	1.02	.92
25 D 51	12BH7A	1.58	1.40	1.26
25 D 51	12BY7A	1.44	1.28	1.15
25 D 51	12CU5/12C5	1.76	1.56	1.40
25 D 51	12GW6/12DQ6B	1.91	1.70	1.53
25 D 51	23Z9	2.12	1.88	1.69
25 D 51	35C5	1.21	1.08	.97
25 D 51	35W4	.74	.66	.59
25 D 51	35Z5GT	1.33	1.18	1.06
25 D 51	50C5	1.15	1.02	.92
25 D 51	50EH5	1.35	1.20	1.08
25 D 51	50L6GT	1.80	1.60	1.44

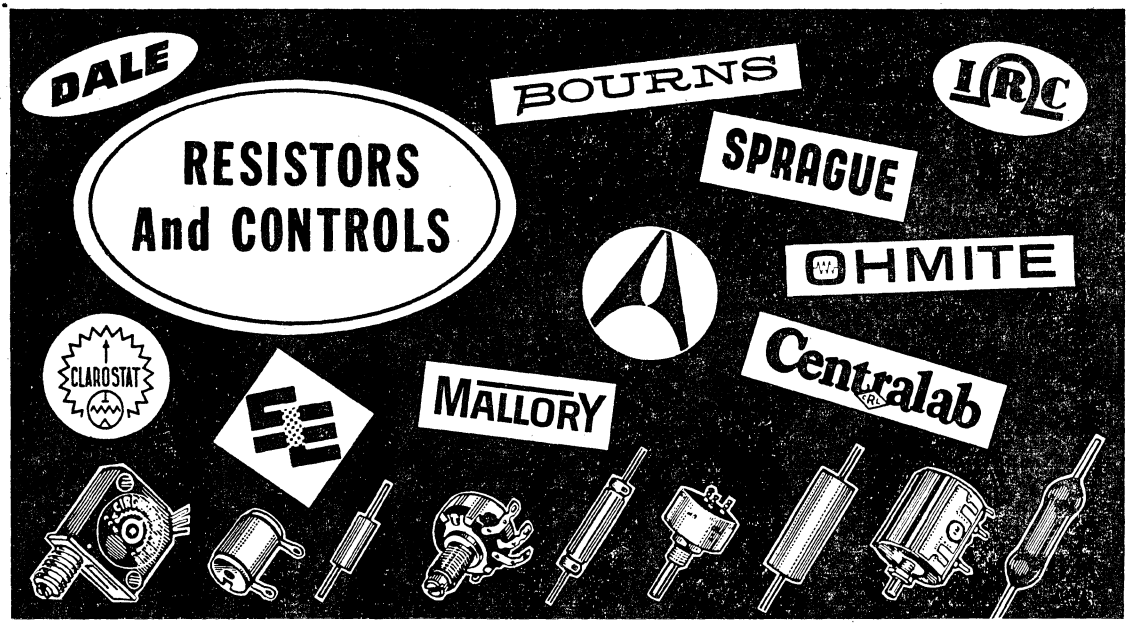
MULLARD 10 M SERIES LABORATORY-TESTED RECEIVING TUBES

Assure long life and ultra-reliable performance, plus tube-to-tube and section-to-section uniformity. For replacement use or designing new equipment. Guaranteed for 10,000 hours of efficient performance, within a two-year period from the date of purchase.

Guarantee does not apply to broken tubes. Each tube is individually packaged and sealed in plastic-foam cushion for shipping protection. **Specify Dept. No. and Tube Type when ordering.** Imported from Great Britain. Av. shpg. wt., 5 oz.

Dept. No.	Tube Type	EACH
25 D 21	6AB8	2.75
25 D 21	6AJ8	2.65
25 D 21	6AK8	2.80
25 D 21	6AL5	1.95
25 D 21	6AQ5	2.15
25 D 21	6AQ5A	2.15
25 D 21	6AQ8	2.40
25 D 21	6AU6	2.05
25 D 21	6AU6A	2.05
25 D 21	6AV6	1.95
25 D 21	6BA6	2.00
25 D 21	6BE6	2.10
25 D 21	6BL8	3.05
25 D 21	6BQ5	2.15
25 D 21	6BQ5A	2.15
25 D 21	6C4	2.85
25 D 21	6DJ8	3.10
25 D 21	6EH7	2.60
25 D 21	6EJ7	2.60
25 D 21	6ES8	3.50
25 D 21	6EU7	2.35
25 D 21	6FY5	2.35
25 D 21	6GK5	2.40
25 D 21	6J6	2.55
25 D 21	6J6A	2.55
25 D 21	6T8A	2.80
25 D 21	12AT7	2.55
25 D 21	12AU7	2.20
25 D 21	12AU7A	2.20
25 D 21	12AV6	1.95
25 D 21	12AX7	2.20
25 D 21	12AX7A	2.20
25 D 21	12DW7	2.55
25 D 21	5654/6AK5W	4.50
25 D 21	KT66	3.68
25 D 21	KT77	4.28
25 D 21	EABC80/6AK8	2.80
25 D 21	ECF80/6BL8	3.05
25 D 21	ECL80/6AB8	2.75
25 D 21	PCF80/9A8	3.25
25 D 21	ECC81/12AT7	2.55
25 D 21	ECH81/6AJ8	2.65
25 D 21	ECC82/12AU7	2.20
25 D 21	ECC83/12AX7	2.20
25 D 21	ECL84/6DX8	2.85
25 D 21	EL84/6BQ5	2.15
25 D 21	PL84/15CW5	2.50
25 D 21	ECC85/6AQ8	2.40
25 D 21	ECF86/6HG8	3.10
25 D 21	EF86/6267	2.50
25 D 21	PCF86/8HG8	2.65
25 D 21	ECC88/6DJ8	3.10
25 D 21	KT88	5.60
25 D 21	EBF89/6DC8	2.65
25 D 21	EF89/6DA6	2.55
25 D 21	EBC90/6AT6	2.00
25 D 21	EC90/6C4	2.85
25 D 21	EK90/6BE6	2.10
25 D 21	EL90/6AQ5	2.55
25 D 21	EB91/6AL5	1.95
25 D 21	EBC91/6AV6	1.95
25 D 21	ECC91/6J6	2.55
25 D 21	HBC91/12AV6	1.95
25 D 21	EF93/6BA6	2.00
25 D 21	EF94/6AU6	2.05
25 D 21	EC95/6ER5	2.40
25 D 21	EF95/6AK5	3.25
25 D 21	EL95/6DL5	2.55
25 D 21	EC97/6FY5	2.35
25 D 21	EF183/6EH7	2.60
25 D 21	EF184/6EJ7	2.60
25 D 21	ECC189/6ES8	3.50
25 D 21	6267	2.50
25 D 21	7025	2.35
25 D 21	7247/12DW7	2.55

Specify Dept. No. and Tube Type No. When Ordering



IMMEDIATE SHIPMENT—IN QUANTITY AT FACTORY PRICES

RESISTORS

Mfr's Type	MIL Spec	MIL Type	OEM To	Page
DALE				
RH	R-18546D	RE65, RE75	249	136
RS	R-26D	RW67G/V,RW69G/V	249	136
IRC				
AS	R-26E		249	132
BWH			4999	128
RC	R-11-D	RC07GF, RC20GF, RC32GF, RC42GF	4999	128
CCA, CEA, CEC	R-10509F	RN55B/D, RN60B/D	9999	131
DCC	R-10509F	RN20X, RN70B	9999	131
MEB, MEC, MMC	R-10509	RN60/D, RN65/D, RN70D	9999	130
Metal Glazed	R-22684B		4999	129
Power Resistors	R-26E		249	132
PW			999	132
WW	R-93D		Any	132
Assortments			Any	129
MALLORY				
MOL Series			999	137
OHMITE				
Carbon	R-11-F	RC05GF, RC07GF, RC20GF, RC32GF, RC42GF	Any	133
Power		67	999	135
99 Series	R26E	RW57, 58, 59, 67, 68, 69	999	134
			999	134
Brown Devil			999	134
Assortments			Any	133
SPRAGUE				
Power	R-26C	RW69G/V	999	137

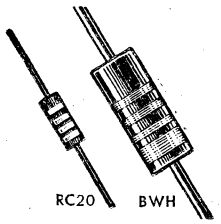
CONTROLS

AMPHENOL-BORG				
Microdials			499	156
Micropot Trimmers			999	155
Wirewound Micropots			499	156
BOURNS				
200, 215, 224, 235			499	140
3051, 3020			499	141
236,260,3010,3011			499	141
271-276, 3012, 3052, 3067, 3068			499	142
3257				
207-209, 220, 3250, 3251		RT10, RT11, RT12, RT22,RJ11,RJ12	499	144

CONTROLS (Cont'd)

Mfr's Type	MIL Spec	MIL Type	OEM To	Page
BOURNS—Cont'd				
490 Series			99	147
3009, 3059, 3069, 3292		RJ11, RJ12	499	143
3000, 3001, 3005, 3007, 3260, 3280, 3281			499	145
3282, 3290, 3300, 3301, 3305			499	146
3367, 3368	R-27208A		499	145
3400, 3500, 3507, 3510, 3520, 3700			249	147
3415, 3435, 3437, 3438, 3445, 3501, 3535			249	148
3600, 3640, 3660, 3665			249	149
3650, 3707			249	147
Mtg. Accessories			99	148
CENTRALAB				
WN, WW			249	160
CLAROSTAT 58, 48M-9, 62JA, 43C2,53C,U39,371	R-94	RV4	999	139
IRC Circuitrim	R-27208	RT22	999	150
Precision	R-27208A		999	151, 152
Military	R-94B	RV2, RV4, RV5, RV6	249	160
	R-19A	RA20, RA30	249	160
Series 45, Type Q			249	158
PQ, RQ, RQL, Revodex Dials			Any	159
Trimmers			499	154
	R-27208C	RT11, RT12, RT24	999	152-154
	R-22097D	RJ12	999	152
	R-22097D	RJ11, RJ24	499	152, 153
Trimmers WP, WPK, AW, WM, WPRL, LP, TP, WPS			Any	159
Assortments			Any	157
			Any	158
MALLORY Hardware			Any	164
T and L-Pads			499	164
SU, U, TSA, MR, MLC, MTC, R			499	163
M, VW			499	164
OHMITE AB	R-94B	RV4	Any	162
AS	R-94	RV6	Any	162
C, E, H, J, K, L, N			99	161

Carbon and Wirewound Insulated Resistors



HANDY "SNAP PAK"

Resistors can be tested while in package. Added protection, faster identification. 10 resistors per pkg. in ¼ and ½-watt sizes, 5 per pkg. in larger sizes.

CARBON COMPOSITION AND WIREWOUND RESISTORS

Type RC Fixed Composition Resistors. Choose from 10% (see Table A) or 5% (Table B) tolerances. Engineered to meet or exceed MIL-R-11 specifications. Withstand 50 to 100% overloads for short periods of time. EIA (RETMA) code for easy identification. Have well-anchored, positive-contact leads with no hot spots. Sizes: RC-¼, ¼x3½"; RC-½, 5⁵⁄₆₄x9⁄₆₄"; RC-1, 9⁄₁₆x7½"; RC-2, 1¹⁄₁₆x5⁄₁₆". Shpg. wt. per 100: ¼W, 4 oz.; ½W, 6 oz.; 1W, 10 oz.; 2W, 14 oz.

Type BWH-2-Watt Fixed Wirewound. Available in values up to 1800 Ohms. Choose from 10% (Table A) or 5% (Table B) tolerances. Rated at 2-watts up to 158°F ambient temperature; 1-watt at 239°F; and ½-watt at 279°F. Manufactured to meet MIL-R-11D specifications. EIA (RETMA) coded for easy identification; wide first band. Inductance .04-5.0 μH from .24-1800 ohms respectively. Same size as 1-watt composition resistors listed above. Shpg. wt. per 100, 10 oz.

EXPLANATION OF MIL NUMBERS

MIL Numbers. Example: RC07GF-153K. RC designates composition type resistor. 07, ¼-watt rating. GF, characteristic—ambient temperature. (G) and resistance temperature (F) in reference to MIL-R-11D specification, 153, indicates nominal resistance in ohms—first 2 digits are significant figures, 3rd digit is number of zeros to add. Tolerance—J, ±5%; K, ±10%; M, ±20%.

10% TOLERANCE INSULATED RC AND BWH TYPES

TYPE RC 10% FIXED COMPOSITION—SPECIFY VALUES WANTED

Stock No.	Mfr's Type New	Mfr's Type Old	MIL Equiv.	Watts	Values See Table "A"	May Be Assorted (Order Each Value in Multiples of 10) EACH 10-99	100-499	500-999	1000-2499	2500-4999
45 D 7150 C	RC¼	GBT-¼	RC07GF	¼	2.7Ω to 1 meg	.07	.06	.05	.04	.03
45 D 5000 C	RC½	GBT-½	RC20GF	½	2.7Ω to 22 meg	.07	.06	.05	.04	.03
45 D 5020 C	RC1	GBT-1	RC32GF	1	10Ω to 22 meg	.08	.07	.06	.05	.04
45 D 5070 C	RC2	SR-2	RC42GF	2	10Ω to 22 meg	.15	.13	.11	.10	.09

TYPE BWH 10% 2-WATT FIXED WIREWOUND—SPECIFY VALUES WANTED—TO 1500 OHMS ONLY

Stock No.	Mfr's Type	MIL Equiv.	Watts	Values See Table "A"	May be Assorted (Order Each Value in Multiples of 5) EACH 5-99	100-499	500-999	1000-2499	2500-4999
45 D 5076 C	BWH	.....	2	.10Ω to 8.2Ω	.11	.10	.09	.08	.07
45 D 5077 C	BWH	.....	2	10Ω to 1500Ω	.11	.10	.09	.08	.07

TABLE "A"—10% EIA (RETMA) VALUES—SPECIFY RESISTANCE WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs
0.10	0.33	1.0	3.3	10	33	100	330	1000	3300	10K	33K	100K	330K	1.0 meg.	3.3	10
0.12	0.39	1.2	3.9	12	39	120	390	1200	3900	12K	39K	120K	390K	1.2 meg	3.9	12
0.15	0.47	1.5	4.7	15	47	150	470	1500	4700	15K	47K	150K	470K	1.5 meg	4.7	15
0.18	0.56	1.8	5.6	18	56	180	560	1800	5600	18K	56K	180K	560K	1.8 meg	5.6	18
0.22	0.68	2.2	6.8	22	68	220	680	2200	6800	22K	68K	220K	680K	2.2 meg	6.8	22
0.27	0.82	2.7	8.2	27	82	270	820	2700	8200	27K	82K	270K	820K	2.7 meg	8.2	....

5% TOLERANCE INSULATED RC AND BWH TYPES

TYPE RC 5% FIXED COMPOSITION—SPECIFY VALUES WANTED

Stock No.	Mfr's Type New	Mfr's Type Old	MIL Equiv.	Watts	Values See Table "B"	May Be Assorted (Order Each Value in Multiples of 10) EACH 10-99	100-499.	500-999	1000-2499	2500-4999
45 D 7155 C	RC¼	GBT-¼	RC07GF	¼	2.7Ω to 1 meg	.09	.08	.07	.06	.05
45 D 5005 C	RC½	GBT-½	RC20GF	½	2.7Ω to 22 meg	.09	.08	.07	.06	.05
45 D 5025 C	RC1	GBT-1	RC32GF	1	10Ω to 22 meg	.12	.11	.10	.09	.08
45 D 5045 C	RC2	SR-2	RC42GF	2	10Ω to 22 meg	.27	.23	.20	.17	.16

TYPE BWH 5% 2-WATT FIXED WIREWOUND—SPECIFY VALUES WANTED—TO 1800 OHMS ONLY

Stock No.	Mfr's Type	MIL Equiv.	Watts	Values See Table "B"	May be Assorted (Order Each Value In Multiples of 5) EACH 5-99	100-499	500-999	1000-2499	2500-4999
45 D 5078 C	BWH	.....	2	.10Ω to 9.1Ω	.17	.16	.15	.14	.13
45 D 5079 C	BWH	.....	2	10Ω to 1500Ω	.17	.16	.15	.14	.13
45 D 5024 C	BWH	.....	2	1600Ω to 1800Ω	.17	.16	.15	.14	.13

TABLE "B"—5% EIA (RETMA) VALUES—SPECIFY RESISTANCE WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs
0.10	0.39	1.5	5.6	22	82	330	1200	4700	18K	68K	270K	1.0 meg	3.9	15
0.11	0.43	1.6	6.2	24	91	360	1300	5100	20K	75K	300K	1.1 meg	4.3	16
0.12	0.47	1.8	6.8	27	100	390	1500	5600	22K	82K	330K	1.2 meg	4.7	18
0.13	0.51	2.0	7.5	30	110	430	1600	6200	24K	91K	360K	1.3 meg	5.1	20
0.15	0.56	2.2	8.2	33	120	470	1800	6800	27K	100K	390K	1.5 meg	5.6	22
0.16	0.62	2.4	9.1	36	130	510	2000	7500	30K	110K	430K	1.6 meg	6.2	.....
0.18	0.68	2.7	10	39	150	560	2200	8200	33K	120K	470K	1.8 meg	6.8	.....
0.20	0.75	3.0	11	43	160	620	2400	9100	36K	130K	510K	2.0 meg	7.5	.....
0.22	0.82	3.3	12	47	180	680	2700	10K	39K	150K	560K	2.2 meg	8.2	.....
0.24	0.91	3.6	13	51	200	750	3000	11K	43K	160K	620K	2.4	9.1	.....
0.27	1.0	3.9	15	56	220	820	3300	12K	47K	180K	680K	2.7	10	.....
0.30	1.1	4.3	16	62	240	910	3600	13K	51K	200K	750K	3.0	11	.....
0.33	1.2	4.7	18	68	270	1000	3900	15K	56K	220K	820K	3.3	12	.....
0.36	1.3	5.1	20	75	300	1100	4300	16K	62K	240K	910K	3.6	13	.....

Specify Stock No., Resistance and Wattage When Ordering Resistors

Metal-Glaze Resistors and Assortments

LOW-COST METAL-GLAZE 2% AND 5% TOLERANCE RESISTORS

Metal Glaze film is up to 100 times thicker than conventional films. Offer excellent temperature coefficients across a wide resistance range. Average resistance changes less than 0.6% after 1000 hours, full load at 70°C. Derated to 0 at 150°. Av. wt./100, 6 oz.

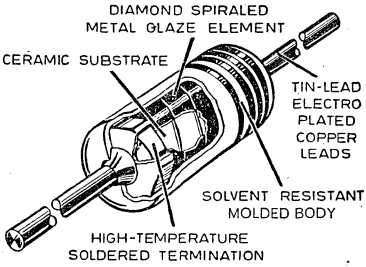
2%-TOLERANCE RESISTORS

Stock No.	Mfr's Type	Watts	Stock Values—See Table Below	EACH 1-99	100-249	250-999	1000-4999
45 D 5028 C	RG07	¼	51 ohms to 150K	.28	.18	.12	.08
45 D 5029 C	RG20	½	51 ohms to 150K	.25	.16	.10	.07

5%-TOLERANCE RESISTORS

45 D 5030 C	RG07	¼	51 ohms to 150K	.25	.16	.10	.07
45 D 5031 C	RG20	½	51 ohms to 150K	.24	.15	.09	.06

Stock No.	Mfr's Type	W	Max. Cont. Volts	Stock Values—Table "A" Below	EACH ASSORTED 1-24	25-Up	EACH ASSORTED Min. of 20 PER VALUE 100-249	250-999	1000-9999
45 D 5027 C	RG1/8	⅛	150	51 ohms through 30K	.23	.20	.14	.12	.10

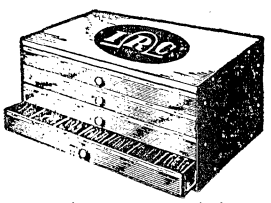


Metal-glaze resistors feature a unique diamond-spiraled, thick-film resistance element made of glass and special metal alloys, fused to a crystalline ceramic core. Resistance element is of unusual stability, extremely hard and rugged, and impervious to environmental extremes such as moisture, temperature, shock, and vibration. Withstands overloads. Tin-lead electroplated copper leads. Meet MIL-R-22684B. Perform better than MIL-R-11 resistors.

TABLE OF STANDARD RESISTANCE VALUES IN OHMS—SPECIFY VALUE

51	100	200	390	750	1500	3300	5600	10K	18K	33K	56K	100K
56	110	220	430	820	1600	3600	6200	11K	20K	36K	62K	110K
62	120	240	470	910	1800	3900	6800	12K	22K	39K	68K	120K
68	130	270	510	1000	2000	4300	7500	13K	24K	43K	75K	130K
75	150	300	560	1100	2400	4700	8200	15K	27K	47K	82K	150K
82	160	330	620	1200	2700	5100	9100	16K	30K	51K	91K	.....
91	180	360	680	1300	3000	.....	.....	.....	.....	.....	.....	.....

BALANCED RESISTOR ASSORTMENTS



METAL RESIST-O-CABINETS

- FREE with Resistor Assortment
- Keeps Your Resistors Neat
- Compartment for Each Value

Sturdy metal Resist-O-Cabinets are free with the purchase of any of the balanced resistor assortments below and at right. Keep your resistor stocks orderly and easily accessible. Four non-spill drawers and 28 carefully designed compartments. Overall size: 5⅜ x5 15/16x10⅞". Durable blue and silver finish.

RESISTOR ASSORTMENT 3A

A balanced assortment containing 120 IRC 10%-tolerance molded wirewound and fixed carbon composition resistors. Offer compact size comparable to ½-watt and 1-watt sizes, yet rated 2-watts at 70°C ambient temperature. Contains the following values: 7 each: 8200, 10K, 22K, 47K; 5 each: 1000, 6800, 15K, 100K; 4 each: 100, 330, 470, 1500, 2200, 3300, 4700, 27K, 1.0 meg; 3 each: 47, 82, 150, 220, 270, 3900, 220K, 470K; 2 each: 4.7, 10, 22, 68; 1 each: 15, 27, 33, 39. Assortment is complete with handy metal Resist-O-Cabinet. Shpg. wt., 4½ lbs.

45 D 6776.....28.80

RESISTOR ASSORTMENT 4A

Comprehensive selection containing 150 IRC 10%-tolerance fixed carbon composition resistors rated ½-watt at 70°C ambient temperature. Voltage rating: 350V. 1½" solder leads. Assortment contains the following values: 8 each: 1000, 47K, 100K, 270K, 470K, 1.0 meg; 7 each: 3700, 10K, 220K, 2.2 meg; 5 each: 3300, 22K, 27K, 33K, 330K, 4.7 meg; 4 each: 100, 470, 1500, 2200, 2700, 56K, 68K, 3.3 meg; 3 each: 47, 220, 270, 10 meg. Assortment with Resist-O-Cabinet. Shpg. wt., 4½ lbs.

45 D 6777.....18.00

RESISTOR ASSORTMENT 5A

Assortment contains an extensive stock of IRC 10%-tolerance fixed carbon composition resistors rated 1-watt at 70°C ambient temperature. Voltage rating: 500V. 1½" solder leads. 125 resistance values. 7 each: 1000, 10K, 27K, 47K, 100K, 270K, 470K, 1.0 meg; 5 each: 2200, 4700, 22K; 4 each: 33K, 39K, 68K; 3 each: 47, 100, 150, 220, 270, 470, 1500, 2700, 3300, 15K, 150K, 220K, 2.2 meg, 4.7 meg. Assortment includes metal IRC Resist-O-Cabinet to keep resistors orderly and easily accessible. Shpg. wt., 4¾ lbs.

45 D 6778.....22.50

RESISTOR ASSORTMENT 6A

Contains 139 IRC precision deposited carbon film and 10%-tolerance insulated resistors rated ½-watt, 1-watt and 2-watts. Contains the following resistances with these power ratings: ½ watt. 4 each: 1000, 47K, 100K, 270K, 470K, 1.0 meg; 3 each: 4700, 10K, 220K, 2.2 meg; 2 each: 47, 100, 150, 220, 270, 470, 1500, 2200, 2700, 3300, 15K, 22K, 27K, 33K, 39K, 68K, 150K, 4.7 meg. 1 watt. 4 each: 1000, 10K, 27K, 100K, 1.0 meg; 3 each: 47K, 470K, 2.2 meg; 2 each: 3300, 15K, 22K, 68K, 150K, 270K; 1 each: 47, 100, 150, 220, 270, 470, 1500, 2200, 2700, 4700, 33K, 39K, 220K, 4.7 meg. 2 watt. 1 each: 47, 100, 470, 4700, 10K, 22K, 47K, Type DCF resistors. Offer 1% tolerance, rated 1 watt at 40°C ambient temperature. 1 each of the following: 1000, 10K, 100K, 1.0 meg and 5.0 meg. Complete assortment with IRC metal Resist-O-Cabinet to keep resistors orderly and readily accessible. Shpg. wt., 5 lbs.

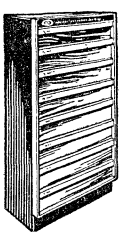
45 D 6779.....23.22

RESISTOR ASSORTMENT 7A

Assortment contains a balanced inventory of 150 IRC 10%-tolerance fixed carbon composition resistors rated ¼-watt at 70°C ambient temperature. Voltage rating: 250V. 1½" solder leads. Resistances as follows: 10 each: 1000, 4700, 10K; 8 each: 2200, 22K, 100K; 6 each: 100, 470, 1500, 6800, 15K, 33K, 47K; 5 each: 3300, 1.0 meg; 4 each: 150, 220, 2700, 3900, 18K; 3 each: 47, 270, 680, 27K, 39K, 68K, 220K, 470K. With metal Resist-O-Cabinet. 4¼ lbs.

45 D 6775.....19.50

RESISTOR ASSORTMENTS WITH STORAGE CABINETS



Each assortment is housed in a 54x27x15" red and black metal cabinet. Cabinet has 8 drawers with labeled dividers for each resistance value, and with expandable compartments. Descriptions of MIL Nos. of resistors on page 130. "F" suffix indicates factory shipped from Philadelphia, Pa.

ELS 22. IRC Type RC07 ¼-watt, 5% tolerance resistors. 121 standard values *indicated in table right. 50 resistors per value, 6050 total. In 8-drawer cabinet. *Separately, $592.00.*

45 D 5260 F. Shpg. wt., 200 lbs.....499.00

ELS 23. IRC Type RC20 ½-watt, 5% tolerance resistors. 167 standard values (see table right). 50 of each value, 8350 total. *Separately, $1002.* In metal cabinet described above.

45 D 5261 F. Shpg. wt., 200 lbs.....655.00

ELS 24. IRC Type RC32 1-watt, 5% tolerance resistors. 167 standard values (see table below). 25 of each value, 4175 total. *Separately, $751.50.* In metal cabinet described at left.

45 D 5262 F. Shpg. wt., 200 lbs.....585.00

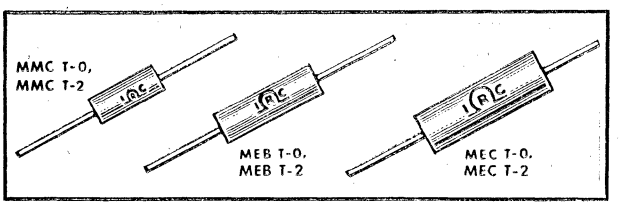
TABLE OF RESISTANCE VALUES IN OHMS

2.7	9.1	*33	*110	*390	*1300	*4700	*16K	*56K	*200K	*680K	2.2	7.5
3.0	*10	*36	*120	*430	*1500	*5100	*18K	*62K	*220K	*750K	2.4	8.2
3.3	*11	*39	*130	*470	*1600	*5600	*20K	*68K	*240K	*820K	2.7	9.1
3.6	*12	*43	*150	*510	*1800	*6200	*22K	*75K	*270K	*910K	3.0	10
3.9	*13	*47	*160	*560	*2000	*6800	*24K	*82K	*300K	Megs	3.3	11
4.3	*15	*51	*180	*620	*2200	*7500	*27K	*91K	*330K	*1.0	3.6	12
4.7	*16	*56	*200	*680	*2400	*8200	*30K	*100K	*360K	1.1	3.9	13
5.1	*18	*62	*220	*750	*2700	*9100	*33K	*110K	*390K	1.2	4.3	15
5.6	*20	*68	*240	*820	*3000	*10K	*36K	*120K	*430K	1.3	4.7	16
6.2	*22	*75	*270	*910	*3300	*11K	*39K	*130K	*470K	1.5	5.1	18
6.8	*24	*82	*300	*1000	*3600	*12K	*43K	*150K	*510K	1.6	5.6	20
7.5	*27	*91	*330	*1100	*3900	*13K	*47K	*160K	*560K	1.8	6.2	22
8.2	*30	*100	*360	*1200	*4300	*15K	*51K	*180K	*620K	2.0	6.8	....

1% Molded Metal-Film Resistors

T-O MOLDED METAL-FILM PRECISION RESISTORS WITH 1% TOLERANCE MEET RIGID SPECIFICATIONS OF MIL-R-10509F

MMC, 30.1 Ohms to 100K—MEB, 51.1 Ohms to 1 Meg—MEC, 51.1 Ohms to 1.5 Megs



Precision 1% tolerance resistors. Feature stability and thermal noise characteristics comparable to precision wire-wound resistors. Lower noise and better temperature coefficient than deposited carbon or oxide-film types. High-temperature plastic case ensures sufficient moisture resistance. Voltage coefficient is less than 5PPM/V. Temperature coefficient characteristic of **0** ±100 PPM/°C over a temperature range of —55°C to +165°C. *Wattage for Characteristic B @ 70°C ambient. †Wattage for Characteristic D at 70° ambient. Meets Characteristic B at 125°C ambient temperature. Av. shpg. wt. per 100, 7 oz.

Stock No.	Mfr's Type	MIL Type	Watts B*	Watts D†	Max. Cont. Volts	Stock Values—See Table "A" Below	EACH 1-24	25-99	100-249	250-999	1000-9999
45 D 5015 C	MMC-T-O	.....	1/8	1/2	200	30.1 ohms to 100K	1.24	.77	.51	.40	.36
45 D 5007 C	MEB-T-O	RN65D	1/4	1/2	350	51.1 ohms to 1 meg	1.25	.48	.24	.16	.13
45 D 5011 C	MEC-T-O	RN70D	1/2	1	350	51.1 ohms to 1.5 megs	1.25	.48	.24	.16	.13

T-2 MOLDED METAL FILM RESISTORS—MEET MIL-R-10509

MMC, 49.9 Ohms to 100K—MEB, 51.1 Ohms to 1 Meg—MEC, 51.1 Ohms to 1.5 Megs

1% precision-made molded metal film resistors easily meet Type RN60C of MIL-R-10509D specifications. Have temperature coefficient characteristics of 0 ±50 PPM/°C over a temperature span of —55° C to +165° C. Rated for full load operation at 125° C; for zero load at 175° C. Have inherently low noise levels. Feature voltage coefficient of less than 5 PPM/V. Available in resistance values from 49.9 ohms to 1.50 megohms. Specify values from Table "A" below when ordering. Av. shpg. wt. per 100, 7 oz.

Stock No.	Mfr's Type	MIL Type	Watts ±125°C	Stock Values—See Table "A" Below	EACH 1-24	25-99	100-249	250-999	1000-9999
45 D 5019 C	MMC T-2	RN50C	1/20	49.9 ohms to 100K	1.71	1.16	.78	.66	.59
45 D 7151 C	MEB T-2	RN65C	1/4	51.1 ohms to 1 meg	1.40	.70	.30	.21	.16
45 D 7153 C	MEC T-2	RN70C	1/2	51.1 ohms to 1.5 megs	1.40	.70	.30	.21	.16

TABLE "A"—MIL-OHM VALUES AVAILABLE FROM STOCK—SPECIFY RESISTANCE WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
30.1	133	422	1000	1960	3740	7150	15K	39.2K	110K	365K
31.6	143	432	1100	2000	3920	7500	16.2K	40.2K	121K	392K
33.2	147	464	1150	2050	4020	7680	16.9K	42.2K	133K	402K
34.0	150	475	1210	2150	4220	7870	17.8K	43.2K	150K	464K
34.8	162	487	1240	2210	4320	8060	18.2K	47.5K	178K	475K
40.2	178	499	1270	2260	4420	8250	19.6K	48.7K	182K	487K
46.4	182	511	1300	2320	4640	8450	20K	49.9K	196K	499K
47.5	200	562	1330	2370	4750	8660	21.5K	51.1K	200K	511K
49.9	215	576	1400	2490	4870	8870	22.1K	54.9K	215K	536K
51.1	221	590	1430	2610	4990	9090	23.7K	56.2K	221K	562K
56.2	249	604	1470	2670	5110	9530	24.9K	60.4K	249K	576K
61.9	261	619	1500	2740	5490	10K	25.5K	61.9K	255K	604K
68.1	274	634	1580	2800	5620	10.2K	26.1K	66.5K	261K	825K
75.0	301	649	1620	2870	5760	11K	26.7K	68.1K	267K	909K
82.5	316	681	1650	3010	5900	12.1K	27.4K	69.8K	280K	**Megs**
100	332	715	1690	3090	6040	13K	30.1K	75K	287K	1.00
105	348	750	1740	3160	6190	13.3K	31.6K	80.6K	301K	1.05
113	383	806	1780	3320	6340	14K	33.2K	82.5K	324K	1.10
121	392	825	1820	3570	6490	14.3K	34K	90.9K	332K	1.21
130	402	909	1910	3650	6810	14.7K	38.3K	100K	340K	1.50

EXPLANATION OF MIL CODES

EXPLANATION OF MILITARY STYLE NUMBERS

EXAMPLE USED IN EXPLANATION

(A)	(B)	(C)	(D)	(E)
RN60	D	249	4	F

(A) Identifies size and wattage.

(B) Identifies characteristic. D stands for +0.02, —0.05 maximum temperature coefficient %/°C; 70° maximum ambient at rated watts; ±% maximum change due to moisture resistance. C: ±0.005; 125°C; 0.5; X: ±0.05; 40°C; ±4.

(C) Identifies ohms. First 3 digits are significant.

(D) An additional figure indicates number of zeros that follow. If an R follows, it represents decimal point for values under 100 ohms or fractional values. Digits following R become significant, as 24.9=24R9.

(E) Identifies resistance tolerance. In this case, ±1%.

EXPLANATION OF MIL NUMBERS

CHARACTERISTICS

Code	Max. Ambient at Rated Watts	Max. Change Due to Moisture Resistance Test
B, D	70° C	±3% wet, ±1.5% dry
C	125° C	±0.5%, wet or dry
X	40° C	±4% wet

Example: RN60 D 2671 F

RN60, high-stability film resistor and size and wattage.

D, characteristic—see Table, Code column. TC is ±0.05%/°C.

2671, ohms resistance. First three digits are significant figures, last digit is zeros to add. For values under 100 ohms, the letter R is used to indicate decimal point, e.g. 34R8 is 34.8.

F, resistance tolerance: ±1%.

Specify Stock No., Resistance and Wattage When Ordering

1% Metal-Film & Deposited-Carbon Resistors

TYPE T-O EVAPORATED METAL-FILM RESISTORS

TYPE CEA AND CCA T-O RESISTORS MEET MIL-R-10509F

CEA T-O, CCA T-O, CEC T-O. Precision ±1% evaporated metal-film resistors with M-coat—a special moisture proofing encapsulation identified by its gray color. All have temperature coefficient characteristics of ±100 PPM/°C over a temperature span of —55° to 165°C. Low noise level: 3 sigma of the noise level is below 0.1 microvolt/volt over the audible spectrum. Voltage coefficient when measured between 1/10 and full rated voltage is less than 5 PPM/volt for all values. Power ratings are based on 125° C ambient. Leads are 1½" ±⅛" long, alloy coated; may be dip-soldered. Resistance, tolerance, TC code stamped on each unit. **Specify values desired—see Table "A".** Shpg. wt., per 100, 10 oz.

Stock No.	Mfr's Type	MIL Type	Watts	Max. Cont. Volts	Values—See Table "A" Below	EACH				
						1-24	25-99	100-249	250-999	1000-9999
45 D 5016 C	CEA T-O	RN55D	⅛	250	10 ohms to 499K	1.10	.44	.21	.14	.11

Stock No.	Mfr's Type	MIL Type	Watts	Max. Cont. Volts	Values—See Table "A" Below	E ACH				
						1-24	25-99	100-249	250-999	1000-9999
45 D 5022 C	CCA T-O	RN60D	¼	250	10 ohms to 1 meg	1.15	.46	.22	.15	.12

Stock No.	Mfr's Type	MIL Type	Watts	Max. Cont. Volts	Values—See Table "A" Below	EACH				
						1-24	25-99	100-249	250-999	1000-9999
45 D 5018 C	CEC T-O	.....	½	350	10 ohms to 1.5 megohms	1.20	.47	.23	.15	.12

TABLE "A"—MIL-OHM VALUES AVAILABLE FROM STOCK—SPECIFY RESISTANCE WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	21.5	46.4	100	215	453	953	2000	4220	8870	18.7K	39.2K	82.5K	174K	365K	768K
10.2	22.1	47.5	102	221	464	976	2050	4320	9090	19.1K	40.2K	84.5K	178K	374K	787K
10.5	22.6	48.7	105	226	475	1000	2100	4420	9310	19.6K	41.2K	86.6K	182K	383K	806K
10.7	23.2	49.9	107	232	487	1020	2150	4530	9530	20K	42.2K	88.7K	187K	392K	825K
11.0	23.7	51.1	110	237	499	1050	2210	4640	9760	20.5K	43.2K	90.9K	191K	402K	845K
11.3	24.3	52.3	113	243	511	1070	2260	4750	10K	21K	44.2K	93.1K	196K	412K	866K
11.5	24.9	53.6	115	249	523	1100	2320	4870	10.2K	21.5K	45.3K	95.3K	200K	422K	887K
11.8	25.5	54.9	118	255	536	1130	2370	4990	10.5K	22.1K	46.4K	97.6K	205K	432K	909K
12.1	26.1	56.2	121	261	549	1150	2430	5110	10.7K	22.6K	47.5K	100K	210K	442K	931K
12.4	26.7	57.6	124	267	562	1180	2490	5230	11K	23.2K	48.7K	102K	215K	453K	953K
12.7	27.4	59.0	127	274	576	1210	2550	5360	11.3K	23.7K	49.9K	105K	221K	464K	976K
13.0	28.0	60.4	130	280	590	1240	2610	5490	11.5K	24.3K	51.1K	107K	226K	475K	
13.3	28.7	61.9	133	287	604	1270	2670	5620	11.8K	24.9K	52.3K	110K	232K	487K	Megs
13.7	29.4	63.4	137	294	619	1300	2740	5760	12.1K	25.5K	53.6K	113K	237K	499K	1.00
14.0	30.1	64.9	140	301	634	1330	2800	5900	12.4K	26.1K	54.9K	115K	243K	511K	1.02
14.3	30.9	66.5	143	309	649	1370	2870	6040	12.7K	26.7K	56.2K	118K	249K	523K	1.05
14.7	31.6	68.1	147	316	665	1400	2940	6190	13K	27.4K	57.6K	121K	255K	536K	1.10
15.0	32.4	69.8	150	324	681	1430	3010	6340	13.3K	28K	59K	124K	261K	549K	1.21
15.4	33.2	71.5	154	332	698	1470	3090	6490	13.7K	28.7K	60.4K	127K	267K	562K	1.24
15.8	34.0	73.2	158	340	715	1500	3160	6650	14K	29.4K	61.9K	130K	274K	576K	1.50
16.2	34.8	75.0	162	348	732	1540	3240	6810	14.3K	30.1K	63.4K	133K	280K	590K	.....
16.5	35.7	76.8	165	357	750	1580	3320	6980	14.7K	30.9K	64.9K	137K	287K	604K	.....
16.9	36.5	78.7	169	365	768	1620	3400	7150	15K	31.6K	66.5K	140K	294K	619K	.....
17.4	37.4	80.6	174	374	787	1650	3480	7320	15.4K	32.4K	68.1K	143K	301K	634K	.....
17.8	38.3	82.5	178	383	806	1690	3570	7500	15.8K	33.2K	69.8K	147K	309K	649K	.....
18.2	39.2	84.5	182	392	825	1740	3650	7680	16.2K	34K	71.5K	150K	316K	665K	.....
18.7	40.2	86.6	187	402	845	1780	3740	7870	16.5K	34.8K	73.2K	154K	324K	681K	.....
19.1	41.2	88.7	191	412	866	1820	3830	8060	16.9K	35.7K	75K	158K	332K	698K	.....
19.6	42.2	90.9	196	422	887	1870	3920	8250	17.4K	36.5K	76.8K	162K	340K	715K	.....
20.0	43.2	93.1	200	432	909	1910	4020	8450	17.8K	37.4K	78.7K	165K	348K	732K	.....
20.5	44.2	95.3	205	442	931	1960	4120	8660	18.2K	38.3K	80.6K	169K	357K	750K	.....
21.0	45.3	97.6	210	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TYPE DCC EPOXY-COATED DEPOSITED-CARBON RESISTORS

Precision 1% tolerance types. **Style RN20X.** Epoxy-coated, deposited-carbon resistors incorporate pure cystalline carbon particles deposited in film form and bonded on a specially designed ceramic rod to produce film-type elements of exacting resistance standards. Extra-heavy epoxy "M" coat withstands 30 cycles of MIL moisture test and also provides good protection against mechanical damage from soldering and wiring. Silver-to-silver contact is provided between element and terminals; leads are alloy coated for sound soldered connections. Type, resistance, tolerance, and code date of manufacture are stamped on each resistor. Rated at ½-watt at 70° C ambient; derate to zero at 150° C. **Specify values wanted when ordering—see Table "B".** Shpg. wt., per 100, 10 oz.

Stock No.	Mfr's Type	Watts	Max. Cont. Volts	Values—See Table "B" Below	EACH				
					1-24	25-99	100-249	250-999	1000-9999
45 D 5493 C	DCC	½	350	10 ohms to 2.49 megs	1.05	.48	.23	.18	.13

TABLE "B" MIL-OHM VALUES AVAILABLE FROM STOCK—SPECIFY RESISTANCE WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs
10.0	42.2	75.0	215	499	1330	2370	4990	10K	19.6K	28.7K	51.1K	100K	267K	1.00
12.1	46.4	90.9	221	604	1400	2550	5110	11K	20K	30.1K	56.2K	121K	301K	1.21
15.0	47.5	100	249	681	1470	2740	5620	12.1K	21.5K	33.2K	60.4K	130K	332K	1.50
20.0	49.9	110	301	750	1500	3010	6040	12.4K	22.1K	38.3K	61.9K	150K	464K	2.00
24.9	51.1	121	332	806	1620	3320	6810	13K	22.6K	39.2K	68.1K	196K	499K	2.15
28.7	56.2	124	392	825	1780	4020	7500	14K	23.7K	40.2K	71.5K	200K	750K	2.21
30.1	61.9	150	402	909	1820	4220	8250	15K	24.9K	46.4K	80.6K	215K	.....	2.49
33.2	68.1	182	432	1000	2000	4640	8660	16.2K	27.4K	47.5K	82.5K	221K	.....	.....
34.8	69.8	200	475	1210	2210	4750	9090	16.5K	28K	49.9K	90.9K	255K	.....	.....

Power and Wirewound Resistors

TYPE AS 1% AND 5% TOLERANCE POWER RESISTORS

Miniature wirewound resistors incorporating "Thermocoat"—a solvent-resistant silicone coating formulation with high dielectric strength and heat capabilities. Carry full power even at 215°C ambients, expanding circuit design limits significantly. Welded connections. Meet MIL V (MIL-R-26E). Temperature coefficient less than 20 ppm/°C. Maximum working voltages are 150 volts for Type AS-2, and 400 volts for Type AS-5A. Av. wt. 1 oz.

1%—TYPE AS-2 2-WATT (½x¼")

Stock No.	Val. Avail. in Ohms See Table at Right	EACH 1-9	10-24	25-49	50-99	100-249
45 D 5867 C	1.0 to 1000	.98	.73	.57	.54	.50
45 D 5868 C	1100 to 4700	1.07	.81	.64	.60	.55
45 D 5869 C	5100 to 10K	1.10	.84	.66	.62	.57
45 D 5870	15K	1.12	.86	.68	.64	.60
45 D 5866 C	16K to 20K	1.19	.90	.72	.67	.63

1%—TYPE AS-5A 5-WATT (15/16x1 1/32")

45 D 5873 C	1.0 to 1000	1.00	.75	.59	.56	.52
45 D 5874 C	1100 to 4700	1.09	.83	.66	.62	.57
45 D 5875 C	5100 to 10K	1.12	.86	.68	.64	.59
45 D 5876	15K	1.14	.88	.70	.66	.62
45 D 5877 C	16K to 20K	1.21	.92	.74	.69	.65
45 D 5878 C	22K to 39K	1.28	.98	.78	.74	.68
45 D 5879	51K	1.39	1.05	.85	.79	.74

5%—TYPE AS-2 2-WATT (½x¼")

Stock No.	Val. Avail. in Ohms See Table Below	EACH 1-9	10-24	25-49	50-99	100-249
45 D 6160 C	1.0 to 1000	.44	.40	.37	.31	.24
45 D 6161 C	1100 to 4700	.47	.43	.36	.34	.27
45 D 6162 C	5100 to 10K	.48	.44	.41	.35	.28
45 D 6163	15K	.52	.45	.42	.38	.31
45 D 6164 C	16K to 20K	.55	.47	.43	.41	.34

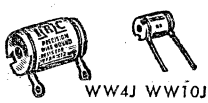
5%—TYPE AS-5A 5-WATT (15/16x1 1/32")

Stock No.	Val. Avail. in Ohms See Table Below	EACH 1-9	10-24	25-49	50-99	100-249
45 D 6165 C	1.0 to 1000	.48	.41	.37	.33	.28
45 D 6166 C	1100 to 4700	.50	.43	.39	.35	.29
45 D 6167 C	5100 to 10K	.51	.44	.40	.36	.30
45 D 6168	15K	.52	.45	.42	.38	.31
45 D 6169 C	16K to 20K	.54	.46	.43	.39	.33

OHM VALUES AVAILABLE FROM STOCK—SPECIFY VALUES

1.0	4.7	12	33	120	300	820	2400	5600	20K
1.2	5.1	13	39	130	330	910	2700	6200	22K
1.5	5.6	15	51	150	360	1000	3000	6800	27K
2.0	6.2	16	56	160	430	1100	3300	7500	30K
2.2	6.8	18	68	180	510	1500	3600	8200	36K
2.4	7.5	20	75	200	560	1600	3900	10K	39K
2.7	8.2	22	82	220	620	1800	4300	15K	51K
3.0	9.1	24	91	240	680	2000	4700	16K	.....
3.3	10	30	100	270	750	2200	5100	18K	.....

WIREWOUND 1% PRECISION RESISTORS



WW4J WW10J

Precision resistors surpassing MIL-R-93D specifications. Power ratings at 85° C. WW4J ½-Watt. Wound in four sections, 700 V max. breakdown voltage. Rated 1.20 watts at 40° C ambient, 0.50 watt at 85°C. Lug terminals. Size, 9/16x1". WW10J 0.15-Watt. Wound in 1 section, 200-V max. breakdown voltage. Rated 1.00-watt at 40° C ambient, 0.15 watt at 85° C. 2" leads. 9/32x1 3/32". Av. shpg. wt., 2 oz.

MIL-OHM VALUES AVAILABLE FROM STOCK—SPECIFY RESISTANCE WANTED

0.1	1	25	250	1000	3000	10K	25K	50K	200K	500K
0.2	5	50	300	1500	4000	20K	30K	100K	250K	.....
0.5	10	100	500	2000	5000	22.5K	40K	125K	300K	.....

TYPE WW4J

Stock No.	Stock Values—See Table Above	EACH
45 D 6500 C	0.1 to 100 ohms	1.32
45 D 6501 C	250 to 1000 ohms	1.41
45 D 6502 C	1500 to 5000 ohms	1.53
45 D 6503	10K only	1.62
45 D 6504 C	20K to 50K	2.10
45 D 6505	100 K only	2.37
45 D 6506 C	125K and 200K	2.61
45 D 6507 C	250K and 300K	2.88

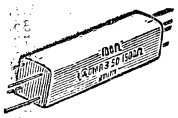
TYPE WW4J

Stock No.	Stock Values—See Table Above	EACH
45 D 6509	500K only	3.87

TYPE WW10J

45 D 6510 C	10 to 50 ohms	1.35
45 D 6511 C	100 to 1000 ohms	1.29
45 D 6512 C	1500 to 5000 ohms	1.32
45 D 6513	10K only	1.38
45 D 6514 C	20K to 50K	1.62
45 D 6515	100K only	1.80

MULTI-RANGE 10-WATT WIREWOUND RESISTORS

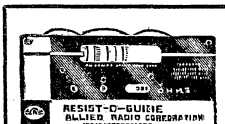


Type MR. Versatile resistors combining 4 separate 10-watt elements in a single, compact steatite housing. With instructions for connecting element leads to provide up to 47 different resistance values within the ranges listed below. Size, 1 7/8x1½". Shpg. wt., 3 oz. 2 resistors per pkg.

Stock No.	Mfr's Type	Resistance Range	Resistor Elements (Ohms)	PER PKG.
45 D 5580	MR1	47 values; 0.5-15 ohms	1, 2, 4, 8	1.20
45 D 5581	MR2	47 values; 5.0-150 ohms	10, 20, 40, 80	1.20
45 D 5582	MR3	47 values; 50-1500 ohms	100, 200, 400, 800	1.20
45 D 5583	MR4	47 values; 500 ohms-15K	1000, 2000, 4000, 8000	1.20
45 D 5584	MR5	12 values; 3000 ohms-50K	10K, 10K, 15K, 15K	1.80

Type 55 Power Resistor Assortment. Includes 2 of each Type MR resistor listed in the table above. Provides complete 10-watt resistance coverage—resistance values range all the way from 0.5 ohms to 50K. Supplied in convenient plastic box. Size, 1¼x5¼x 3½". Shpg. wt., 1 lb.

45 D 5585 ..... 6.60



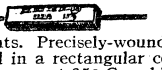
ALLIED COLOR-CODE GUIDE

Includes color code, tolerance code, listing of EIA-JAN 5 and 10% std. stock values. 2x4¾". FREE with 20 or more resistors. 2 oz.

45 D 6770 ..... .25

10% 5 AND 10-WATT POWER RESISTORS

TYPES PW-5 AND PW-10



Popular axial-lead power resistors. Compact shape fits easily among other components. Precisely-wound element has glass fiber core, and is sealed in a rectangular ceramic case. Tolerance is ±10%. Power ratings are at 25° C ambient. 1½" leads.

Type PW-5 5 Watt. Size, 7/8x3/8x1 1/32". *Available in values of 1 to 6000 ohms only.* Specify values from Table below. *Inquire for prices on quantities of 1000 or more.* Shpg. wt., 2 oz.

45 D 5175 C. 1-99.....Each .25
100-499.....Each .17 500-999.....Each .13

PW-5 VALUES AVAILABLE—SPECIFY VALUES WANTED (OHMS)

1	7.5	30	125	350	750	1500	3000
2	10	50	150	400	800	1750	4000
3	15	75	200	500	1000	2000	4500
4	20	100	250	600	1200	2250	5000
5	25	120	300	700	1250	2500	6000

Type PW-10 10 Watt. Size, 1 7/8x3/8x1 1/32". Specify values when ordering—see Table of values available below. *Inquire for prices on quantities of 1000 or more.* Shpg. wt., 2 oz.

45 D 5190 C. 1-99.....Each .36
100-499.....Each .25 500-999.....Each .19

PW-10 VALUES AVAILABLE—SPECIFY VALUES WANTED (OHMS)

1	7.5	30	150	600	2000	10K
2	10	40	200	750	3000	12K
3	15	50	250	1000	3500	20K
4	20	75	300	1200	5000	25K
5	25	100	500	1500	6000	.....

"Little-Devil" Resistors

OHMITE

Insulated, molded composition resistors. Choose from 10% or 5% tolerances. Color coded for easy identification; tinned leads. Meet MIL-R-11F specs. *MIL-R-11 min. resist. 10 ohms. †MIL-R-11 min. resist. 2.7 ohms. Use at full wattage ratings to 158° F. Breakdown ratings: ⅛ W, 150 V; ½ W, 350 V; 1 W, 500 V; 2 W, 750 V. Shpg. wt., per 100, 10 oz.

10% TOLERANCE RESISTORS—SPECIFY VALUES FROM TABLE "A" BELOW

Stock No.	Watts	Mil Style	Values—See Table "A" Below	EACH						
				May Be Asstd			Asstd—Minimum 100 Per Value			
				1-4	5-49	50-Up	100-249	250-499	500-999	1000-Up
45 D 6037 C	⅛	RC05GF*	2.7 ohms to 8.2 ohms	.27	.22	.18	.16	.14	.13	.12
45 D 6038 C	⅛	RC05GF*	10 ohms to 22 meg	.24	.20	.16	.14	.13	.12	.11
45 D 6451 C	¼	RC07GF	2.7 ohms to 8.2 ohms	.14	.12	.08	.06	.06	.05	.04
45 D 6450 C	¼	RC07GF	10 ohms to 22 meg	.13	.11	.07	.05	.05	.04	.04
45 D 6039 C	½	RC20GF†	1 ohm to 2.2 ohms	.13	.11	.07	.05	.05	.04	.04
45 D 6040 C	½	RC20GF†	2.7 ohms to 22 meg	.12	.10	.08	.07	.06	.05	.04
45 D 6060 C	1	RC32GF	2.7 ohms to 22 meg	.18	.15	.09	.08	.07	.06	.05
45 D 6080 C	2	RC42GF	10 ohms to 22 meg	.24	.20	.15	.11	.10	.09	.08

TABLE "A" 10% TOLERANCE RESISTORS—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg	Meg	Meg
1	2.7	6.8	18	47	120	330	820	2200	5600	15K	39K	100K	270K	680K	1.8	4.7	12
1.2	3.3	8.2	22	56	150	390	1000	2700	6800	18K	47K	120K	330K	820K	2.2	5.6	15
1.5	3.9	10	27	68	180	470	1200	3300	8200	22K	56K	150K	390K	1.0 meg	2.7	6.8	18
1.8	4.7	12	33	82	220	560	1500	3900	10K	27K	68K	180K	470K	1.2 meg	3.3	8.2	22
2.2	5.6	15	39	100	270	680	1800	4700	12K	33K	82K	220K	560K	1.5 meg	3.9	10	.....

5% TOLERANCE RESISTORS—SPECIFY VALUES FROM TABLE "B" BELOW

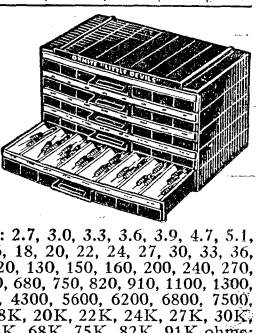
45 D 6042 C	⅛	RC05GF*	2.7 ohms to 9.1 ohms	.37	.31	.25	.22	.19	.18	.17
45 D 6043 C	⅛	RC05GF*	10 ohms to 22 meg	.34	.28	.23	.20	.18	.16	.15
45 D 6456 C	¼	RC07GF	2.7 ohms to 9.1 ohms	.29	.24	.16	.11	.10	.08	.07
45 D 6455 C	¼	RC07GF	10 ohms to 22 meg	.26	.22	.14	.10	.09	.08	.07
45 D 6044 C	½	RC20GF†	1 ohm to 2.4 ohms	.26	.22	.14	.10	.09	.08	.07
45 D 6045 C	½	RC20GF†	2.7 ohms to 22 meg	.24	.20	.12	.09	.08	.07	.06
45 D 6065 C	1	RC32GF	2.7 ohms to 22 meg	.36	.30	.18	.13	.12	.11	.09
45 D 6085 C	2	RC42GF	10 ohms to 22 meg	.48	.40	.24	.19	.18	.17	.16

TABLE "B" 5% TOLERANCE RESISTORS—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs	Megs	Megs
1.0	2.4	5.6	13	33	75	180	430	1000	2400	5600	13K	33K	75K	180K	430K	1.0	2.4	5.6	13
1.1	2.7	6.2	15	36	82	200	470	1100	2700	6200	15K	36K	82K	200K	470K	1.1	2.7	6.2	15
1.2	3.0	6.8	16	39	91	220	510	1200	3000	6800	16K	39K	91K	220K	510K	1.2	3.0	6.8	16
1.3	3.3	7.5	18	43	100	240	560	1300	3300	7500	18K	43K	100K	240K	560K	1.3	3.3	7.5	18
1.5	3.6	8.2	20	47	110	270	620	1500	3600	8200	20K	47K	110K	270K	620K	1.5	3.6	8.2	20
1.6	3.9	9.1	22	51	120	300	680	1600	3900	9100	22K	51K	120K	300K	680K	1.6	3.9	9.1	22
1.8	4.3	10	24	56	130	330	750	1800	4300	10K	24K	56K	130K	330K	750K	1.8	4.3	10	.....
2.0	4.7	11	27	62	150	360	820	2000	4700	11K	27K	62K	150K	360K	820K	2.0	4.7	11	.....
2.2	5.1	12	30	68	160	390	910	2200	5100	12K	30K	68K	160K	390K	910K	2.2	5.1	12	.....

RESISTOR ASSORTMENTS

Wide selection of industrial and service assortments. Provide comprehensive resistor stocks especially suited for use in engineering departments, laboratories, model or service shops. In handy plastic cabinets. 4¾x9x5¼". Have 5 drawers and 40 compartments. **CAB-2, 3, 4, 10.** Service assortment, 10% tolerance; 1 cabinet. **CAB-25, 26, 27.** Industrial assortment. 10% tolerance; 2 cabinets. **CAB-45, 46, 47, 48.** Industrial assortment, 5% tolerance; 4 cabinets.



Resistors Housed in Convenient Plastic Storage Cabinets

CAB-2. 1 watt. 125 total. 1 each: 10, 15, 27, 47, 100, 150, 270, 330, 470, 680, 1500, 2200, 6800, 33K, 68K, 82K ohms; .22, .33, .68, 1.5, 2.2, 2.7, 3.9, 4.7, 6.8, 10 meg. 3 each: 1000, 2700, 15K ohms. 5 each: 4700, 22K, 39K ohms; .15 meg. 10 each: 10K, 27K, 47K ohms; .10, .27, .47, 1.0 meg.
45 D 6759. Shpg. wt., 5 lbs. **22.50**

CAB-3. 2 watts. 125 total. Same quantities and values as above.
45 D 6762. Shpg. wt., 5 lbs. **30.00**

CAB-4. ¼-watt. 150 total. 1 each: 150, 330, 680, ohms; .68, 1.5, 2.2, 2.7, 3.9, 4.7, 6.8, 10.0 meg. 2 each: 82K, ohms. 3 each: 270, 470, 33K, 39K, 68K ohms; .15, .22, .27, .33 meg. 5 each: 47, 100, 1500, 2700, 6800, 15K, 22K, 27K, 47K ohms; .47 meg. 10 each: 1000, 2200, 4700, 10K ohms; .10, 1.0 meg.
45 D 6760. Shpg. wt., 5 lbs. **19.50**

CAB-10. ½ watt. 150 total. As CAB-4, except: 1 each: 10, 15, 27, 47, 1500, 2200, 6800, 82K ohms. 3 ea.: 2700, 15K ohms; 2.7 meg. 5 ea.: 1000, 39K ohms, .15 meg. 10 ea.: 27,47K ohms, .27, .47 meg.
45 D 6761. Shpg. wt., 5 lbs. **18.00**

CAB-25. ¼ watt. 1000 total. 5 each: 2.7, 3.3, 3.9, 4.7, 5.6, 6.8, 12, 15, 18, 22, 27, 33, 39, 56, 68, 82, 120, 180, 390, 560, 820, 1000, 1200, 1800, 5600, 39K, 82K ohms; .12, .15, .18, .27, .39, .56, .68, .82, 1.2, 1.5, 1.8, 2.2, 2.7, 3.3, 3.9, 4.7, 5.6, 6.8, 10, 15, 22 meg. 20 each: 10, 47, 150, 220, 330, 470, 680, 1500, 2700, 3900, 8200, 12K, 18K, 27K, 33K, 56K, 68K ohms; .22, .33, .47 meg. 30 each: 100, 270, 2200, 3300, 4700, 6800, 10K, 15K, 22K, 47K ohms; .10, 1 meg.
45 D 6763. Shpg. wt., 8 lbs. **70.00**

CAB-26. ½-watt. 1000 total. As CAB-25, except: 5 each: 3900, 8200, 15K, 18K ohms. 15 each: 150, 270, 330, 560, 680, 1800, 2700, 6800, 12K, 39K, 56K, 82K ohms; .15, .33, 2.2, 3.3 meg. 20 each: 3300, 5600 ohms; .27 meg. 30 each: 470, 1000 ohms; .47 meg.
45 D 6764. Shpg. wt., 8 lbs. **60.00**

CAB-27. 1-watt. 600 total. As CAB-25, except: 5 each: 8200, 12K, 18K, 56K, 68K ohms; .33 meg. 10 each: 2.7, 4.7, 6.8, 10, 15, 22, 27, 33, 47, 100, 150, 220, 270, 330, 390, 470, 560, 680, 1000, 1200, 1500, 2200, 2700, 3300, 3900, 4700, 6800, 10K, 15K, 22K, 27K, 33K, 39K, 47K ohms; .10, .15, .22, .27, .47, 1 meg.
45 D 6765. Shpg. wt., 8 lbs. **54.00**

CAB-45. ⅛-watt. 1000 total. 5 each: 2.7, 3.0, 3.3, 3.6, 3.9, 4.7, 5.1, 5.6, 6.8, 7.5, 8.2, 9.1, 11, 12, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 56, 62, 68, 75, 82, 91, 110, 120, 130, 150, 160, 200, 240, 270, 300, 330, 360, 390, 430, 510, 560, 620, 680, 750, 820, 910, 1100, 1300, 1600, 1800, 2400, 3000, 3300, 3600, 4300, 5600, 6200, 6800, 7500, 8200, 9100, 11K, 13K, 15K, 16K, 18K, 20K, 22K, 24K, 27K, 30K, 33K, 36K, 39K, 43K, 51K, 56K, 62K, 68K, 75K, 82K, 91K ohms; .11, .12, .13, .15, .16, .18, .20, .22, .24, .27, .30, .33, .36, .39, .43, .47, .51, .56, .62, .68, .75, .82, .91, 1.0, 1.1, 1.2, 1.3, 1.5, 1.6, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3, 3.6, 3.9, 4.3, 4.7, 5.1, 5.6, 6.2, 6.8, 7.5, 8.2, 10.0, 12, 15, 18, 20, 22 meg. 10 each: 47, 51, 220, 470, 1200, 2700, 3900, 5100, 12K, 47K ohms. 20 each: 10, 100, 180, 1000, 1500, 2000, 2200, 4700, 10K ohms; .10 meg.
45 D 6766 U. Shpg. wt., 17 lbs. **225.00**

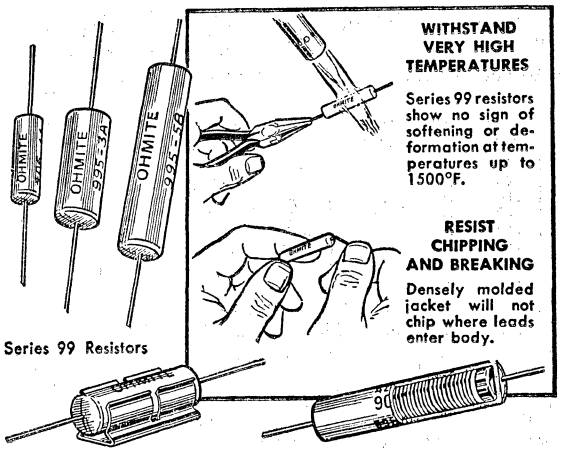
CAB-46. ¼ watt. 1500 total. As CAB-45, except: 5 each: 180 ohms. 10 each: 150, 270, 390, 510, 560, 680, 820, 1500, 2400, 3000, 6200, 18K, 27K, 30K, 39K, 51K, 68K, 82K ohms; .15, .20, .47, 1.5 meg. 25 each: 10, 220, 330, 470, 1200, 1800, 2000, 2700, 3300, 3900, 5100, 5600, 8200, 12K, 20K, 22K, 33K, 47K ohms; 1.0 meg. 30 each: 100, 1000, 2200, 4700, 6800, 10K, 15K ohms; .10 meg.
45 D 6767 U. Shpg. wt., 17 lbs. **210.00**

CAB-47. ½ watt. 1500 total. As CAB-45, except: 5 each: 47, 180, ohms. 15 each: 27, 51, 150, 200, 220, 270, 330, 390, 510, 560, 620, 1200, 1800, 2700, 3000, 3900, 5100, 5600, 8200, 18K, 20K, 24K, 27K, 39K, 51K, 56K, 68K ohms; .15, .22 meg. 20 each: 75, 470, 6800, 12K, 33K, 47K ohms; .47, 1.0 meg. 30 each: 10, 100, 1000, 2000, 2200, 3300, 4700, 10K, 15K 22K ohms; .10 meg.
45 D 6768 U. Shpg. wt., 17 lbs. **180.00**

CAB-48. 1-watt. 900 total. As CAB-45, except: 5 each: 47, 180, 1500, 2700, 3900, 5100, 12K ohms. 10 each: 10, 100, 150, 200, 270, 330, 510, 680, 1000, 2000, 2200, 4700, 10K, 22K, 47K ohms; .10 meg.
45 D 6769 U. Shpg. wt., 17 lbs. **160.00**

OHMITE Wirewound Resistors

SERIES 99 VITREOUS-ENAMELED MOLDED RESISTORS



UNIFORM SIZE
Consistent size and shape.. Ideal for automated assembly.

HIGH-VOLTAGE INSULATION
1000 VAC Breakdown for molded vitreous enamel insulation.

These wirewound resistors feature molded vitreous enamel coating for excellent insulation characteristics and heat dissipation. Uniform size—mount in metal clips for heat-sink effect allowing up to 100% wattage increase. Uniform insulation thickness for 1000 VAC breakdown rating. Identifying markings fired right onto coating. Consistent size and shape—ideal for automated assembly. Withstand high humidity, immersion in salt solution. 1½" tinned leads. Tolerance, ±5%. Meet MIL-R-26 for RW57, RW58, RW59, RW67, RW68, RW69. Av. shpg. wt. per 25, 4 oz.

STYLE 995-1A—1½-WATT 27/64x1⅛"

Stock No.	Stock Values (Ohms) See Table "A" Below	EACH 1-9	10-24	25-99	100-249
45 D 6088 C	1 to 1000	.62	.53	.43	.37
45 D 6089 C	1100 to 3000	.66	.56	.46	.40

STYLE 995-3A—3¼-WATT 35/64x13/64"

45 D 6090 C	1 to 1000	.59	.50	.41	.35
45 D 6091 C	1100 to 5000	.62	.53	.43	.37
45 D 6092 C	5100 to 10K	.66	.56	.46	.40

STYLE 995-5B—5-WATT 15/16x13/64"

45 D 6115 C	1 to 1000	.62	.53	.43	.37
45 D 6116 C	1100 to 5000	.66	.56	.46	.40
45 D 6117 C	5100 to 10K	.70	.60	.49	.42
45 D 6118 C	11K to 20K	.78	.66	.55	.47
45 D 6119 C	22K to 25K	.82	.70	.57	.49

STYLE 995-10A—11-WATT 1 25/32x5/16"

45 D 6122 C	1 to 1000	.68	.58	.48	.41
45 D 6123 C	1100 to 5000	.73	.62	.51	.44
45 D 6124 C	5100 to 10K	.84	.71	.59	.50
45 D 6125 C	11K to 20K	.95	.81	.67	.57
45 D 6126 C	22K to 40K	1.00	.85	.70	.60
45 D 6127 C	43K to 51K	1.12	.95	.78	.67

TABLE "A" STOCK VALUES—FOR STYLE 995 ABOVE

Specify Values Wanted in Ohms

1.0	3.3	8.2	25	56	180	430	820	2200	4700	9100	24K	50K
1.1	3.6	9.1	27	62	200	450	900	2400	5000	10K	25K	51K
1.2	3.9	10	30	68	220	470	910	2500	5100	11K	27K	.....
1.3	4.0	11	33	75	240	500	1000	2700	5600	12K	30K	.....
1.5	4.3	12	35	82	250	510	1100	3000	6000	13K	33K	.....
1.6	4.7	13	36	91	270	560	1200	3300	6200	14K	35K	.....
1.8	5.0	15	39	100	300	600	1300	3500	6800	15K	36K	.....
2.0	5.1	16	40	110	330	620	1400	3600	7000	16K	39K	.....
2.2	5.6	18	43	120	350	680	1500	3900	7500	17K	40K	.....
2.4	6.2	20	47	130	360	700	1600	4000	8000	18K	43K	.....
2.7	6.8	22	50	150	390	750	1800	4300	8200	20K	45K	.....
3.0	7.5	24	51	160	400	800	2000	4500	9000	22K	47K	.....

MOUNTING CLIPS FOR STYLE 99 RESISTORS

Protect from mechanical shock. Have heat-sink effect for up to 100% increase in power rating. Av. shpg. wt. per 100, 3 oz.

Stock No.	Mfr's Type	For Resistor	EACH 1-99	100-499	500-999
45 D 6096	5900	995-1A (1½-Watt)	.20	.15	.12
45 D 6097	5904	995-3A (3¼-Watt)	.20	.15	.12
45 D 6098	5906	995-5B (5-Watt)	.20	.15	.12
45 D 6099	5908	995-10A (11-Watt)	.20	.15	.12

TYPE 200 "BROWN DEVIL" WIREWOUND RESISTORS

Wide selection of high-quality, compact, wirewound resistors. Specially designed for applications such as voltage dropping, bias supplies, bleeders. Have thick vitreous enamel coating for excellent heat conduction and insulation. Also fully protected against the harmful effects of humidity and moisture, preventing costly and needless failure. Tolerance, ±5%. Overall sizes (excluding leads); 3-watt, 7/16x13/64"; 5¼-watt, 5/8x1¼"; 8-watt, 1x5/16"; 12-watt, 1¾x5/16"; 20-watt 2x7/16". 1½" leads. Specify values from Tables "B" or "C" below. Av. shpg. wt., per 25, 8 oz.

STYLE 200-3—3-WATT (Values to 10K) See Table "B" Below

Stock No.	Stock Values (Ohms) See Table "B" Below	EACH 1-9	10-24	25-99	100-249
45 D 5735 C	1 to 1000	.51	.43	.36	.31
45 D 5736 C	1100 to 4700	.55	.47	.39	.33
45 D 5737 C	5100 to 10K	.58	.49	.41	.35

STYLE 200-5¼—5¼-WATT (Values to 20K) See Table "B" Below

45 D 5738 C	1 to 1000	.55	.47	.39	.33
45 D 5739 C	1100 to 4700	.58	.49	.41	.35
45 D 5740 C	5100 to 10K	.61	.52	.43	.37
45 D 5741 C	11K to 20K	.68	.58	.48	.41

TABLE "B" STOCK VALUES—FOR 3 AND 5¼-WATT STYLES ABOVE—Specify Values Wanted

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1.0	3.6	12	43	150	510	1800	6200
1.1	3.9	13	47	160	560	2000	6800
1.2	4.3	15	51	180	620	2200	7500
1.3	4.7	16	56	200	680	2400	8200
1.5	5.1	18	62	220	750	2700	9100
1.6	5.6	20	68	240	820	3000	10K
1.8	6.2	22	75	270	910	3300	11K
2.0	6.8	24	82	300	1000	3600	12K
2.2	7.5	27	91	330	1100	3900	13K
2.4	8.2	30	100	360	1200	4300	15K
2.7	9.1	33	110	390	1300	4700	16K
3.0	10	36	120	430	1500	5100	18K
3.3	11	39	130	470	1600	5600	20K

STYLE 200-8—8-WATT (Values to 10K) See Table "C" Below

Stock No.	Stock Values (Ohms) See Table "C" Below	EACH 1-9	10-24	25-99	100-249
45 D 5730 C	1 to 1000	.55	.47	.39	.33
45 D 5731 C	1100 to 5000	.58	.49	.41	.35
45 D 5732 C	6000 to 10K	.61	.52	.43	.37

STYLE 200-12—12-WATT (Values to 50K) See Table "C" Below

Stock No.	Stock Values (Ohms) See Table "C" Below	EACH 1-9	10-24	25-99	100-249
45 D 5700 C	1 to 1000	.60	.51	.42	.36
45 D 5701 C	1100 and 5000	.64	.54	.45	.38
45 D 5702 C	6000 and 10K	.74	.63	.52	.44
45 D 5703 C	12.5K to 20K	.83	.71	.58	.50
45 D 5704 C	25K and 30K	.87	.74	.61	.52
45 D 5705	50K	.98	.83	.69	.59

STYLE 200-20—20-WATT (In All Values Except * in Table "C")

Stock No.	Stock Values (Ohms) See Table "C" Below	EACH 1-9	10-24	25-99	100-249
45 D 5720 C	1 to 1000	.71	.60	.50	.43
45 D 5721 C	1200 to 5000	.74	.63	.52	.44
45 D 5722 C	6000 to 10K	.87	.74	.61	.52
45 D 5723 C	12.5K to 20K	.89	.76	.62	.53
45 D 5724 C	25K and 30K	1.04	.88	.73	.62
45 D 5725 C	50K and 60K	1.21	1.03	.85	.73
45 D 5727	100K	1.65	1.40	1.16	.99

TABLE "C" STOCK VALUES—FOR 8, 12 AND 20-WATT STYLES ABOVE—Specify Values Wanted

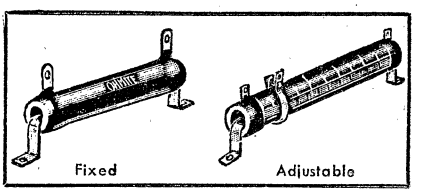
Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	15*	125*	500	1250	4500	15K
1.5*	20*	150	600*	1500	5000	20K
2	25	200	700	1750	6000	25K
3	30*	225*	750	2000	7000	30K
4	35*	250	800	2250	7500	50K
5	40*	300	900	2500	8000	60K
7.5*	50	350	1000	3000	9000	100K
10	75	400	1100*	3500	10K	.....
12*	100	450*	1200	4000	12.5K	.....

Be Sure to Specify Stock No., Resistance and Wattage When Ordering

Wirewound Power Resistors — OHMITE

FIXED AND ADJUSTABLE POWER RESISTORS

Fixed Types. For use as voltage droppers, bias resistors, and bleeders in applications where resistance need not be varied. Resistance tolerance, ±5% for values 1 ohm or higher; ±10% for values below 1 ohm. **Adjustable Types.** For voltage dividing networks, power supplies—anywhere adjustable resistance is required. Feature fine alloy wire, wound on quality ceramic cores and insulated by vitreous enamel coatings. Tolerance ±10%. With slider and mounting brackets. Wattage rating applies only when entire resistance is in circuit; with center lug at intermediate point, rating is reduced in same proportion. Wattage ratings are for free air mounting. **Specify value when ordering.** Av. shpg. wt., 5-50 watts, 4 oz.; 100 watts and up, 1 lb.



FIXED POWER RESISTORS

STYLE 270-12—12 WATTS—1¾-5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5770 C	.51, 1.0, 1.5, 10, 15, 18, 33, 39, 47, 56, 68, 82, 100, 120, 150, 180, 220, 470, 560, 820, 1000	.60	.51	.42	.36
45 D 5771 C	1200, 1500, 2200 3300, 3900, 4700	.64	.54	.45	.38
45 D 5772	10K	.74	.63	.52	.44
45 D 5773 C	12K, 15K	.83	.71	.58	.50
45 D 5774	22K	.87	.74	.61	.52
45 D 5775	51K	.98	.83	.69	.59

STYLE 270-25—25 WATTS—2x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5776 C	1, 2, 3, 4, 5, 10, 15, 25, 50, 75, 100, 150, 200, 250, 500, 750, 800, 1000	.76	.65	.53	.46
45 D 5777 C	1500, 2000, 2500, 3000, 4000, 5000	.79	.67	.55	.47
45 D 5835 C	6000, 7500, 10K	.89	.76	.62	.53
45 D 5778 C	15K, 20K	.95	.81	.67	.57
45 D 5779 C	25K, 30K	1.09	.93	.76	.65
45 D 5780 C	50K, 60K	1.27	1.08	.89	.76
45 D 5781	70K	1.49	1.27	1.04	.89
45 D 5782	100K	1.72	1.46	1.20	1.03

STYLE 270-50—50 WATTS—4x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5769	1	1.63	1.39	1.14	.98
45 D 5783 C	2, 3, 4, 5, 10, 25, 50, 75, 100, 150, 200, 250, 500, 750, 800, 1000	1.17	.99	.82	.70
45 D 5784 C	1500, 2000, 2500, 5000	1.20	1.02	.84	.72
45 D 5785	10K	1.29	1.10	.90	.77
45 D 5836	20K	1.42	1.21	.99	.85
45 D 5786	25K	1.62	1.38	1.13	.97
45 D 5787	50K	1.81	1.54	1.27	1.09
45 D 5789	100K	2.24	1.90	1.57	1.34

STYLE 270-100—100 WATTS—6½x¾"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5768 C	1, 2, 3	2.27	1.93	1.59	1.36
45 D 5795 C	4, 5, 10, 25, 50, 75, 100, 125, 150, 250, 500, 1000	1.62	1.38	1.13	.97
45 D 5796 C	1500, 2000, 2500	1.68	1.43	1.18	1.01
45 D 5797 C	7500, 10K	1.82	1.55	1.27	1.09
45 D 5798	20K	1.96	1.67	1.37	1.18
45 D 5801	50K	2.32	1.97	1.62	1.39
45 D 5803	100K	2.89	2.46	2.02	1.73

STYLE 270-175—175 WATTS—8½x1⅛"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5837 C	3, 5	3.35	2.85	2.35	2.01
45 D 5838 C	10, 25, 50, 75, 100, 125, 150	2.39	2.03	1.67	1.43
45 D 5841	10K	2.66	2.26	1.86	1.60
45 D 5845	75K	3.23	2.75	2.26	1.94
45 D 5846	100K	3.42	2.91	2.39	2.05

STYLE 270-225—225 WATTS—10½x1⅛"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5847 C	1, 2, 3, 4, 5	3.61	3.07	2.53	2.17
45 D 5848 C	10, 25, 50, 75, 100, 150, 250, 500, 1000	2.58	2.19	1.81	1.55
45 D 5849 C	2000, 2500, 3000, 5000	2.66	2.26	1.86	1.60
45 D 5850	10K	2.85	2.42	2.00	1.71
45 D 5851 C	15K, 20K	3.03	2.58	2.12	1.82
45 D 5853	50K	3.23	2.75	2.26	1.94
45 D 5855	100K	3.63	3.09	2.54	2.18

DIVIDOHM ADJUSTABLE RESISTORS

STYLE 210-12—12 WATTS—1¾x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5804 C	1, 2, 3, 5, 7.5, 10, 15, 20, 25, 50, 75, 100, 150, 200, 250, 300, 400, 500, 750, 1000,	1.20	1.02	.84	.72
45 D 5805 C	1250, 1500, 2000, 2500, 3000, 3500, 5000,	1.24	1.05	.87	.74
45 D 5806 C	7000, 7500, 8000, 10K	1.33	1.13	.93	.80

45 D 5764. Extra Slider for 12-Watt Types ..... .15

STYLE 210-25—25 WATTS—2x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5807 C	1, 2, 3, 5, 10, 15, 20, 25, 50, 75, 100, 150, 250, 300, 400, 500, 750, 1000	1.35	1.15	.95	.81
45 D 5808 C	1500, 2000, 2500, 3000, 5000	1.39	1.18	.97	.83
45 D 5809 C	7500, 10K	1.49	1.27	1.04	.89
45 D 5810 C	15K, 20K	1.54	1.31	1.08	.92
45 D 5811	25K	1.69	1.44	1.18	1.01

STYLE 210-50—50 WATTS—4x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5812	1	2.23	1.90	1.56	1.34
45 D 5813 C	2, 3, 4, 5, 10, 25, 50, 75, 100, 150, 200, 250, 300, 400, 500, 750, 1000	1.76	1.50	1.23	1.06
45 D 5814 C	1500, 2000, 2500, 4000, 5000	1.80	1.53	1.26	1.08
45 D 5815	10K	1.89	1.61	1.32	1.13
45 D 5816 C	15K, 20K	2.02	1.72	1.41	1.21
45 D 5817 C	25K, 30K, 40K	2.22	1.89	1.55	1.33
45 D 5818	50K	2.40	2.04	1.68	1.44
45 D 5819	100K	2.84	2.41	1.99	1.70

STYLE 210-75—75 WATTS—6x5/16"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5856 C	1, 2	2.51	2.13	1.76	1.51
45 D 5857 C	5,10,15,25,50,100,200,250,300,1000	1.96	1.67	1.37	1.18
45 D 5858	2000	2.02	1.72	1.41	1.21

45 D 5765. Extra Slider for 25, 50 and 75-Watt Types..... .15

STYLE 210-100—100 WATTS—6½x¾"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5821 C	1, 2, 3	2.87	2.44	2.01	1.72
45 D 5822 C	4, 5, 10, 25, 50, 100, 250, 500, 1000	2.22	1.89	1.55	1.33
45 D 5823	5000	2.28	1.94	1.60	1.37
45 D 5826 C	25K, 40K	2.84	2.41	1.99	1.70
45 D 5828	100K	3.49	2.97	2.44	2.09

45 D 5766. Extra Slider for 100-Watt Types..... .15

STYLE 210-225—225 WATTS—10½x1⅛"

Stock No.	Resistance (Ohms)	EACH 1-9	10-24	25-99	100-249
45 D 5829 C	1, 2, 3, 4, 5	4.54	3.86	3.18	2.72
45 D 5830 C	10, 25, 50, 100, 250, 500, 1000	3.51	2.98	2.46	2.11
45 D 5831	5000	3.58	3.04	2.51	2.15
45 D 5832	10K	3.77	3.20	2.64	2.26

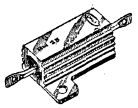
45 D 5767. Extra Slider for 225-Watt Types..... .24

EXTRA MOUNTING BRACKETS FOR RESISTORS

Stock No.	Type No.	For Resistor Core O.D.	Watts	PKG. OF 100 1-9	10-24	25-99
45 D 5894	5	5/16"	12	1.47	1.25	1.03
45 D 5895	9	9/16"	25, 50, 75	1.68	1.43	1.18
45 D 5896	12	¾"	100	3.15	2.68	2.21
45 D 5897	18	1⅛"	175, 225	4.20	3.57	2.94

Wirewound 1% Resistors

SERIES RH POWER RESISTORS



Precision resistors, molded in die-cast gold anodized, radiator-finned aluminum housings. Screw-mount directly to chassis for maximum heat dissipation. Impervious to moisture. Welded construction, terminal to terminal. Small size. Meets MIL-R-18546D. Precision ±1% tolerance.

Tolerance of less than 1% available on Special Order. For ±.5% tolerance, add 100% to prices shown. For ±.25%, add 150%; for ±.1%, add 200%; for ±.05%, add 300%. Specify values shown in Table "A," below. Average shpg. wt. per 100 resistors, 3¼ lbs.

TYPE RH-5—7.5-WATT

MIL-TYPE RE60 .600x.344x.320"

Stock No.	Values—See Table "A" Below	EACH			
		1-24	25-49	50-99	100-249
45 D 6925 C	1 ohm to 1000 ohms	1.82	1.45	1.36	1.27
45 D 6926 C	1400 to 5000	1.91	1.53	1.44	1.34
45 D 6927 C	6000 to 10K	2.08	1.66	1.56	1.45
45 D 6929	15K	2.44	1.95	1.83	1.71
45 D 6930	20K	2.62	2.39	2.18	1.95

TYPE RH-10—12.5-WATT

MIL-TYPE RE65 .750x.420x.390"

Stock No.	Values—See Table "A" Below	EACH			
		1-24	25-49	50-99	100-249
45 D 6352 C	1 to 1000	1.82	1.45	1.36	1.27
45 D 6353 C	1400 to 5000	1.91	1.53	1.44	1.34
45 D 6354 C	6000 to 10K	2.08	1.66	1.56	1.45
45 D 6356	15K	2.44	1.95	1.83	1.71
45 D 6357 C	20K and 25K	2.62	2.39	2.18	1.95
45 D 6358	30K	2.90	2.65	2.41	2.17

TYPE RH-25—25-WATT

MIL-TYPE RE70 1.062x.550x.546"

Stock No.	Values—See Table "A" Below	EACH			
		1-24	25-49	50-99	100-249
45 D 6359	.5 ohm	2.44	2.20	2.00	1.84
45 D 6360 C	1 to 1000	1.82	1.45	1.36	1.27
45 D 6361 C	1400 to 5000	1.91	1.53	1.44	1.34
45 D 6362 C	6000 to 10K	2.08	1.66	1.56	1.45
45 D 6364	15K	2.44	1.95	1.83	1.71
45 D 6365 C	20K and 25K	2.62	2.39	2.18	1.95
45 D 6366	30K	2.90	2.65	2.41	2.17
45 D 6367	50K	3.19	2.91	2.64	2.42

TYPE RH-50—50-WATT

MIL-TYPE RE75 1.968x.630x.610"

45 D 6380	.5 ohm	2.60	2.37	2.17	2.01
45 D 6369 C	1 to 5	2.48	2.25	2.00	1.84
45 D 6370 C	6 to 1000	2.23	1.78	1.67	1.56
45 D 6371 C	1400 to 5000	2.34	1.87	1.76	1.64
45 D 6372 C	6000 to 10K	2.53	2.02	1.89	1.77
45 D 6373 C	15K to 20K	2.75	2.20	2.06	1.93
45 D 6374 C	25K to 50K	3.00	2.40	2.24	2.10

TABLE "A" STOCK VALUES (OHMS)—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
.5	2.5	5	10	30	60	85	175	225	375	560	900	1750	3000	6000	25K
1	3	6	15	35	70	100	180	250	400	600	1000	1800	3500	10K	30K
1.5	4	7.5	20	40	75	125	200	300	470	700	1400	2000	4000	15K	50K
2	4.5	8	25	50	80	150	220	350	500	750	1500	2500	5000	20K	.....

SERIES RS 1% MINIATURE POWER RESISTORS

Series RS resistors are specifically designed to meet precision power requirements in advanced circuits at high ambient temperatures. Ideal where space is at a premium. Meet the functional requirements of MIL-R-26D specifications. Specially developed silicone coating protects against moisture, salt spray and abrasion; maintains stable performance under the most difficult environmental conditions. Resistors' dielectric strength, 1000 VAC. Tolerance, ±1%. Feature complete-welded construction. Axial leads. Specify values from Table "B" below, when ordering. Shpg. wt. per 100, 2 oz.

RS-¼ (¼ watt), .250x.078" diameter
RS-1A (1 watt), .422x.093" diameter
RS-1B (1 watt), .575x.093" diameter
RS-2A (2 watts), .812x.188" diameter
RS-2C (2.5 watts), .500x.218" diameter
RS-2 (3 watts), .625x.250" diameter
RS-5 (5 watts), .875x.312" diameter
RS-10 (10 watts), 1.78x.375" diameter

TABLE "B" STOCK VALUES (OHMS)—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
.5	3	10	30	60	100	225	400	650	1200	1800	4000	7000	13K	27.5K	50K
1	4	12	35	70	125	250	450	750	1300	2000	4500	7500	15K	30K	60K
1.5	5	15	40	75	150	270	470	800	1500	2200	5000	10K	20K	35K	.....
2	6	20	45	80	200	300	500	900	1600	2500	6000	12K	22.5K	40K	.....
2.5	8	25	50	90	220	350	600	1000	1750	3000	6800	12.5K	25K	47K	.....

TYPES RS-¼, RS-1A, RS-1B MINIATURE POWER RESISTORS

RS-¼ (¼ Watt) Stock No.	RS-1A (1 Watt) Stock No.	RS-1B (1 Watt) Stock No.	Values (Ohms)—See Table "B" Above	EACH			
				1-24	25-49	50-99	100-249
.....	45 D 6896	45 D 6902	.5	1.50	1.32	1.12	.94
45 D 6806 C	45 D 6897 C	45 D 6904 C	1 to 1000	.98	.77	.73	.68
45 D 6807 C	.....	.....	1200 to 3000	1.08	.86	.81	.75
.....	45 D 6898 C	45 D 6905 C	1200 to 4000	1.08	.86	.81	.75
.....	45 D 6899 C	45 D 6906 C	4500 to 7500	1.21	.95	.90	.83

TYPES RS-2A, RS-2C, RS-2, RS-5, RS-10 MINIATURE POWER RESISTORS

RS-2A (2 Watts) Stock No.	RS-2C (2½ Watts) Stock No.	RS-2 (3 Watts) Stock No.	RS-5 (5 Watts) Stock No.	RS-10 (10 Watts) Stock No.	Values (Ohms)—See Table "B" Above	EACH			
						1-24	25-49	50-99	100-249
45 D 6841 C	45 D 6381 C	45 D 6909 C	45 D 6388 C	45 D 6800 C	1-1000	.75	.59	.56	.52
45 D 6842 C	45 D 6382 C	45 D 6910 C	45 D 6389 C	45 D 6801 C	1200-5000	.83	.66	.62	.57
45 D 6843 C	45 D 6383 C	45 D 6911 C	45 D 6390 C	45 D 6802 C	6000-10K	.86	.68	.64	.59
45 D 6844 C	45 D 6384 C	45 D 6912 C	45 D 6391 C	45 D 6803 C	12K-15K	.88	.70	.66	.62
45 D 6845	45 D 6385	45 D 6913	45 D 6392	45 D 6804	20K	.92	.74	.69	.65
45 D 6846 C	.....	45 D 6914 C	45 D 6393 C	.....	22.5K-27.5K	.98	.78	.74	.68
.....	.....	45 D 6914	.....	.....	30K	.98	.78	.74	.68
.....	.....	.....	45 D 6393 C	45 D 6805 C	30K-40K	.98	.78	.74	.68
.....	.....	.....	45 D 6394 C	.....	47K-50K	1.05	.85	.79	.74
.....	.....	.....	45 D 6395	.....	60K	1.16	.92	.87	.81

Be Certain to Specify Stock No., Ohms and Wattage When Ordering Resistors

Power Resistors

SPRAGUE "BLUE JACKET" MINIATURIZED WIREWOUND RESISTORS

SPRAGUE PART NUMBERS

Example 242E 103 5—242E designates Sprague type. 103, res. code. First 2 digits are significant figures, third fig., zeros to add (exam: 10,000 ohms). For values under 100 ohms, letter R denotes decimal point, e.g. 7R5 is 7.5. 5, tol. ±5%.

Axial-lead wirewound power resistors. Meet or exceed MIL-R-26C specs. Miniaturized and designed for utmost stability and reliability under extreme operating conditions. Dependable in critical equipment, yet priced low enough for radio-TV service use. Suitable for point-to-point terminal board and printed circuit wiring. Axial-lead design provides secure mounting even under vibration. Crazeproof vitreous enamel coating guards against humidity, and prevents costly and needless failures. Resists corrosive industrial fumes. Tolerance, ±5%. Rated on basis of 300°C maximum hot-spot temperature rise above ambient of 40°C. 50% derating occurs at 180°C. Temperature coefficient resistance will not exceed 0.003%/°C up to 250°C, not more than 0.006% above 250°C. 242E replaces former 151E. All have #20 tinned leads. Av. shpg. wt. per 25, 8 oz.

TYPE 242E—3 WATT, 5%, 1 7/32" x 7/32" dia.

Stock No.	Stock Values See Table "A"	EACH 1-24	25-99	100-249	250-499	500-999
45 D 5095 C	1 to 10	.44	.32	.28	.23	.22
45 D 5092 C	12 to 1000 except 35, 350	.44	.32	.28	.23	.22
45 D 5093 C	1200 to 5000	.47	.34	.29	.24	.23
45 D 5094 C	6000 to 10K	.49	.37	.34	.25	.24

TYPE 243E—5 WATT, 5%, 1 5/16" x 7/16" dia.

45 D 5080 C	1 to 10	.46	.37	.30	.26	.25
45 D 5085 C	12 to 1000 except 18, 22, 27, 33, 39, 47, 56, 68, 82, 180, 270, 330, 390, 470, 560, 820	.46	.37	.30	.26	.25
45 D 5081 C	1200 to 5000 except 2700, 3300, 3900 and 4700	.48	.40	.31	.27	.26
45 D 5082 C	6000 to 10K except 6800 and 8200	.52	.42	.33	.29	.28
45 D 5083 C	12K to 20K	.57	.48	.36	.32	.31
45 D 5084 E	22K to 30K	.64	.52	.41	.37	.36

TABLE "A"—VALUES FOR "BLUE JACKET" RESISTORS

STOCK VALUES (OHMS)—SPECIFY VALUES WANTED

1	12	30	56	180	350	700	1800	3900	8000	22K
1.5	15	33	68	200	390	820	2000	4000	8200	25K
2	18	35	75	220	400	900	2200	4700	9000	30K
3	20	39	82	250	470	1000	2500	5000	10K	.....
5	22	40	100	270	500	1200	2700	6000	12K	.....
7.5	25	47	120	300	560	1400	3000	6800	15K	.....
10	27	50	150	330	600	1500	3300	7500	20K	.....

SPRAGUE "KOOLOHM" 5% RESISTORS—STANDARD AND NON-INDUCTIVE

Improved version of "KT" and "NIT" series is smaller than older units. Withstands severe duty cycles encountered in heavy-duty industrial electronic equipment. Final "burn-in" test stabilizes resistance value on full load. Space-wound wire prevents turn-to-turn shorting. Ceramic insulated wire and outer shells provide completely insulated surface as well as complete moisture-proofing. Windings and leads welded to end-cap for superior mechanical strength. ±5% tolerance; handles hop-spot temperatures to 340° C. See Table "B" for values available. Av. shpg. wt. per 25, 8 oz.

Nonporous Ceramic Outer Shell plus Rugged Internal Design. Provide Excellent Insulation and Strength

TYPE 450E—3-WATT (STANDARD) 5/16" x 1/4" dia.

Stock No.	Stock Values See Table "B" Right	EACH 1-24	25-49	50-99	100-249
45 D 5901 C	1 to 1000 ohms	.35	.25	.23	.21
45 D 5902 C	1500 to 3000 ohms	.43	.30	.28	.26
45 D 5906 C	6000 and 10K	.47	.33	.30	.28

TYPE 452E—5-WATT (STANDARD) 1" x 1/4" dia.

45 D 5910 C	1 to 1000 ohms	.37	.26	.24	.22
45 D 5911 C	1500 to 5000 ohms	.41	.29	.27	.25
45 D 5917 C	6000 and 10K	.44	.31	.29	.27
45 D 5921 C	12K to 20K	.57	.40	.37	.34

TYPE 453E—5 WATT (NON-INDUCTIVE) 1" x 1/4" dia.

Stock No.	Stock Values See Table "B" Below	EACH 1-24	25-49	50-99	100-249
45 D 5925 C	1 to 1000 ohms	.54	.38	.35	.33
45 D 5926 C	1500 to 3000 ohms	.61	.43	.40	.37

TABLE "B"—VALUES FOR "KOOLOHM" RESISTORS

STOCK VALUES—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	10	25	100	250	600	2000	6000	20K
2	12	40	150	300	900	2500	10K	.....
3	15	50	200	400	1000	3000	12K	.....
5	20	75	220	500	1500	5000	15K	.....

MALLORY MOL METAL "OXIDE FILM" RESISTORS

- Completely Insulated with Silicone-Based Shell
- Has Spiraled Oxide Film Bonded to Ceramic Base
- End Caps with Pressure-Fitted Welded Axial Leads
- Under ½% Resistance Change at 10 Times Rated Load

Film type ±10% tolerance axial lead resistors. Oxide film is bonded to ceramic base at high temp. Resistance spiraled film oxide is controlled electronically. End caps have welded axial leads pressure fitted to ceramic bases. Green silicone-based insulating material provides uniform coating; flame-resistant—even under severe overload. Temp. Coefficient: ±250 PPM/°C @ 105°C ref. to 25°C. Overload: res. change less than ½% @ 10 times rated load for 5 seconds. Load Life: res. change less than 5% after 1000 hrs. @ stated load and ambient temp. (cycled 1½ hrs. on, ½ hr. off). Leads: 20 gauge; 17 on 2 MOL. Av. shpg. wt. per 25, 8 oz.

TYPE 2MOL—2-WATT, 1 1/16" x 5/16" dia.

Stock No.	Stock Values (Ohms) See Table "C" Right	EACH 1-99	100-249	250-499	500-999
45 D 5122 C	33 to 56K	.20	.14	.12	.09

TYPE 3MOL—3-WATT, 1 5/16" x 5/16" dia.

45 D 5123 C	39 to 1800	.20	.14	.12	.088
45 D 5124 C	2200 to 3900	.20	.14	.12	.09
45 D 5125 C	4700 to 6800	.22	.15	.13	.098
45 D 5126 C	8200 and 10K	.24	.165	.14	.105
45 D 5127 C	12K to 22K	.25	.18	.152	.114
45 D 5128 C	27K to 56K	.28	.195	.167	.125

TYPE 5MOL—5-WATT, 1 3/4" x 5/16" dia.

Stock No.	Stock Values (Ohms) See Table "C" Right	EACH 1-99	100-249	250-499	500-999
45 D 5129 C	100 to 1800	.20	.14	.12	.09
45 D 5130 C	2200 to 3900	.22	.15	.13	.098
45 D 5131 C	4700 to 6800	.23	.16	.137	.103
45 D 5132 C	8200 and 10K	.26	.18	.156	.117
45 D 5133 C	12K to 22K	.30	.21	.178	.133
45 D 5134 C	27K to 120K	.32	.23	.195	.146

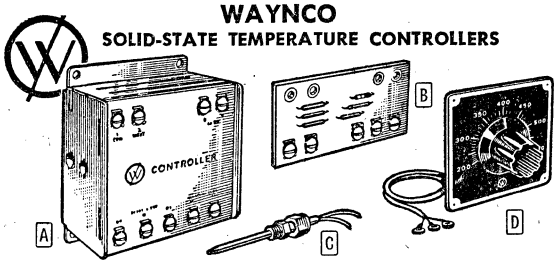
TABLE "C"—VALUES FOR "OXIDE FILM" RESISTORS

STOCK VALUES—SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
33	82	220	560	1500	3900	10K	27K	68K
39	100	270	680	1800	4700	12K	33K	82K
47	120	330	820	2200	5600	15K	39K	100K
56	150	390	1000	2700	6800	18K	47K	120K
68	180	470	1200	3300	8200	22K	56K	.....

Solid-State Controllers, Optoelectronic Devices

WAYNCO
SOLID-STATE TEMPERATURE CONTROLLERS



Solid-state temperature controllers using low-cost thermistor or platimum temperature sensors. Ideal for ovens, heat seling, plastic processing, medical and biological apparatus, liquid level controls, heat treating, cyrogenics.

[A] ON-OFF TEMPERATURE CONTROLLERS

Model 15 Series. Removable bridge board for fast temperature changes; switching sensitivity 0.1° to 0.3°F. For ambient temperature from 0° to 125°F, and voltage variations from 105-135 volts. Use with Bridge-Board—Remote Set Pot Assembly and Sensors (below). Where load exceeds current capacity of output relay, units may be used as pilot relays to larger load contactor. 15-00-01 has SPST reed relay output, others SPDT. 115 VAC, *230 VAC. Av. wt., 1½ lbs.

Stock No.	Type	Output/Relay	1-9 EA.	10-25 EA.
60 D 8250	15-00-01	50 VA, SPST	33.70	29.00
60 D 8251	15-00-10	1 A, SPDT	33.70	29.00
60 D 8252	15-00-11	10 A, SPDT	40.00	34.60
60 D 8253	15-00-12	*10 A, SPDT	40.00	34.60

[A] PROPORTIONAL TEMPERATURE CONTROLLERS

Model 03 Series. Handle loads up to 1000 watts at 115 VAC. Include remote set pot assembly, built-in bridge and adjustable proportional band. Order sensors separately below. Av. wt., 1½ lbs.

Stock No.	Mfr's Type	Temp. Range	Use Sensor	EACH 1-9	EACH 10-25
60 D 8254	03-03-09A	25°-250°F	A	89.00	74.50
60 D 8255	03-03-09B	100°-400°F	B	89.00	74.50
60 D 8256	03-03-09C	200°-600°F	C	89.00	74.50

[B] [D] BRIDGE BOARDS—REMOTE SET-POT ASSEMBLIES

For use with Series 15 controllers above. Use temperature sensor (below) as indicated in table. Av. wt., 6 oz.

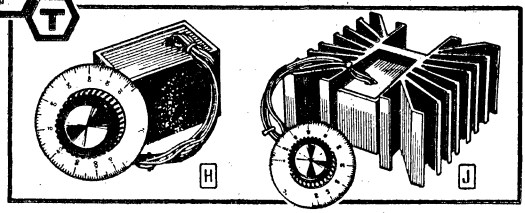
60 D 8257	212/218-133	25°-250°F	A	9.95	8.80
60 D 8258	212/218-134	100°-400°F	B	9.95	8.80
60 D 8259	212/218-045	200°-600°F	C	9.95	8.80
60 D 8260	212/218-110	0°-500°F	D	9.95	8.80
60 D 8261	212/218-067	0°-1000°F	D	9.95	8.80

[C] TEMPERATURE SENSORS

3/16" dia. stainless steel sheath. 18" leads; stainless steel compression fitting w/standard ⅛" NPT thread. Sensor type column refers to controllers above. Lgth. is length below fitting. 5 oz.

Stock No.	Mfr's Type	Sensor Type	Base (Ohms)	Element Type	Lgth.	EACH 1-9	EACH 10-25
60 D 8262	104-800-007	A	3K	Thermistor	3"	18.50	15.95
60 D 8263	104-800-008	A	3K	Thermistor	6"	18.50	15.95
60 D 8264	104-800-013	B	15K	Thermistor	3"	18.50	15.95
60 D 8265	104-800-014	B	15K	Thermistor	6"	18.50	15.95
60 D 8266	104-800-009	C	100K	Thermistor	3"	18.50	15.95
60 D 8267	104-800-010	C	100K	Thermistor	6"	18.50	15.95
60 D 8268	104-801-001	D	100	Platinum	3"	29.50	25.70
60 D 8269	104-801-002	D	100	Platinum	6"	29.50	25.70

PAK-TRONICS MINI-TEMP
PROPORTIONAL TEMPERATURE CONTROLLERS



- Solid-State Circuit with Sealed-Module Construction for Long Life
- Failsafe Operation: Unit Shuts off Automatically If Probe Is Damaged

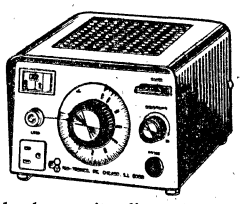
[H] **Model 1211.** Current handling capacity, 8.3 amps. Power rating: 120 VAC, 1000 watts; 240 VAC, 2000 watts. Overall size, 1⅜x 3x2⅜". For 120 or 240 V, 60 Hz AC. Shpg. wt., 1 lb.

60 D 9273. 1-4.....Each 64.00
5-9.....Each 60.80 10-24.....Each 57.60
25-49.....Each 54.40 50-99.....Each 51.20

[J] **Model 1215.** Current handling capacity, 40 amps. Power rating: 120 VAC, 4800 watts; 240 VAC, 9600 watts. Overall size, 6¼x 6¼x3". For 120 or 240 V, 60 Hz AC. Shpg. wt., 3 lbs.

60 D 9274. 1-4.....Each 110.00
5-9.....Each 104.50 10-24.....Each 99.00
25-49.....Each 93.50 50-99.....Each 88.00

New concept in proportional temperature controllers, for use in lab ovens, incubators, water and oil baths, and more. Extremely small, yet control temperatures up to 700° F. Unique construction permits behind panel mounting. Complete epoxy sealing. Failsafe operation: controller shuts off automatically when probes are damaged and short-circuit occurs. Easy-to-read calibrated dial and knob assembly for fast precise temperature settings. Full proportional control completely eliminates temperature oscillations. Control is applied before desired temperature is reached, reducing power required to maintain constant temperature. Dual voltage operation and dual power ratings. Shockproof temperature probe: stainless steel, 6" long by ¼" diameter, with 12" lead wire. Each unit includes indicating lamp assembly and calibrating resistor.



PAK-TRONICS UNIVERSAL TEMPERATURE CONTROLLER

- Solid-State Circuitry
- —20° C to 425° Range

Model 201 and 202. Compact units feature—20° to +425° range, 1800 watts of power, solid-state circuitry that provides low voltage safety features. Large three-inch knob permits direct temperature readings. Interchangeable kits (below) alter units for indicated temperature ranges. Each kit contains a plug-in sensing probe, plug-in range card, dial plate calibrated to match temperature control of range card and a calibrating resistor. **Order one or more range kits with each unit, controller does not include range kits.** Size, 4½x6x7". Shpg. wt., 10 lbs.

Stock No.	Mfr's Type	Description	EACH
60 D 9275	201	For 110 VAC	145.00
60 D 9276	202	For 240 VAC	155.00
60 D 9277	250	Kit, +15° to +115° C	50.00
60 D 9278	251	Kit, +20° to +260° C	55.00
60 D 9279	252	Kit, —20° to +425° C	80.00

RAYTHEON
RAYSISTOR OPTOELECTRONIC DEVICES

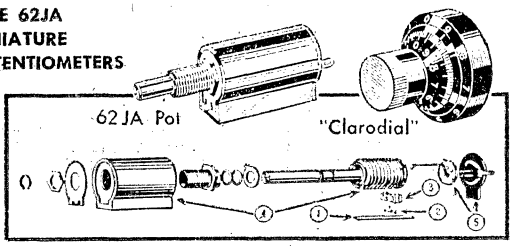
Optoelectronic devices for a variety of control functions. Provide noise-free control of AC and DC signals over wide dynamic range, with fast switching time and high reliability. Consist of light source and photo-resistive element in light-tight case. Rugged construction with no moving parts. *Includes socket. †50 volts minimum. ‡Typical switching time in seconds. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Control Lamp Volts	Control Lamp mA	Signal Photocell Resis., Ohms On	Signal Photocell Resis., Ohms Off†	Max. Volts	Max. mW	Switch Time‡ On	Switch Time‡ Off	EACH 1-9	EACH 10-24
60 D 7209	CK1101	E	120	1-3	1000	10^6	100	75	.0012	.060	11.00	9.00
60 D 7210	CK1102	E	0-1	0-50	700	10^6	100	75	.020	.300	11.00	9.00
60 D 7211	CK1103	E	0-5	0-200	150	10^6	100	75	.020	.800	11.00	9.00
60 D 7212	CK1104	E	0-25	0-37	150	10^6	100	75	.010	.450	11.00	9.00
60 D 7214	CK1114	G	0-1	0-17	850	10^6	100	100	.018	.060	8.75	7.15
60 D 7215	CK1115	G	0-4	0-55	200	10^7	200	100	.020	.300	8.75	7.15
60 D 7216	CK1116	G	0-4	0-17	350	10^7	200	100	.010	.300	9.35	7.75
60 D 7217	CK1121*	F	0-5	0-55	150	10^7	200	100	.020	.250	4.00	3.25
60 D 7218	CK1122*	F	0-10	0-17	1000	10^7	200	100	.030	.225	4.00	3.25
60 D 7219	CK1123*	F	0-25	0-37	150	10^7	200	100	.010	.300	4.00	3.25
60 D 7220	CK1124*	F	150	.2-1.2	3000	10^7	200	100	.005	.100	4.00	3.25
60 D 7221	CK2000*	F	0-25	0-37	40	10^6	100	100	.030	.300	5.00	4.05
60 D 7222	CK2003*	F	150	.2-1.2	3000	10^7	150	100	.035	.250	4.60	3.85

Call Your Nearest Allied Facility for All Your Electronic Needs

Clarostat Potentiometers and Controls

TYPE 62JA MINIATURE POTENTIOMETERS



EXTRA-QUALITY FEATURES DIAGRAMMED ABOVE:

- (1) Collector rail of gold-plated alloy
- (2) High conductivity, low noise contact
- (3) 4-finger carrier reduces wobble
- (4) Tough, thermal plastic construction for Case, Contact Carrier and Drum
- (5) Slip rings have 2 contact fingers at 180° position for positive contact

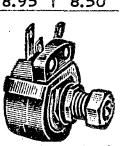
Accurate 10-turn pots with resistance tolerance of ±5%. High power rating in a miniature size—2 watts @ 25°C. Have dielectric strength of 1000 volts AC with absolute linearity of ±0.25%; except 100, 200 and 250 ohms, ±0.5%. Overall length, 2 11/16", with 3/8" mtg. bushing 3/8-32 threaded. Shafts are 1/4" dia. x 9/16" long, fit Clarodials, below. Shpg. wt., 3½ oz.

Stock No.	Mfr's Type	Resistances (Ohms) Specify When Ordering	EACH 1-9	10-24	25-99	100-499
46 D 7102 C	62JA	100, 200, 250, 500, 1000, 2000, 5000, 10K, 20K, 30K, 50K, 100K	7.50	6.50	6.00	5.50

CLARODIALS. For 62JA above. 5/8" knob, 1" dial. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Description	EACH 1-9	10-24	25-99
46 D 7104	411	Black, no lock	7.75	7.30	6.95
46 D 7105	412	Black, with lock	8.95	8.50	8.05
46 D 7106	461	Clear, no lock	8.25	7.80	7.40
46 D 7107	462	Clear, with lock	9.45	8.95	8.50

TYPE 48M-9 MINIATURE 0.2-WATT COMPOSITION POTENTIOMETERS



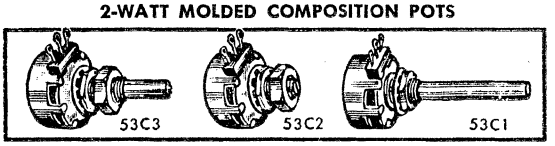
Compact composition-element potentiometers. Equipped with split locking bushing to permit fixed setting when used in bias supplies, voltage dividers, or test equipment. Mechanical and electrical rotation is 300°. Tolerance is ±10% except * ±20%. All have linear taper. Power rating is 0.2 watt. Insulation (terminals to ground) 1000 VAC. Threaded locking bushing 1/4x3/8" long. 1/8" dia. slotted shaft. 1 31/32x5/8" dia. body. Shpg. wt., 5 oz.

TABLE "A" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1000	10K	25K	50K	100K	500K*

Stock No.	Mfr's Type	Ohms (See Table "A" Above)	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 7243 C	48M-9	1000 to 500K	5.10	3.83	3.28	2.74	2.37	2.18	2.01

2-WATT MOLDED COMPOSITION POTS



Totally enclosed and sealed against moisture. Tol.: ±10% to 1 megohm; ±20% above 1 megohm. Type 53C1 has 1 5/8" long by 1/4" dia. round shaft beyond bushing; 3/8" long bushing with 3/8-32-NEF-2 thread. Type 53C2 has 1/8" by 1/4" dia. screwdriver slotted shaft with 1/2" long locking bushing. Type 53C3 has 7/8" long by 1/4" dia. round shaft FMS; 3/8" long bushing with 3/8-32-NEF-2 thread. Types 53C2 and 53C3 are fabricated to meet MIL-R-94 Style RV4. Shpg. wt., 4 oz.

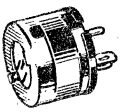
TABLE "B" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg
50	500	2000	10K	50K	200K	750K	3
100	1000	2500	20K	100K	250K	1 meg	5
250	.....	5000	25K	150K	500K	2 meg	10

Stock No.	Mfr's Type	Ohms (See Table "B" Above)	EACH 1-9	10-49	50-99	100-249	250-UP
46 D 7110 C	53C1	50 ohms to 10 meg	1.95	1.60	1.50	1.25	.92
46 D 7115 C	53C2	50 ohms to 10 meg	2.25	1.90	1.58	1.33	.99
46 D 7116 C	53C3	50 ohms to 10 meg	1.95	1.60	1.50	1.25	.92

SERIES 371 MOLDED POTENTIOMETERS

- Economy Hot-Molded Construction
- Rated 3/8-Watt • 20% Tolerance
- Pressure Spring and Cover



WITH WIRE LEADS OR SOLDER LUGS

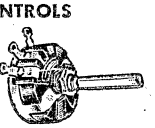
Have hot-molded carbon element, carbon contact brush, pressure spring and cover. Rating, 3/8-watt at 70° C, derating to zero at 120° C. Tol. ±20%. Wkg. V, 350 VAC. Diel. strength, 750 V rms. Torque, 6 oz.—inch max. operating; 1 lb.-inch stop. Rotation, 290° (±5°). Resistance range, 100 ohms to 1 meg. Specify resistance. Av. shpg. wt., 2 oz.

TABLE "C" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
100	500	2500	10K	25K	100K	200K	500K
250	1000	5000	15K	50K	150K	250K	1 meg

Stock	Leads	EACH 1-9	10-49	50-99	100-249	250-499	500-999
46 D 5904 C	Solder Lugs	2.37	1.70	1.02	.88	.81	.75
46 D 5905 C	Wire Leads	2.37	1.70	1.02	.88	.81	.75

TYPE 58 4-WATT WIREWOUND CONTROLS



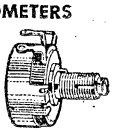
Designed to provide extremely smooth, quiet operation as voltage dividers, bias controls, etc. Have linear windings; resistance tolerance of ±10%. Insulation tested to 1000 VAC. Control size: 2 5/32x1 21/32" dia. Shaft size: 2"x1/4" dia. Molded phenolic body. Shpg. wt., 4 oz.

TABLE "D" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
1	15	50	300	2000	20K	40K
4	20	100	500	5000	25K	50K
10	30	200	1000	10K	30K	.....

Stock No.	Mfr's Type	Resistances Available (See Table "D" Above)	EACH
46 D 7120 C	58	1 ohm to 10K	1.31
46 D 7121 C	58	20K and 25K	1.60
46 D 7122 C	58	30K, 40K, 50K	2.05

TYPE 43C2 2-WATT WIREWOUND POTENTIOMETERS



Available in a wide range of resistances. Have corrosion-proof finish, moisture and dust-proof construction. Resistance tolerance is ±5%. Linearity is ±2%. Require 1 5/32" O.D.; 5/8" depth behind mounting surface. With 1/4" slotted shaft and 3/8" dia., 1/2" long locking bushing. Shpg. wt., 5 oz.

TABLE "E" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms
5	75	400	2000	10K
10	100	500	2500	15K
20	150	750	3000	20K
25	200	1000	4000	25K
50	300	1500	5000	50K

Stock No.	Mfr's Type	Resistances Available (See Table "E" Above)	EACH
46 D 3492 C	43C2	5 ohms to 10K	2.63
46 D 3493 C	43C2	15K to 25K	2.95
46 D 3494	43C2	50K	3.47

SERIES U39 "HUMDINGER" CONTROLS

Versatile 2-watt wirewound controls for above-chassis or printed-circuit board mounting. All have linear taper. Resistance tolerance is ±20%. Have no shafts, slot is provided for screwdriver adjustment. 3/4" diameter; 1 1/4" long; 1" mtg. centers. With insulated mounting plate. Shpg. wt., 2 oz.

TABLE "F" RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	75	150	500	700	1500	4000
8	100	200	600	800	2000	5000
50	125	300	650	1000	3000	

Stock No.	Mfr's Type	Ohms (See Table "F" Above)	EACH
46 D 7970 C	U39	5 to 5000	.63

BOURNS Multi-Turn Potentiometers

BOURNS HANDY INDEX

Type	Page	Type	Page	Type	Page	Type	Page	Type	Page	Type	Page	Type	Page	Type	Page	Type	Page	Type	Page
200	140	260	141	3005	145	3053	142	3280	145	3400	147	3510	147	3707	147	H21E	148	H493	147
207	144	271	142	3007	145	3059	143	3281	145	3415	148	3520	147	H-01	148	H22S	148	H494	147
208	144	272	142	3009	143	3067	142	3282	146	3435	148	3535	148	H-02	148	H25	148	RT10C	144
209	144	273	142	3010	141	3068	142	3290	146	3437	148	3600	149	H-04	148	H26S	148	RT11C	144
215	140	274	142	3011	141	3069	143	3292	143	3438	148	3640	149	H-05	148	H90	148	RT12C	144
220	144	275	142	3012	142	3250	144	3300, 01	146	3445	148	3650	147	H11E	148	H93-99	149	RT22C	144
224	140	276	142	3020	141	3251	144	3305	146	3500	147	3660	149	H12S	148	H103	149	RJ11B	144
235	140	3000	145	3051	141	3257	142	3367	145	3501	148	3665	149	H13P	148	H491	147	RJ12B	144
236	141	3001	145	3052	142	3260	145	3368	145	3507	147	3700	147	H15S	148	H492	147	RJ22B	144

BOURNS PART NUMBERING SYSTEM

3011	L	10	1253	M
Basic Model	Term. Style	Modifying Number	Resistance Code	Panel Mount

Basic Model: Three or 4 digits designate the various models available.

Terminal Styles: "L," insulated wire leads; "S," solder terminals; "P," printed circuit pins; "W," bare-wire leads.

Modifying Number: —1, is std. model. —2, is std. WW with values of 100K. — XX, is 2 digit nonstandard basic model.

Resistance Code (in Ohms): 3 digit code—first 2-digits represent significant nos., last digit, no. of zeros to follow. 4 digit code—first 3-digits for significant nos., last digit is no. of zeros to follow.

Panel Mount Designator: For panel mount feature add "M" to complete the part no.

TABLE A—VALUES (OHMS)

10	200	5000	50K	750K
20	500	10K	100K	1 meg
50	1000	20K	200K	2 meg
100	2000	25K	500K	5 meg

TRIMPOT® SUBMINIATURE POTENTIOMETERS

Precision-made, multi-turn, subminiature potentiometers. Self-locking screwdriver adjustments. 22 to 25-turn adjustments. Panel mounts require panel thickness max. .13" with .228" hole. Std. mounts have two #2 holes on 1" centers. L suffix, insulated leads. Resistance tol.: carbon models, ±20%; wirewound models, ±10%. **Quantity prices are for one resistance and one type only. Specify value when ordering. 2 oz.**

½-WATT GENERAL-PURPOSE WIREWOUND. 1¼x¼x5/16". —65°C to +125°C

Stock No.	Mfr's Type	Fig.	Term. Conn.	Mtg.	Values (Ohms) See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7380 C	200L	A	Leads	Std.	10 ohms-10K	4.86	4.50	4.05	3.84	3.60	3.42
46 D 7381 C	200L	A	Leads	Std.	20K, 25K	6.48	6.00	5.40	5.12	4.80	4.56
46 D 7675	200L	A	Leads	Std.	50K only	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7676	200L-2	A	Leads	Std.	100K only	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7005 C	200L	B	Leads	Panel	10 ohms-10K	5.67	5.25	4.73	4.48	4.20	3.99
46 D 7006 C	200L	B	Leads	Panel	20K, 25K	7.29	6.75	6.08	5.76	5.40	5.13
46 D 7007	200L	B	Leads	Panel	50K only	8.37	7.75	6.98	6.62	6.20	5.89
46 D 7008	200L-2	B	Leads	Panel	100K only	9.99	9.25	8.33	7.90	7.40	7.03
46 D 7383	200S	C	Lugs	Std.	10 ohms-10K	4.86	4.50	4.05	3.84	3.60	3.42
46 D 7384 C	200S	C	Lugs	Std.	20K, 25K	6.48	6.00	5.40	5.12	4.80	4.56
46 D 7677	200S	C	Lugs	Std.	50K only	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7010 C	200S	E	Lugs	Panel	10 ohms-10K	5.67	5.25	4.73	4.48	4.20	3.99
46 D 7011 C	200S	E	Lugs	Panel	20K, 25K	7.29	6.75	6.08	5.76	5.40	5.13
46 D 7012	200S	E	Lugs	Panel	50K only	8.37	7.75	6.98	6.62	6.20	5.89
46 D 7600 C	200P	D	PC pins	PC	10 ohms-10K	4.86	4.50	4.05	3.84	3.60	3.42
46 D 7601 C	200P	D	PC pins	PC	20K, 25K	6.48	6.00	5.40	5.12	4.80	4.56
46 D 7602	200P	D	PC pins	PC	50K only	7.56	7.00	6.30	5.98	5.60	5.32

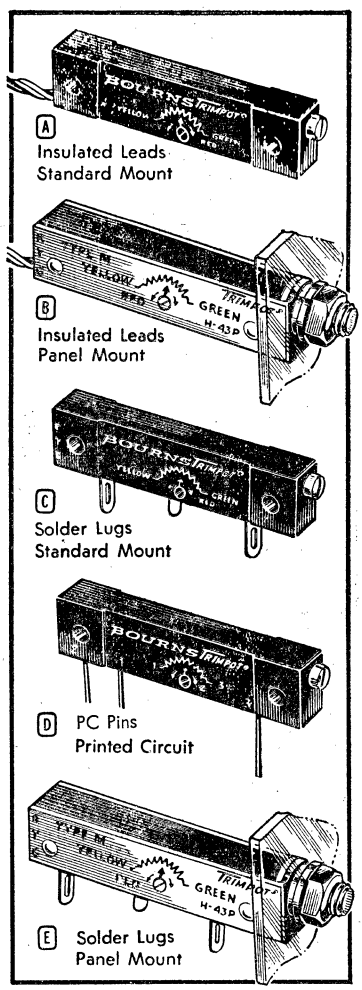
¼-WATT CARBON. 1¼x¼x5/16". —65°C to +125°C

46 D 7376 C	215L	A	Leads	Std.		4.86	4.50	4.05	3.84	3.60	3.42
46 D 7013 C	215L	B	Leads	Panel		5.67	5.25	4.73	4.48	4.20	3.99
46 D 7606 C	215S	C	Lugs	Std.		4.86	4.50	4.05	3.84	3.60	3.42
46 D 7014 C	215S	E	Lugs	Panel	5000-5 meg	5.67	5.25	4.73	4.48	4.20	3.99
46 D 7605 C	215P	D	PC pins	PC		4.86	4.50	4.05	3.84	3.60	3.42
46 D 7678 C	235L*	A	Leads	Std.	*except 25 K	7.02	6.50	5.85	5.55	5.20	4.94
46 D 7015 C	235L*	B	Leads	Panel		7.83	7.25	6.53	6.19	5.80	5.51
46 D 7679 C	235P*	D	PC pins	PC		7.02	6.50	5.85	5.55	5.20	4.94

1-WATT HUMIDITY-PROOF WIREWOUND

For initial or occasional adjustment, or where a non-standard value is required. Subminiature. Sealed in high-temperature plastic cases. Meet MIL. specs. 22 turns. High dissipation: 1 watt @ 70°C, 0.5 Watt @ 125°C; Std. mounts have two #2 threaded holes on 1" ctrs. Panel mt. types: max. .13" panel thickness, .194" hole. 1¼x3/16x 5/16".—65°C to +175°C. **Quantity prices for one value and type only. 2 oz.**

Stock No.	Mfr's Type	Fig.	Term. Conn.	Mtg.	Values (Ohms) (See Table A)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7366 C	224L	A	Leads	Std.	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46 D 7367 C	224L	A	Leads	Std.	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7368	224L	A	Leads	Std.	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7362	224L-2	A	Leads	Std.	100K only	11.34	10.50	9.45	8.97	8.40	7.98
46 D 7038 C	224L	B	Leads	Panel	10 ohms-10K	7.83	7.25	6.53	6.19	5.80	5.51
46 D 7039 C	224L	B	Leads	Panel	20K, 25K	9.45	8.75	7.88	7.47	7.00	6.65
46 D 7040	224L	B	Leads	Panel	50K only	9.99	9.25	8.33	7.90	7.40	7.03
46 D 7041	224L-2	B	Leads	Panel	100K only	12.15	11.25	10.13	9.61	9.00	8.55
46 D 7369 C	224S	C	Lugs	Std.	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46 D 7371 C	224S	C	Lugs	Std.	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7372	224S	C	Lugs	Std.	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7363	224S-2	C	Lugs	Std.	100K only	11.34	10.50	9.45	8.97	8.40	7.98
46 D 7042 C	224S	E	Lugs	Panel	10 ohms-10K	7.83	7.25	6.53	6.19	5.80	5.51
46 D 7043 C	224S	E	Lugs	Panel	20K, 25K	9.45	8.75	7.88	7.47	7.00	6.65
46 D 7044	224S	E	Lugs	Panel	50K only	9.99	9.25	8.33	7.90	7.40	7.03
46 D 7045	224S-2	E	Lugs	Panel	100K only	12.15	11.25	10.13	9.61	9.00	8.55
46 D 7373 C	224P	D	PC pins	PC	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46 D 7374 C	224P	D	PC pins	PC	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7375	224P	D	PC pins	PC	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7361	224P-2	D	PC pins	PC	100K only	11.34	10.50	9.45	8.97	8.40	7.98



NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

Precision Potentiometers

BOURNS

SUBMINIATURE POTENTIOMETERS

MIL specs. for humidity and temp. Require 25 turns to go from zero to full value. Resolution varies from 2% @ 10 ohms to less than 0.2% @ full value. 3051 has ±20% resistance tolerance; 236 and 260, ±10%. Std. mounts have two #2 holes on 1" ctrs. Panel mounts require max. panel thickness .13". Av. shpg. wt., 2 oz.

¼-WATT HIGH-TEMP. HUMIDITY-PROOF CARBON. 1¼x5/16x3/16". −65°C to +150°C.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Tabe A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46D 7357 C	3051L	A	Insul. leads	Std.	5000 ohms-5 meg, except 25K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7046 C	3051L	B	Insul. leads	Panel		7.83	7.25	6.53	6.19	5.80	5.51
46D 7358 C	3051S	C	Solder lugs	Std.		7.02	6.50	5.85	5.55	5.20	4.94
46D 7047 C	3051S	E	Solder lugs	Panel		7.83	7.25	6.53	6.19	5.80	5.51
46D 7359 C	3051P	D	PC pins	PC		7.02	6.50	5.85	5.55	5.20	4.94

4/5-WATT HUMIDITY-PROOF WIREWOUND. 23/64x19/64x111/32". − 55°C to +135°C.

46D 7389 C	236L	A	Insul. leads	Std.	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7390 C	236L	A	Insul. leads	Std.	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46D 7681	236L	A	Insul. leads	Std.	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46D 7682	236L-2	A	Insul. leads	Std.	100K only	11.34	10.50	9.45	8.97	8.40	7.98
46D 7020 C	236L	B	Insul. leads	Panel	10 ohms-10K	7.83	7.25	6.53	6.19	5.80	5.51
46D 7021 C	236L	B	Insul. leads	Panel	20K, 25K	9.45	8.75	7.88	7.47	7.00	6.65
46D 7022	236L	B	Insul. leads	Panel	50K only	9.99	9.25	8.33	7.90	7.40	7.03
46D 7023	236L-2	B	Insul. leads	Panel	100K only	12.15	11.25	10.13	9.61	9.00	8.55
46D 7686 C	236S	C	Solder lugs	Std.	10 to 10K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7687 C	236S	C	Solder lugs	Std.	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46D 7688	236S	C	Solder lugs	Std.	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46D 7024 C	236S	E	Solder lugs	Panel	10 to 10K	7.83	7.25	6.53	6.19	5.80	5.51
46D 7025 C	236S	E	Solder lugs	Panel	20K, 25K	9.45	8.75	7.88	7.47	7.00	6.65
46D 7026	236S	E	Solder lugs	Panel	50K only	9.99	9.25	8.33	7.90	7.40	7.03
46D 7683 C	236P	D	PC pins	PC	10 to 10K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7684 C	236P	D	PC pins	PC	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46D 7685	236P	D	PC pins	PC	50K only	9.18	8.50	7.65	7.26	6.80	6.46

1-WATT HIGH-TEMPERATURE WIREWOUND. 5/16x9/32x1¼". −55°C to +175°C.

46D 7388 C	260L	A	Insul. leads	Std.	10 ohms-10K	5.94	5.50	4.95	4.70	4.40	4.18
46D 7394 C	260L	A	Insul. leads	Std.	20K, 25K	7.56	7.00	6.30	5.98	5.60	5.32
46D 7689	260L	A	Insul. leads	Std.	50K only	8.10	7.50	6.75	6.41	6.00	5.70
46D 7690	260L-2	A	Insul. leads	Std.	100K only	9.72	9.00	8.10	7.68	7.20	6.84
46D 7027 C	260L	B	Insul. leads	Panel	10 ohms-10K	6.75	6.25	5.63	5.34	5.00	4.75
46D 7028 C	260L	B	Insul. leads	Panel	20K, 25K	8.37	7.75	6.98	6.62	6.20	5.89
46D 7029	260L	B	Insul. leads	Panel	50K only	8.91	8.25	7.43	7.05	6.60	6.27
46D 7030	260L-2	B	Insul. leads	Panel	100K only	10.53	9.75	8.78	8.32	7.80	7.41
46D 7609 C	260S	C	Solder lugs	Std.	10 ohms-10K	5.94	5.50	4.95	4.70	4.40	4.18
46D 7610 C	260S	C	Solder lugs	Std.	20K, 25K	7.56	7.00	6.30	5.98	5.60	5.32
46D 7611	260S	C	Solder lugs	Std.	50K only	8.10	7.50	6.75	6.41	6.00	5.70
46D 7031 C	260S	E	Solder lugs	Panel	10 ohms-10K	6.75	6.25	5.63	5.34	5.00	4.75
46D 7032 C	260S	E	Solder lugs	Panel	20K, 25K	8.37	7.75	6.98	6.62	6.20	5.89
46D 7033	260S	E	Solder lugs	Panel	50K only	8.91	8.25	7.43	7.05	6.60	6.27
46D 7612 C	260P	D	PC pins	PC	10 ohms-10K	5.94	5.50	4.95	4.70	4.40	4.18
46D 7613 C	260P	D	PC pins	PC	20K, 25K	7.56	7.00	6.30	5.98	5.60	5.32
46D 7614	260P	D	PC pins	PC	50K only	8.10	7.50	6.75	6.41	6.00	5.70

Meet MIL specs for humidity-proof, plus shock, vibration, and acceleration stability. Power: Rating at 50-70°C. Turns: 22 to 25, zero to full value. Res. Tol: Type 3010, ±5%; 3011, ±20%. Resolution: 3010, 2% @ 10 ohms to .17% @ 100K ohms. Mount: Same as above types. **Quantity prices for one value and type only.** Av. wt., 2 oz.

1-WATT HUMIDITY-PROOF WIREWOUND. 1¼x5/16x9/32". −65°C to +175°C.

46D 7624 C	3010L	A	Insul. leads	Std.	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7626 C	3010L	A	Insul. leads	Std.	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46D 7627	3010L	A	Insul. leads	Std.	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46D 7628	3010L-2	A	Insul. leads	Std.	100K only	11.34	10.50	9.45	8.97	8.40	7.98
46D 7052 C	3010L	B	Insul. leads	Panel	10 ohms-10K	7.83	7.25	6.53	6.19	5.80	5.51
46D 7053 C	3010L	B	Insul. leads	Panel	20K, 25K	9.45	8.75	7.88	7.47	7.00	6.65
46D 7054	3010L	B	Insul. leads	Panel	50K only	9.99	9.25	8.33	7.90	7.40	7.03
46D 7055	3010L-2	B	Insul. leads	Panel	100K only	12.15	11.25	10.13	9.61	9.00	8.55
46D 7644 C	3010P	D	PC pins	PC	10 ohms-10K	7.02	6.50	5.85	5.55	5.20	4.94
46D 7645 C	3010P	D	PC pins	PC	20K, 25K	8.64	8.00	7.20	6.83	6.40	6.08
46D 7646	3010P	D	PC pins	PC	50K only	9.18	8.50	7.65	7.26	6.80	6.46
46D 7647	3010P-2	D	PC pins	PC	100K only	11.34	10.50	9.45	8.97	8.40	7.98

¼-WATT HUMIDITY-PROOF CARBON. 1¼x5/16x9/32". −65°C to +150°C.

46D 7629 C	3011L	A	Insul. leads	Std.	10K-2 meg (except 25K)	7.02	6.50	5.85	5.55	5.20	4.94
46D 7056 C	3011L	B	Insul. leads	Panel		7.83	7.25	6.53	6.19	5.80	5.51
46D 7631 C	3011P	D	PC pins	PC		7.02	6.50	5.85	5.55	5.20	4.94

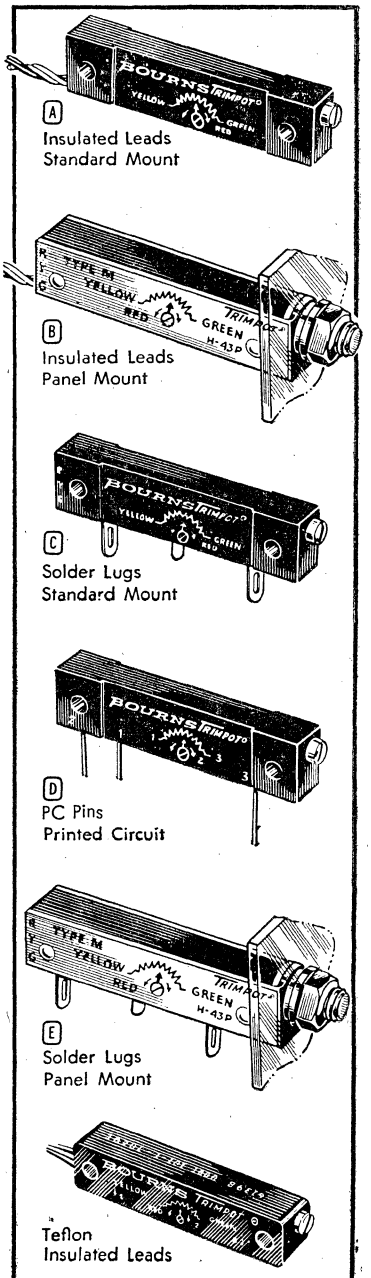
3020L 5-WATT WIREWOUND TRIMPOT® POTENTIOMETERS

Rated 5 watts @ 25°C; 3.75 watts @ 70°C; 2 watts @ 130°C. MIL-R-27208A. Strain-resistant mandrel. Silverweld® wire terminations. Tol., ±5%. Resolution: 1.23% to 0.20%. 100 to 50K ohms. 25 turn adjust. 31/64x¼x1¼". Av. shpg. wt., 2 oz.

Stock No.	Fig.	Terminal Connections	Mtg.	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46D 7189 C	A	Insul. leads	Std.	100 ohms-10K	14.04	13.00	11.70	11.10	10.40	9.88
46D 7190 C	A	Insul. leads	Std.	20K and 25K	15.66	14.50	13.05	12.38	11.60	11.02
46D 7191	A	Insul. leads	Std.	50K only	16.20	15.00	13.50	12.81	12.00	11.40

TABLE A—STOCK VALUES
SPECIFY VALUES WANTED

Ohms	Ohms	Ohms
10	2000	200K
20	5000	500K
50	10K	750K
100	20K	1 meg
200	25K	2 meg
500	50K	5 meg
1000	100K	



A Insulated Leads Standard Mount

B Insulated Leads Panel Mount

C Solder Lugs Standard Mount

D PC Pins Printed Circuit

E Solder Lugs Panel Mount

Teflon Insulated Leads

NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

BOURNS Potentiometers

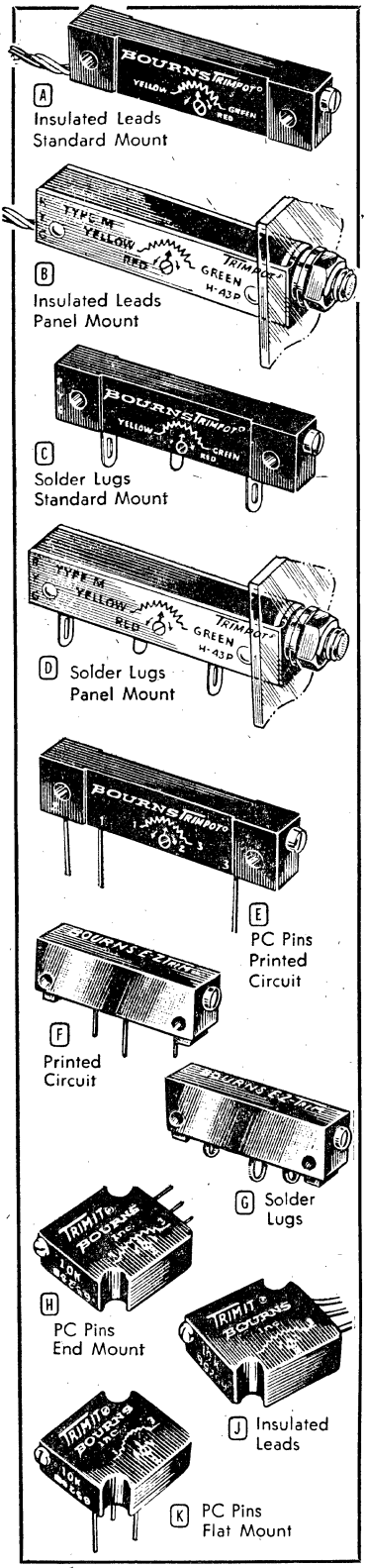


TABLE A—STOCK VALUES—SPECIFY VALUES WANTED (OHMS)

10	50	200	1000	5000	20K	100K	500K	1 meg	5 meg
20	100	500	2000	10K	50K	200K	750K	2 meg	.....

TRIMIT® SUBMINIATURE POTENTIOMETERS

Low cost pots—body is only 9/32x5/16x1¼". May be stacked. Have 25-turn screwdriver adjustment, zero to full value, with self-locking shaft. Power rating is at 25°C. Operating range, —55 to +105°C. Panel mounting requires .228" hole with max. thickness, .13" Standard mounts have two #2 holes on 1" ctrs. Quantity price for one resistance value and type only. Specify Mfr's Type and resistance when ordering. 2 oz.

½-WATT WIREWOUND TYPE. Size: 5/16x¼x1¼".

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7397 C	271	A	Insul. leads	Std.	50 ohms-10K	3.19	2.95	2.66	2.52	2.36	2.24
46 D 7981	271	A	Insul. leads	Std.	20K only	4.32	4.00	3.60	3.42	3.20	3.04
46 D 7034 C	271	B	Insul. leads	Panel	50 ohms-10K	4.00	3.70	3.34	3.16	2.96	2.81
46 D 7062	271	B	Insul. leads	Panel	20K only	5.13	4.75	4.28	4.06	3.80	3.61
46 D 7398 C	273	C	Solder lugs	Std.	50 ohms-10K	3.19	2.95	2.66	2.52	2.36	2.24
46 D 7982	273	C	Solder lugs	Std.	20K only	4.32	4.00	3.60	3.42	3.20	3.04
46 D 7035 C	273	D	Solder lugs	Panel	50 ohms-10K	4.00	3.70	3.34	3.16	2.96	2.81
46 D 7063	273	D	Solder lugs	Panel	20K only	5.13	4.75	4.28	4.06	3.80	3.61
46 D 7399 C	275	E	PC pins	PC	50 ohms-10K	3.19	2.95	2.66	2.52	2.36	2.24
46 D 7983	275	E	PC pins	PC	20K only	4.32	4.00	3.60	3.42	3.20	3.04

1/5-WATT CARBON TYPE. Size: 9/32x5/16x1¼".

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7377 C	272	A	Insul. leads	Std.	5000 ohms-5 meg	3.78	3.50	3.15	2.99	2.80	2.66
46 D 7036 C	272	B	Insul. leads	Panel		4.59	4.25	3.83	3.63	3.40	3.23
46 D 7378 C	274	C	Solder lugs	Std.		3.78	3.50	3.15	2.99	2.80	2.66
46 D 7037 C	274	D	Solder lugs	Panel		4.59	4.25	3.83	3.63	3.40	3.23
46 D 7379 C	276	E	PC pins	PC		3.78	3.50	3.15	2.99	2.80	2.66

PALIRIUM®-ELEMENT POTENTIOMETERS

Non-wirewound, infinite, resolution resistance element "Palarium." Humidity-proof. 25 turns. Meets MIL-R-22097B. Max. operating temp., 175° C. Types 3012 and 3052. Tol., ±10%. End settings, 0.1% max. Power rating, 1 watt at 70° C. Temp. coefficient: 25° C to 175° C, ±100 ppm/°C to —65° C,—100 to +300 ppm/°C. Specify Mfr's Type No. and resistance value when ordering. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7996 C	3012L	A	Insul. leads	Std.	10 ohms-1 meg	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7192 C	3012L	B	Insul. leads	Panel		6.75	6.25	5.63	5.34	5.00	4.75
46 D 7997 C	3012P	E	PC pins	PC		5.94	5.50	4.95	4.70	4.40	4.18
46 D 7193 C	3012P	F	PC pins	Panel		6.75	6.25	5.63	5.34	5.00	4.75
46 D 7999 C	3052L	A	Insul. leads	Std.	10 ohms-1 meg	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7194 C	3052L	B	Insul. leads	Panel		6.75	6.25	5.63	5.34	5.00	4.75
46 D 7998 C	3052P	E	PC pins	PC		5.94	5.50	4.95	4.70	4.40	4.18
46 D 7195 C	3052P	F	PC pins	Panel		6.75	6.25	5.63	5.34	5.00	4.75

E-Z TRIM® POTENTIOMETERS

Types 3067, 3068. Type 3067 ½-watt 15-turn and 3068 1/5-watt 15-turn pots for commercial applications. 3068 has a Resiston carbon resistance element. Type 3067 has wirewound element. The wipers idle at both ends of travel. Mounting centers, 53/64". 3/8x1x9/32". Specify Mfr's Type No. and resistance value wanted when ordering. Quantity prices for one resistance value and type only. Av. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7636 C	3067-S	G	Solder lugs	Std.	50 ohms-20K	1.85	1.71	1.54	1.46	1.37	1.30
46 D 7637 C	3067-P	E	PC pins	Std.	50 ohms-20K	1.85	1.71	1.54	1.46	1.37	1.30
46 D 7638 C	3068-S	G	Solder lugs	Std.	20K-1 meg	1.85	1.71	1.54	1.46	1.37	1.30
46 D 7639 C	3068-P	E	PC pins	Std.	20K-1 meg	1.85	1.71	1.54	1.46	1.37	1.30

MODEL 3257 TRIMIT POTENTIOMETERS

Commercial type for industrial or lab use. 25-turn screwdriver adjustment. Positive stops at end of wiper travel. Silverweld termination. Power rating, .5 watt at room temp. Operating temp range, —65°C to 105°C. Specify Mfr's Type and resistance wanted when ordering. Quantity price for one value and type only. Wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Mtg.	Values See Table A (Except 5000)	EACH§ 1-9	10-24	25-49	50-99	100-249
46 D 7738 C	3257L	J	Insul. leads	Std.	10 ohms-10K	3.19	2.95	2.66	2.52	2.36
46 D 7739	3257L	J	Insul. leads	Std.	20K only	4.32	4.00	3.60	3.42	3.20
46 D 7740 C	3257P	K	PC pins	Flat	10 ohms-10K	3.19	2.95	2.66	2.52	2.36
46 D 7741	3257P	K	PC pins	Flat	20K only	4.32	4.00	3.60	3.42	3.20
46 D 7742 C	3257W	H	PC pins	End	10 ohms-10K	3.19	2.95	2.66	2.52	2.36
46 D 7743	3257W	H	PC pins	End	20K only	4.32	4.00	3.60	3.42	3.20

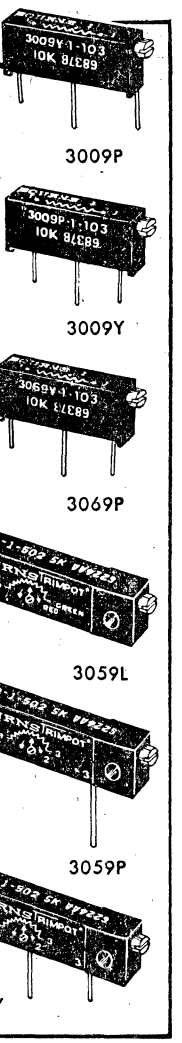
NOTE: §QUANTITY PRICES ARE FOR ONE RESISTANCE VALUE AND TYPE ONLY

TRIMMER POTENTIOMETERS WITH HIGH-STABILITY CERMET ELEMENT

- Infinite Resolution Cermet Element for the Stability of a Wirewound
- Low Temperature Coefficient of ±150 ppm/°C Over Entire Range
- Excellent Shock and Vibration Stability • Tinned PC Pins
- Choice of Values from 10 Ohms Through 1 Megohm • 10% Tolerance

Humidity-resistant potentiometers feature Cermet element for infinite resolution with the stability of a wirewound unit. Low temperature coefficient of ±150 ppm/° C over entire resistance range. Outstanding settability of ±0.05%. Wiper assembly idles at both ends of travel, preventing damage from forced adjustment. Excellent shock, vibration and acceleration stability. Tinned PC pins compatible with automated and hand soldering methods (except 3059L with insulated wire leads). Types 3009, 3059, and 3069 have Mil-Spec immersion seal. Values Available (Specify): 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K and *750K ohms 3059 Series Only; 1 megohm.

Infinite Resolution, High Stability
CERMET®
Resistance Element In Every Type



MODEL 3009 COMPACT E-Z TRIM® POTENTIOMETERS

Infinite resolution Cermet element with ±0.05% settability. Only .75x.19x.35"; standard or RJ11 pin configuration. Tinned .021" dia. pins for easy printed circuit board fabrication. Mil-Spec immersion seal. Power rating: 0.75 watt at 25°C derated to zero at 125°C. Operating Temp: −55° to +125°C. Temp. coefficient: ±150 ppm/°C maximum. Tol: ±10%. Min. resistance: 2.0% or 1 ohm, whichever is greater. No. of turns, 20 nominal. Insulation resistance: 100 megs min. at 500 VAC. Shaft torque: 5.0 oz.-in. max. PC pin spacing (staggered): standard 3009P, .30" between pin 1 and 2, .20" between 2 and 3; 3009Y (RJ11), .40" between pin 1 and 2, .30 between 2 and 3. 1 oz.

Stock No.	Mfr's Type	Terminal Connections	Values (See above)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7758 C	3009P	Std. PC pins	10 ohms	1.94	1.84	1.75	1.71	1.65	1.55
46 D 7759 C	3009Y	RJ11 PC pins	to 1 meg.	1.94	1.84	1.75	1.71	1.65	1.55

MODEL 3069 COMMERCIAL E-Z TRIM® POTENTIOMETERS

Same as Model 3009 above, but slightly larger size (.75x.35x.25").

Stock No.	Mfr's Type	Terminal Connections	Values (See above)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7760 C	3069P	Std. PC pins	10 ohms-1 meg	1.94	1.84	1.75	1.71	1.65	1.55

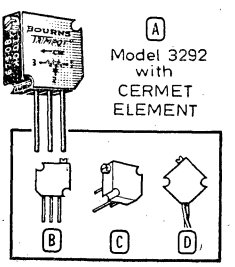
MODEL 3059 HIGH-TEMPERATURE TRIMPOT® POTENTIOMETERS

Meet or exceed all requirements of MIL-R-22097, Characteristic C, Style RJ12. Excellent Mil-Spec humidity performance; stable, infinite resolution with Palirium® Cermet element. Power rating: 1.0 watt at 70°C, derated to zero at 150°C. Temp. coefficient: ±150 ppm/°C. Tol: ±10%. No of turns: 22 (±5). End settings: 2 ohms max. PC pin spacing: 3059P, .70" and .20"; 3059Y .30" and .40" (staggered). Size: 1.25x.19x.32"; two mtg. holes for #2 screw on 1.000" centers. Wt., 1 oz.

Stock No.	Mfr's Type	Terminal Connections	Values* (See above)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7761 C	3059L	Insul. leads	10 ohms to 1 meg	3.00	.285	2.70	2.57	2.43	2.29
46 D 7762 C	3059P	Std. PC pins	10 ohms to 1 meg	3.00	.285	2.70	2.57	2.43	2.29
46 D 7763 C	3059Y	RJ11 PC pins	10 ohms to 1 meg	3.00	2.85	2.70	2.57	2.43	2.29

MODEL 3292 TRIMPOT® POTENTIOMETERS WITH CERMET ELEMENT

Excellent stability and performance. Thin line (.150") design in ⅜" square case. Infinite resolution on Palirium® Cermet element. High Performance: .50 watt at +85°C; +175°C maximum operating temperature; 30G vibration; 100G shock; humidity proof all plastic case. Temperature coefficient: 150 ppm/°C maximum. Meets or exceeds MIL-R-22097 characteristic C. Complete resistance range: 10 ohms to 1 megohm. Wiper idles at both ends to prevent forced adjustment. PC pin spacing. Insulation resistance: 500 volts DC, 1000 megohms minimum. Tol: ±10%. End settings: 1 ohm. Wt., 1 oz.



Stock No.	Mfr's Type	Fig.	Terminal Connections	Values See table A below	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7764 C	3292X	A	PC pins	10 ohms to 1 meg	6.50	6.18	5.85	5.72	5.52	5.18
46 D 7765 C	3292W	B	PC pins	10 ohms to 1 meg	6.50	6.18	5.85	5.72	5.52	5.18
46 D 7766 C	3292P	C	PC pins	10 ohms to 1 meg	6.50	6.18	5.85	5.72	5.52	5.18
46 D 7767 C	3292L	D	Insul. leads	10 ohms to 1 meg	6.50	6.18	5.85	5.72	5.52	5.18

TABLE "A" STOCK VALUES (OHMS) SPECIFY VALUES WANTED

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10	100	1,000	10 K	50 K	500 K
20	200	2,000	20 K	100 K	1 Meg
50	500	5,000	25 K	200 K	

NOTE: §QUANTITY PRICES ARE FOR ONE RESISTANCE VALUE AND TYPE ONLY

Precision Potentiometers

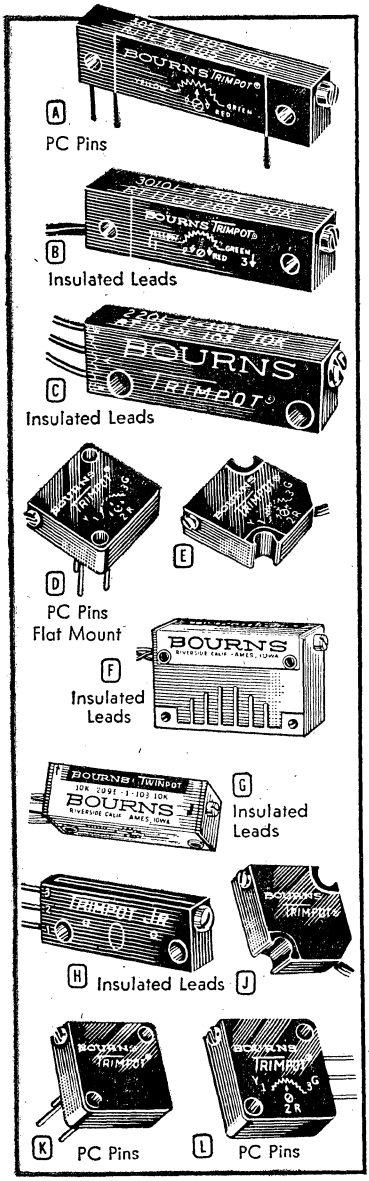
MULTI-TURN POTS

NUMBER OF TURNS (Zero to Maximum)

MIL	Turns	Size
RT10	15	1x.180x.315″
RT11	25	1.25x.280x.312″
RT12	22	1.25x.190x.320″
RT22	25	.500x.500x.220″
RJ11	22	1.250x.280x.312″
RJ12	22	1.25x.190x.320″
RJ22	25	.500x.500x.220″

TABLE A—VALUES (OHMS)

10	200	5000	30K	250K
20	500	10K	50K	500K
50	1000	20K	100K	750K
100	2000	25K	200K	1 meg



MILITARY STANDARD MULTI-TURN POTENTIOMETERS

MIL-R-27208 Wirewound. Rated ¾-watt at 85°C. Max. oper. temp., 150°C. Temp. coeff., ±70PPM/°C, referred to an ambient of 25°C. Tol., ±5%. RT10, microminiature, ¾″ mtg. ctrs. RT11, RT12; subminiature, 1″ mtg. ctrs. RT22 square, .52″ mtg. ctr. on lead type. MIL-R-22097 Carbon. ¼-watt at 70°C. Max., 125°C. Coeff., ±600-PPM/°C. Tol., ±10%. Mtg. ctrs. RJ11BL, RJ12, 1″; RJ22BL, .52″. Wt., 2 oz.

MIL-R-27208 WIREWOUND POTENTIOMETERS

Stock No.	MIL or Mfr's Type	Fig.	Terminals	Values See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7171 C	RT10C2L	C	Insul. wire	100 ohms-10K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7172 C	RT11C2L	B	Insul. wire	10 ohms-10K	5.56	5.13	4.71	4.34	4.03	3 79
46 D 7173	RT11C2L	B	Insul. wire	20K only	6.11	5.64	5.18	4.77	4.43	4.17
46 D 7174 C	RT11C2P	A	PC pins	10 ohms-10K	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7175	RT11C2P	A	PC pins	20K only	6.11	5.64	5.18	4.77	4.43	4.17
46 D 7176 C	RT12C2L	B	Insul. wire	10 ohms-10K	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7177	RT12C2L	B	Insul. wire	20K only	6.11	5.64	5.18	4.77	4.43	4.17
46 D 7178 C	RT12C2P	A	PC pins	10 ohms-10K	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7179	RT12C2P	A	PC pins	20K only	6.11	5.64	5.18	4.77	4.43	4.17
46 D 7180 C	RT22C2L	E	Insul. wire	100 ohms-10K	5.27	5.01	4.74	4.48	4.22	3.95
46 D 7162	RT22C2L	E	Insul. wire	20K only	5.75	5.46	5.18	4.89	4.60	4.31
46 D 7181 C	RT22C2P	D	PC pins	100 ohms-10K	4.72	4.48	4.25	4.00	3.78	3.54
46 D 7163	RT22C2P	D	PC pins	20K only	5.20	4.94	4.68	4.42	4.16	3.90
46 D 7516	RT22C2W	. . .	PC pins	100 ohms-10K	4.72	4.48	4.25	4.00	3.78	3.54
46 D 7517	RT22C2W	. . .	PC pins	20K only	5.20	4.94	4.68	4.42	4.16	3.90
46 D 7518	RT22C2X	. . .	PC pins	100 ohms-10K	4.72	4.48	4.25	4.00	3.78	3.54
46 D 7519	RT22C2X	. . .	PC pins	20K only	5.20	4.94	4.68	4.42	4.16	3.90

MIL-R-22097 CARBON POTENTIOMETERS (*Not available in 30K, 200K, 750K)

46 D 7182 C	RJ11BL	B	Insul. wire	20K-1 meg*	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7183 C	RJ11BP	A	PC pins	20K-1 meg*	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7186 C	RJ12BL	B	Insul. wire	20K-1 meg*	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7187 C	RJ12BP	A	PC pins	20K-1 meg*	5.56	5.13	4.71	4.34	4.03	3.79
46 D 7184 C	RJ22BL	E	Insul. wire	20K-1 meg*	7.83	7.25	6.53	6.19	5.80	5.51
46 D 7185 C	RJ22BP	D	PC pins	20K-1 meg*	7.83	7.25	6.53	6.19	5.80	5 51

SUBMINIATURE POTENTIOMETERS

Humidity-proof types meet MIL specs. Tol., ±10%. Res.: 2.7% @ 10 ohms to less than 0.2% @ full value. *Standard mts: 207, 208 (rheostat); 4 holes on 1″x½″ sq. 220, two #2 holes on ¾″ ctr. †Panel mt. req. .13″ max. thickness with .228″ hole, except 220, .194″. 2 oz. 1¼x1⅜6x9½″. Temp., —65°C to +175°C.

2-WATT HIGH-RESISTANCE WIREWOUND (‡Not available in 25K, 30K)

46 D 7603 C	207L*	F	Insul. lds.	100 ohms-50K‡	10.26	9.50	8.55	8.11	7.60	7.22
46 D 7604	207L*	F	Insul. lds.	100K only	11.88	11.00	9.90	9.39	8.80	8.36
46 D 7048 C	207L†	F	Insul. lds.	100 ohms-50K‡	11.07	10.25	9.23	8.75	8.20	7.79
46 D 7049	207L†	F	Insul. lds.	100K only	12.69	11.75	10.58	10.03	9.40	8.93
46 D 7050 C	208L*	F	Insul. lds.	100K, 150K	11.34	10.50	9.45	8.97	8.40	7.98
46 D 7051	208L*	F	Insul. lds.	200K only	12.96	12.00	10.80	10.25	9.60	9.12
46 D 7060 C	208L†	F	Insul. lds.	100K, 150K	12.15	11.25	10.13	9.61	9.00	8.55
46 D 7061	208L†	F	Insul. lds.	200K only	13.77	12.75	11.48	10.89	10.20	9.69

½-WATT TWINPOT® DUAL-WIREWOUND POTENTIOMETER

Both elements identical value. Each dissipates ½-watt @ 70°C. Tracking is 5% from 200 ohms to 50K, 8% from 10 ohms to 100 ohms. ±10% tol. —65° to +135°C. *Standard mounts have two #2 mtg. holes on 1″ ctrs. †Panel mount types require max. .13″ panel thickness and .228″ hole. 1¼x½x 5⁄16″. Quantity prices for one value. Wt., 2 oz.

46 D 7615 C	209L*	G	Insul. lds.	10 ohms-10K	12.96	12.00	10.80	10.25	9.60	9.12
46 D 7616	209L*	G	Insul. lds.	20K only	14.58	13.50	12.15	11.53	10.80	10.26
46 D 7691	209L*	G	Insul. lds.	50K only	16.20	15.00	13.50	12.81	12.00	11.40
46 D 7057 C	209L†	G	Insul. lds.	10 ohms-10K	15.12	14.00	12.60	11.97	11.20	10.64
46 D 7058	209L†	G	Insul. lds.	20K only	16.74	15.50	13.95	13.25	12.40	11.78
46 D 7059	209L†	G	Insul. lds.	50K only	18.36	17.00	15.30	14.53	13.60	12.92

1-WATT SUBMINIATURE HUMIDITY-PROOF WIREWOUND

MIL-R-27208A. ±5% tol. 1 watt at 70°C. 200L: 6″ Teflon .024″ standard leads. 220W: 1½″ gold-plated leads. —65°C to +175°C. 5⁄16x3⁄16x1″. 2 oz.

46 D 7607 C	220L	H	Insul. lds.	10 ohms-10K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7608 C	220L	H	Insul. lds.	20K, 30K	10.26	9.50	8.55	8.11	7.60	7.22
46 D 7395 C	220W	H	Unins. lds.	10 ohms-10K	8.64	8.00	7.20	6.83	6.40	6.08
46 D 7396 C	220W	H	Unins. lds.	20K, 30K	10.26	9.50	8.55	8.11	7.60	7.22

TRIMPOT® SUBMINIATURE HUMIDITY-PROOF POTS

Type 3250, 3251. 25-turn adjust. 3250 wirewound to 175°C, 1 W @ 70°C. Res.: 1.09 to .10%, 10-50K ohms. Tol. ±5%. 3251 carbon to 150°C, rated ½-W 50°C, ¼-W @ 100°C. Infinite res. Tol., ±20%. MIL-R-27208B, MIL-R-22097C. L, Teflon leads; P, W printed circuit pins. L, ½x½x3⁄16″; P, W, ½x½x7⁄32″. *No 25K, 30K, 250K. 2 oz.

46 D 7692 C	3250L	J	Insul. lds.	10 ohms-10K	6.71	6.22	5.59	5.31	4.97	4.72
46 D 7693 C	3250L	J	Insul. lds.	20K, 25K	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7694	3250L	J	Insul. lds.	50K only	10.00	9.27	8.34	7.91	7.41	7.04
46 D 7936 C	3251L	J	Insul. lds.	20K-1 meg*	7.83	7.25	6.53	6.19	5.80	5.51
46 D 7695 C	3250P	K	PC	10 ohms-10K	7.23	6.69	6.02	5.71	5.35	5.08
46 D 7696 C	3250P	K	PC	20K, 25K	7.97	7.38	6.64	6.30	5.90	5.61
46 D 7697	3250P	K	PC	50K only	10.53	9.75	8.78	8.33	7.80	7.41
46 D 7937 C	3251P	K	PC	20K-1 meg*	7.83	7.25	6.53	6.19	5.80	5.51
46 D 7066 C	3250W	L	PC	10 ohms-10K	7.23	6.69	6.02	5.71	5.35	5.08
46 D 7067 C	3250W	L	PC	20K, 25K	7.97	7.38	6.64	6.30	5.90	5.61
46 D 7068	3250W	L	PC	50K only	10.53	9.75	8.78	8.33	7.80	7.41
46 D 7938 C	3251W	L	PC	20K-1 meg*	7.83	7.25	6.53	6.19	5.80	5.51

NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

MICROMINIATURE HUMIDITY-PROOF POTENTIOMETERS

Type 3280. Humidity-proof wire wound Trimpot potentiometer with relatively high power handling capabilities in a package only ⅜" square. Rated @ 1 watt at 70°C, ½-watt at 125°C. Usable to 175°C. High resolution, 1.25% to 0.11% from 10 to 50K ohms respectively. 25-turn screwdriver adjustment with positive acting end stops and clutch. Meets or exceeds MIL-R-27208B specs for humidity, shock, vibration and dielectric strength. Size: .150" thick by ⅜" square. Shpg. wt., 2 oz.

Type 3281. Identical in appearance, dimensions, and mounting arrangements to 3280. Power rating 0.50 watt at 50°C. Minimum insulation resistance at 500 VDC, 100 megs. Resiston carbon element provides values up to 1 meg. 25-turn mechanical worm gear with positive stops. Automatic clutch prevents damage to stop mechanism. Dielectric strength per MIL-R-22097C. MIL specs for sand, dust, salt, spray, and moisture resistance. —65°C to +150°C. Wt., 2 oz. *Not avail. in 25K.

Stock No.	Mfr's Type	Fig.	Mounting	Values—See Table A, Right	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7069 C	3280L	A	Standard	10 ohms-10K	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7070 C	3280L	A	Standard	20K, 25K	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7071	3280L	A	Standard	50K only	9.72	9.00	8.10	7.69	7.20	6.84
46 D 7986 C	3281L	A	Standard	20K-1 meg*	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7072 C	3280P	A	PC	10 ohms, 10K	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7073 C	3280P	B	PC	20K, 25K	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7074	3280P	B	PC	50K only	9.72	9.00	8.10	7.69	7.20	6.84
46 D 7987 C	3281P	B	PC	20K-1 meg*	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7075 C	3280W	C	PC	10 ohms-10K	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7076 C	3280W	C	PC	20K, 25K	9.18	8.50	7.65	7.26	6.80	6.46
46 D 7077	3280W	C	PC	50K only	9.72	9.00	8.10	7.69	7.20	6.84
46 D 7988 C	3281W	C	PC	20K-1 meg*	7.56	7.00	6.30	5.98	5.60	5.32

Model 3260 is a humidity-proof, microminiature potentiometer which provides resistance values up to 20K ohms in a package only ¼" square. All plastic sealed case protects against liquids and potting compounds. 11-turn mechanical adjustment. Positive end stops at both ends of travel and clutch wiper action. Power rating is 0.2 watt at 70°C. Operating temperature range, —65°C to +175°C. Exceeds MIL specs for shock, vibration, salt, sand, dust, etc. Dielectric strength per MIL-R-27208A. Resistance tol., ±5%. Insulation resistance at 500 VDC, 1000 meg minimum. High resolution—1.68% at 10 ohms to .25% at 20K. Specify Stock No. and Resistance when ordering. Size: .25x.25x.25". Av. shpg. wt., 2 oz.

46 D 7734 C	3260H	D	PC	10-1000	7.50	6.95	6.25	5.93	5.56	5.28
46 D 7735 C	3260H	D	PC	2000, 5000	8.25	7.64	6.88	6.53	6.11	5.81
46 D 7736 C	3260H	D	PC	10K and 20K	10.50	9.72	8.75	8.31	7.78	7.39

15-TURN MICROMINIATURE, HIGH-TEMPERATURE, HUMIDITY-PROOF POTS

Type 3000P. Microminiature Trimpot with high temperature, sealed plastic case usable to +175°C. Precision wirewound element. 15-turn screwdriver adjustment. Meet MIL-R-27208B specs for humidity, vibration and shock. Silverweld® termination. Power rating, ½ watt at 70°C. Resolution: 1.7% to 0.29%, 50 to 20K. Resistance tol. ±10%. PC mtg. ¾x5/32x5/16".

Type 3001P. Same in appearance, dimensions and mounting arrangement as 3000P, but is a carbon pot usable to +150°C. Resiston® carbon element. Power rating, 0.2 watt at 70°C. Meets MIL specs for humidity, shock and vibration. Wiper assembly idles at end of travel. Infinite resolution. Res. tol. ±20%. *Not avail. in 25K. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Mounting	Values—See Table A, Above	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7621 C	3000P	E	PC	50, ohms-10K	9.72	9.00	8.10	7.68	7.20	6.84
46 D 7622	3000P	E	PC	20K only	10.80	10.00	9.00	8.54	8.00	7.60
46 D 7064 C	3001P	E	PC	20K, 1 meg*	9.18	8.50	7.65	7.26	6.80	6.46

20-TURN MICROMINIATURE E-Z TRIM POTENTIOMETER

Model 3007. Microminiature potentiometer with high temperature sealed plastic case, usable to 125°C. Precision wirewound element. 20-turn screwdriver adjustment. Meet MIL-R-27208B specs for humidity, vibration and shock. Power rating, 1 watt at 40°C. Resolution: 1.6% to 0.2%, 50 to 20K. Resistance tol. ±10%. Standard PC mounting. .75x.16x.31." (Prices are for one resistance value only). Shpg. wt., 2 oz.

46 D 7385 C	3007P	F	PC	50 ohms-20K	1.75	1.62	1.46	1.39	1.30	1.23

20-TURN SUBMINIATURE E-Z TRIM® POTENTIOMETER

Model 3005. Commercial, subminiature, wirewound potentiometers. 20-turn mechanical screwdriver adjustment. Wiper assembly idles at both ends of travel. Sealed to prevent contamination. Silverweld® termination. Printed-circuit pin terminals. Meets MIL-STD-202 humidity specifications. Resistance range: 10 to 20K ohms. Resistance tolerance, ±10%. Insulation resistance, 500 VDC, 100 megohm minimum. Resolution: 0.2 to 1.6%. Power rating: 40°C ambient at 1.0 watt; 125°C amb. at 0 watt. Operating temperature range: —55°C to 125°C. Temp. coeff., 50PPM/°C nom. 100PPM/°C max. Not avail. in 20 ohms. Size: .75x.16x.31".

46 D 7652 C	3005P	F	PC	10 ohms-20K	2.00	1.85	1.75	1.72	1.65	1.55

1-TURN SUBMINIATURE TRIMPOT® POTENTIOMETERS

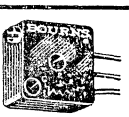
Types 3367, 3368. Type 3367 is wirewound pot rated ½ W to 70°C, usable to 105°C ambient. Resolution 1.3 to 0.19% from 10 to 20,000 ohms respectively. ±5%. **Type 3368** is Resiston® carbon pot rated ¼ W to 50°C, usable to 105°C. Infinite resolution. ±20% tolerance. Both types meet steady state humidity test with under 1% wiper shift under extreme vibration. Body 3/16x½" dia. S types have #12-18 bushings and nut. 9/32" long. Specify value wanted and Mfr's type. Shpg. wt., 2 oz. *Not available in 25K.

Stock No.	Mfr's Type	Fig.	Terminal	Values—See Table A, Above	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7640 C	3367S	G	Lugs	10 ohms-20K	5.67	5.25	4.73	4.48	4.20	3.99
46 D 7083 C	3368S	H	Lugs	20K-1 meg*	6.75	6.25	5.63	5.34	5.00	4.75
46 D 7642 C	3367P	G	PC	10 ohms-20K	4.86	4.50	4.05	3.84	3.60	3.42
46 D 7084 C	3368P	H	PC	20K-1 meg*	5.94	5.50	4.95	4.70	4.40	4.18

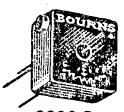
NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

TABLE A— STOCK VALUES Specify Values

Ohms	Ohms
10	10K
20	20K
50	25K
100	50K
200	100K
500	200K
1000	500K
2000	750K
5000	1 meg



A 3280 L 3281 L Insulated Leads

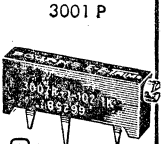


B 3280 P 3281 P PC Pins

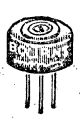
C 3280 W 3281W PC Pins

D 3260 PC Pins

E 3000 P 3001 P



F 3005 P 3007 P



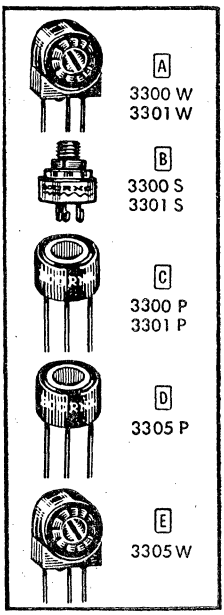
G 3367 P 3368 P

H 3367 S 3368 S

BOURNS Quality Potentiometers

TABLE A–STOCK VALUES SPECIFY VALUES WANTED

Ohms	Ohms	Ohms
10	1000	100K
20	2000	200K
50	5000	500K
100	10K	750K
200	20K	1 meg
500	50K	.....



A 3300 W 3301 W

B 3300 S 3301 S

C 3300 P 3301 P

D 3305 P

E 3305 W

SUBMINIATURE AND MICROMINIATURE TRIMPOT® POTENTIOMETERS

1-TURN MICROMINIATURE TRIMPOT® POTENTIOMETERS

Type 3300. Humidity-proof, single-turn, wirewound potentiometers. Power rating: ½-watt at 70°C ambient; ¼-watt at 110° ambient. Excellent shock and vibration stability. Meet all MIL-R-27208A specifications. Low residual end setting resistance (0-1.0%). Continuity is maintained through full mechanical range. Silverweld® termination eliminates vulnerable single-wire termination. Resistance tolerance, ±5%. Electrical adjustment slot .025" wide. 3300P has No. 26 gold-plated printed circuit pins .016" dia. 3300S has gold-plated solder lugs 5/32" long. 3/16x5/16" dia. with ¼" 10-32 bushing on 3300S. **Quantity prices are for one resistance value and type only.** Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Values (Ohms) See Table A	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7931 C	3300P	C	PC pins	10 ohms-10K	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7932	3300P	C	PC pins	20K only	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7929 C	3300W	A	PC pins	10 ohms-10K	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7930	3300W	A	PC pins	20K only	7.56	7.00	6.30	5.98	5.60	5.32
46 D 7933 C	3300S	B	Solder lugs	10 ohms-10K	8.91	8.25	7.43	7.05	6.60	6.27
46 D 7934	3300S	B	Solder lugs	20K only	10.53	9.75	8.78	8.33	7.80	7.41

Type 3301. Humidity-proof, single-turn potentiometers with high temperature Resiston carbon element. Power rating, 0.25 watts @ +70°C. Resistance tolerance, ±20%. Same size and mounting characteristics as 3300 above. **Quantity prices for one value and type only. Specify values.**

46 D 7989 C	3301P	C	PC pins	10K-1 meg	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7991 C	3301W	A	PC pins	10K-1 meg	5.94	5.50	4.95	4.70	4.40	4.18
46 D 7990 C	3301S	B	Solder lugs	10K-1 meg	8.91	8.25	7.43	7.05	6.60	6.27

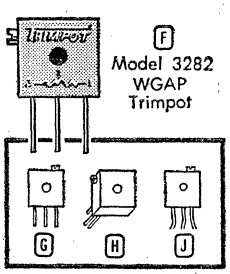
MODEL 3305 COMMERCIAL SINGLE TURN POT

Meets MIL-STD-202B humidity insulation. Sealed to prevent contamination. Silverweld termination alloys with multiple resistance wires. Stops provided at each end of travel. 3305P, printed circuit pins. 3305W, printed circuit pins (side adjust). Operating range, −55°C to +125°C. Power rating 0.5 watt at 25°C. Tol., ±5%. **Quantity prices for one value and type only.** Av. shpg. wt., .02 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Values (See Table A)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7900 C	3305P	D	PC pins	50 ohms-5K	1.75	1.68	1.61	1.56	1.47	1.37
46 D 7901	3305P	D	PC pins	10K	2.00	1.92	1.84	1.78	1.68	1.57
46 D 7902	3305P	D	PC pins	20K	2.50	2.40	2.30	2.23	2.10	1.96
46 D 7903 C	3305W	E	PC pins	50 ohms-5K	2.25	2.16	2.07	2.00	1.89	1.77
46 D 7904	3305W	E	PC pins	10K	2.50	2.40	2.30	2.23	2.10	1.96
46 D 7905	3305W	E	PC pins	20K	3.00	2.88	2.76	2.67	2.52	2.36

SERIES 3200 MICRO TRIMPOT® POTENTIOMETERS

MODEL 3282 WGAP MICROMINIATURE TRIMPOT



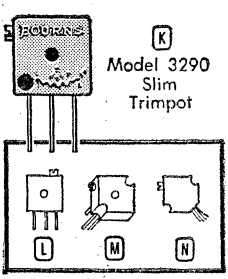
F Model 3282 WGAP Trimpot

G H J

Microminiature potentiometers, ⅜" square. Stable, infinite resolution Palirium element. Rated 1 watt at 70°C. Max. operating temp., 175°C. Meets MIL-R-22097. Single mounting hole; printed circuit pins or insulated leads. Positive end stops. Tol., ±10%. **Quantity prices for one value only.** 2 oz.

Stock No.	Mfr's Type	Fig.	Terminal Connections	Values (See Table A)	EACH§ 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7515 C	3282H	F	PC pins	10 ohms-1 meg. (Except 200K, 750K)	6.50	6.18	5.85	5.72	5.52	5.18
46 D 7514 C	3282W	G	PC pins		6.50	6.18	5.85	5.72	5.52	5.18
46 D 7512 C	3282P	H	PC pins		6.50	6.18	5.85	5.72	5.52	5.18
46 D 7513 C	3282L	J	Ins. wire		6.50	6.18	5.85	5.72	5.52	5.18

MODEL 3290 THIN MICRO TRIMPOT® POTENTIOMETER



K Model 3290 Slim Trimpot

L M N

Humidity-proof wire-wound potentiometer only .150" thick, ⅜" square. Rated 1 watt at 70°C. Max. operating temperature, 175°C. Meets MIL-R-27208. Single center mounting hole; printed circuit pins or insulated leads. Tol., ±5%. **Quantity prices for one value, type only.** 2 oz.

46 D 7753 C	3290H	K	PC pins	10 ohms-10K	7.33	6.79	6.11	5.80	5.43	5.16
46 D 7754 C	3290H	K	PC pins	20K, 25K	8.75	8.10	7.30	6.92	6.48	6.16
46 D 7755	3290H	K	PC pins	50K only	10.10	9.35	8.42	7.99	7.48	7.11
46 D 7744 C	3290L	N	Ins. wire	10 ohms-10K	7.33	6.79	6.11	5.80	5.43	5.16
46 D 7745 C	3290L	N	Ins. wire	20K, 25K	8.75	8.10	7.30	6.92	6.48	6.16
46 D 7746	3290L	N	Ins. wire	50K only	10.10	9.35	8.42	7.99	7.48	7.11
46 D 7747 C	3290P	M	PC pins	10 ohms-10K	7.33	6.79	6.11	5.80	5.43	5.16
46 D 7748 C	3290P	M	PC pins	20K, 25K	8.75	8.10	7.30	6.92	6.48	6.16
46 D 7749	3290P	M	PC pins	50K only	10.10	9.35	8.42	7.99	7.48	7.11
46 D 7750 C	3290W	L	PC pins	10 ohms-10K	7.33	6.79	6.11	5.80	5.43	5.16
46 D 7751 C	3290W	L	PC pins	20K, 25K	8.75	8.10	7.30	6.92	6.48	6.16
46 D 7752	3290W	L	PC pins	50K only	10.10	9.35	8.42	7.99	7.48	7.11

BOURNS PART NUMBERING SYSTEM

3011	L	10	1253	M
Basic Model	Term. Style	Modifying Number	Resistance Code	Panel Mount

Basic Model: Three or 4 digits designate the various models available.

Terminal Styles: "L," insulated wire leads; "S," solder terminals; "P", printed circuit pins; "W," bare-wire leads.

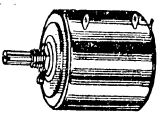
Modifying Number: −1, is std. model. −2, is std. WW with values of 100K. −XX, is 2 digit nonstandard basic model.

Resistance Code (in Ohms): 3 digit code—first 2-digits represent significant nos., last digit, no. of zeros to follow. 4 digit code—first 3-digits for significant nos., last digit is no. of zeros to follow.

Panel Mount Designator: For panel mount feature add "M" to complete the part no.

NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

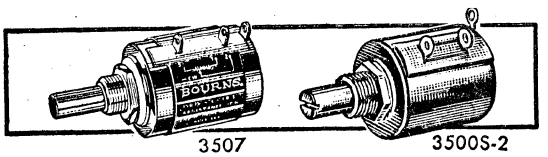
3400 BUSHING-MOUNT 10-TURN POT



Excellent wiper stability, resolution. Silverweld® wire termination. Moisture-resistant. Rated 5 watts at 40°C. Temp. range —65 to +105°C. Meets MIL-R-12934C humidity cycling. 1 13/16" dia. body is 1¾" long. ½" shaft. ⅜"-32 bushing. Solder lug terms. Quantity prices for one value and type only. Wt., 7 oz.

Stock No.	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7698 C	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 250K	9.00	8.55	8.10	8.10	7.65
46 D 7700	500K only	19.00	18.05	17.10	16.15	15.20
46 D 7701	1 meg only	28.00	26.60	25.20	23.80	22.40

10-TURN PRECISION WIREWOUND POTS



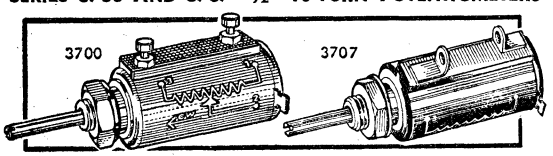
3507 3500S-2

Type 3500S-2. Steady-state humidity proof. Rated 2 watts at 70°C ambient. Operating temperature range, —65° to +125°C. Resist shock, vibration, sand, dust, fungus. Resistance tolerance, ±3%; end settings, 1% or less. Molded all-plastic case with shaft seal. Resolution: .033% to .006%—50 ohms to 500K, respectively. Has 13/16" shaft with bushing. ¼" shaft dia. Bushing, ⅜-32. Body, 1x7/8" dia. Silverweld® terminations. Solder lug terminals.

Type 3507S-1. 10-turn pot with excellent wiper stability. 2 watts at 25°C ambient. Operating range, —55 to +105°C. Resolution, .044 to .006% from 50 ohms to 250K, respectively. Tolerance, ±5%. Body, 1 1/8x7/8" dia. Shaft length, 13/16" with bushing. Silverweld® terminations. Solder terminals. Specify value wanted. Quantity prices are for one resistance value and type only. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7078 C	3500S-2	50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 125K	10.00	9.50	9.00	8.50	8.00
46 D 7705 C	3500S-2	150K, 200K, 250K	19.00	18.05	17.10	16.15	15.20
46 D 7706	3500S-2	500K only	28.00	26.60	25.20	23.80	22.40
46 D 7699 C	3507S-1	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K	7.50	6.60	6.25	5.95	5.50
46 D 7707	3507S-1	250K only	16.50	14.52	13.74	13.08	12.09

SERIES 3700 AND 3707—½" 10-TURN POTENTIOMETERS



Miniature 10-turn bushing mount pots. Resolution, .088% to .010% from 100 to 100K respectively. Type 3700 rated 1 watt at 70°C ambient and is steady-state humidity-resistant; Type 3707 rated 1 watt at 40°C ambient. Operating temperature range; Type 3700, —65° to +125°C; Type 3707, —55° to +105°C. Resistance tolerance, ±5%. Independent linearity: Type 3700 ±0.25%; Type 3707 ±1.0%. Molded all-plastic case with shaft seal and solder lugs. Silverweld® multiple resistance wires eliminate single wire terminations. Quantity prices for one value and type only. 4 oz.

TYPE 3700

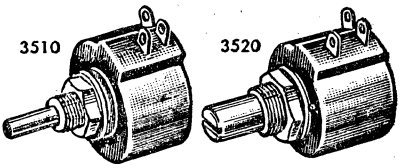
Stock No.	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7091 C	50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K	24.50	23.28	22.05	20.83	19.60
46 D 7702	250K only	32.00	30.40	28.80	27.20	25.60

TYPE 3707

Stock No.	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7729 C	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K und 100K	12.50	11.88	11.25	10.63	10.00

3 AND 5-TURN BUSHING-MOUNT POTS

- Humidity Resistant
- Temp. Range —65 to +125°C
- Individually Inspected



Types 3510S, 3520S. Compact, sealed wirewound pots with high humidity resistance. Meet MIL-STD-202 for steady-state humidity, vibration and shock; meet MIL-E-5272C for sand, dust, fungus. Individual inspection of each potentiometer is carried out to guarantee physical and electrical characteristics.

Type 3510S is a 3-turn pot rated @ 1 watt to 70°C ambient. Resolution is .1 to .019% from 200-ohm to 100K models respectively. ⅞" dia. body is .549" long with 11/16" long bushing and shaft. ⅛" dia. shaft with ¼" bushing. Type 3520S is a 5-turn pot rated @ 1½ watts to 70°C. Resolution is .077 to .012 up to 250K models. ⅞" diameter body is .678" long with 13/16" long bushing and shaft. ¼" dia. shaft with ⅜" bushing. Tol. ±3%. Solder lugs. Specify values. Quantity prices are for one resistance value and type only. 3 oz.

Stock No.	Mfr's Type	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D7079 C	3510S	25, 50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K	15.00	14.25	13.50	13.50	12.75
46 D7708	3510S	100K only	33.00	31.35	29.70	29.70	28.05
46 D7080 C	3520S	50, 100, 200, 500, 1000, 5000, 10K, 20K, 50K, 75K	13.50	12.83	12.15	11.48	10.80
46 D7709	3520S	100K only	22.50	21.38	20.25	19.13	18.00
46 D7710	3520S	250K only	31.50	29.93	28.35	26.78	25.20

SERIES 490 30-TURN COUNTING DIALS

H-491

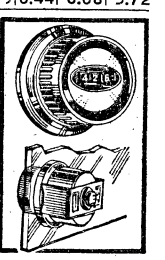
H-494

For use with Bourns precision potentiometers or other devices rotating up to 30 turns. Easy-to-read white numerals on black background—even on types with clear anodized body. Read one part in 1000 for ten turns. Compact design requires only 1" diameter panel space. Mount directly to potentiometer shaft to eliminate backlash. Reliable locking device on units with brake secures dial without shift in setting. Fit ¼" diameter bushing except H-491-3, H-492-3, H-493-3 and H-494-3 fit ⅜" bushing. 1" diameter. Quantity prices are for one type only. Shpg. wt., 4 oz.

Stock No.	Mfr's Type: With Brake	Mfr's Type: No Brake	Fits Shaft Dia.	Finish	EACH § 1-9	10-24	25-99	100-249	250-499
46 D 7510	.....	H-491-1	3/32"	Clear	7.05	6.70	6.35	5.99	5.64
46 D 7511	H-492-1	.....	3/32"	Clear	7.25	6.89	6.53	6.16	5.80
46 D 7508	.....	H-493-1	3/32"	Black	7.25	6.89	6.53	6.16	5.80
46 D 7509	H-494-1	.....	3/32"	Black	7.40	7.03	6.66	6.29	5.92
46 D 7506	.....	H-491-2	⅛"	Clear	7.05	6.70	6.35	5.99	5.64
46 D 7507	H-492-2	.....	⅛"	Clear	7.25	6.89	6.53	6.16	5.80
46 D 7504	.....	H-493-2	⅛"	Black	7.25	6.89	6.53	6.16	5.80
46 D 7505	H-494-2	.....	⅛"	Black	7.40	7.03	6.66	6.29	5.92
46 D 7502	.....	H-491-3	¼"	Clear	6.75	6.41	6.08	5.74	5.40
46 D 7503	H-492-3	.....	¼"	Clear	6.95	6.60	6.26	5.91	5.56
46 D 7500	.....	H-493-3	¼"	Black	6.95	6.60	6.26	5.91	5.56
46 D 7501	H-494-3	.....	¼"	Black	7.15	6.79	6.44	6.08	5.72

3650 10-TURN DIGITAL KNOBPOT®

- Integral Digital Readout, Knob and Pot
- Accuracy—Output Within 0.1% of Reading
- Repeatability—Within 0.05% Voltage Ratio



MIL-R-12934 for dielectric strength, vibration, etc. MIL-R-5272 for sand, dust, fungus. Silverweld® term. Panel, solder lugs. Tol., ±3%. Res., .053 for 100 ohms to .004% for 500K ohms. 2.5 watts at 25°C. 1¼" knob; 1¾" flange. For panels 1/32-¼". Panel hole, 1.39". Quantity prices are for one resistance value and type only. 4 oz.

Stock No.	Ohms (Specify Value Wanted)	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7756 C	100, 200, 500, 1000, 2000 5000, 10K, 20K, 50K, 75K 100K, 125K, 200K, 250K	28.50	26.39	23.75	22.54	21.11
46 D 7757	500K only	39.25	36.35	32.71	31.04	29.07

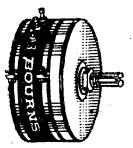
NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

BOURNS Quality Potentiometers

TABLE A—STOCK VALUES
SPECIFY RESISTANCE WANTED

OHMS	OHMS	OHMS	OHMS
25	500	10K	200K
50	1000	20K	500K
100	2000	50K	.....
200	5000	100K	.....

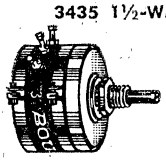
3415 4-WATT SINGLE-TURN 2" DIA. POTS



Wirewound pots with excellent humidity resistance; meet MIL-R-12934 humidity cycling requirements. Dual collector pick-off assures outstanding vibration and shock performance. High temperature, moisture resistant thermosetting plastic housing. Precision sleeve bearing support shaft, front, rear. Rated 4 watts at 70°C. Temp. range, —65 to +125°C. Temp. coeff., 20PPM/°C max. Tol., ±3%. Gold-plated turret terms. Body 2" dia. x .846". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7659 C	3415S	50 ohms-100K	19.00	18.05	17.10	16.15	15.20

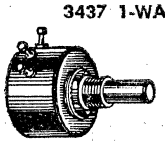
3435 1½-WATT SINGLE-TURN 1 1/16" DIA. POTS



Wirewound element; meets MIL-R-12934 humidity cycling requirements. Dual collector pick-off for vibration and shock resistance. Shaft supported front and rear by precision sleeve bearings. Extended temperature range, —65 to +125°C. Thermosetting plastic housing, moisture-resistant. Rated 1.5 watts at 70°C. Tol., ±3% Temp. coeff., 29PPM/°C max. Gold-plated turret terminals. Body, 1 1/16" dia. x .681". Shaft, 7/8" long including 3/8-32 bushing. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7660 C	3435S	50 ohms-10K	24.00	22.80	21.60	20.40	19.20
46 D 7661 C	3435S	20K, 50K	33.00	31.35	29.70	28.05	26.40
46 D 7662	3435S	100K only	42.00	39.90	37.80	35.70	33.60

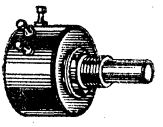
3437 1-WATT SINGLE-TURN 1 1/16" DIA. POTS



Low-cost wirewound industrial potentiometers with Silverweld® termination, ±0.5% linearity. Dual collector pick-off for high vibration and shock resistance. Stainless steel shaft, moisture-resistant thermosetting plastic housing. Rated 1 watt at 40° C. Tolerance, ±5%. Operating temperature, —15 to 80°C. Temperature coefficient, 20 PPM/°C maximum. Gold-plated turret terminals. Body, 1 1/16" dia. x .71". Shaft, 7/8" long including 3/8-32 bushing, 3/8" long. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7653 C	3437S	50 ohms-50K	8.00	7.60	7.20	6.80	6.40

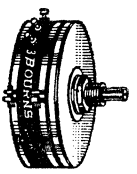
3438 1-WATT SINGLE-TURN 1 1/16" DIA. POTS



Single-turn, precision industrial potentiometers with Infinitron.® element for essentially infinite resolution. Rugged resistance element terminations; life of 2 million shaft revolutions. High temperature, moisture-resistant, thermosetting plastic housing; stainless steel shaft. Rated 1 watt at 40°C. Tolerance, ±20%. Operating temperature,—15° to +105°C. Temperature coefficient, 500PPM/°C max. Gold plated turret terminals. Body, 1 1/16" dia. x .71"; shaft, 7/8" including 3/8-32 bushings 3/8" long. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7654 C	3438S	100 ohms-50K	8.00	7.60	7.20	6.80	6.40

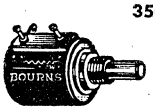
3445 6-WATT SINGLE-TURN 3" DIA. POTS



Wirewound potentiometer for demanding industrial requirements. Meets humidity cycling requirements of MIL-R-12934. Dual collector pick-off for outstanding vibration and shock resistance. Precision sleeve bearings support shaft, front and rear. Extended operating temperature range, —65°C to +125°C. Moisture-resistant, thermosetting plastic housing. Power rating, 6 watts at 70°C. Tolerance, ±3%. Temperature coefficient, 20 PPM/°C maximum. Linearity, ±0.25%. Gold-plated turret terminals. Body, 3" diameter x .846". Shaft, 7/8" including 1/2-32 bushing, 3/8" long. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7655 C	3445S	100 ohms-100K	22.00	20.90	19.80	18.70	17.60

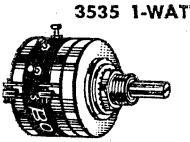
3501 10-TURN 7/8" DIA. POTS



Infinitron™ element for infinite resolution. Meets MIL-R-12934 humidity cycling requirements. High temp. range, —55 to +125°C. Film deposit on insulated conductive mandrel insures uniform heat dissipation. Rated 2 watts — 70°C. Temp. coeff., 300PPM/°C max. Tol., ±10%. Gold-plated terminal turrets. Body 7/8" dia. x 15/16". Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7656 C	3501S	1000 ohms-500K	13.75	13.06	12.38	11.69	11.00

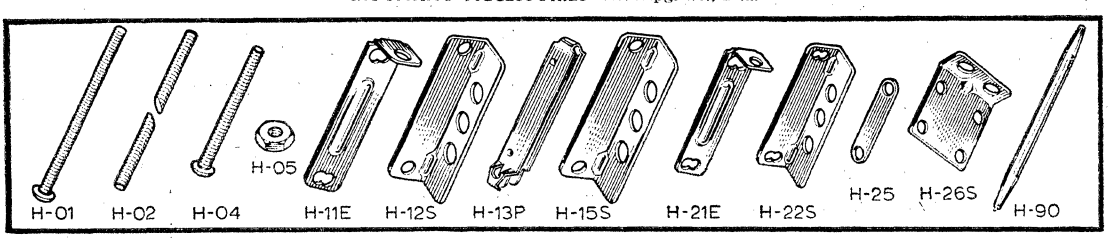
3535 1-WATT SINGLE-TURN 7/8" DIA. POTS



Meets MIL-R-12934 for humidity cycling. Temperature range, —65 to 125°C. Precision sleeve bearings for shaft support, front and rear. Dual collector pick-off for vibration, shock resistance. Thermosetting plastic housing. Rated 1 watt @ 70°C. Tol., ±3%. Temp. coeff., 20PPM/°C max. Linearity, ±0.5%. Body, 7/8" dia. x .681". Shaft, 1/2" long including 3/8-32 bushing, 5/16" long. Gold-plated terms. 4 oz.

Stock No.	Mfr's Type	Values—See Table A	EACH § 1-9	10-24	25-49	50-99	100-249
46 D 7657 C	3535S	25 ohms-20K	14.00	13.30	12.60	11.90	11.20
46 D 7658	3535S	50K only	27.00	25.65	24.30	22.95	21.60

MOUNTING ACCESSORIES Av. shpg. wt., 1 oz.

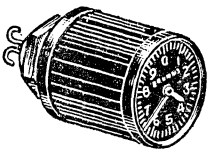


Stock No.	Type	Used with These Types	Description	1-24, EA.	25-99, EA.
46 D 7393	H-01	All types	1½", 2-56 round head screws; for mtg., 4 or 5 units	.02	.02
46 D 7617	H-02	All types	12" long, 2-56 stainless rod; for group mtg., any number units	.80	.80
46 D 7984	H-04	3250, 3251, 3280, 3281	#1-72x1" machine screw for mounting	.03	.03
46 D 7985	H-05	3250, 3251, 3280, 3281	Hex nut for use with above screw	.05	.05
46 D 7391	H-11E	200, 207, 208, 209, 215, 224, 235, 236,	End mounting bracket for types having 1" mtg. ctrs.	.20	.15
46 D 7392	H-12S	260, 271-274, 3010-3012, 3051-3053	Side mounting bracket for types having 1" mtg. ctrs.	.20	.15
46 D 7618	H-13P	271, 272, 273, 274	Panel mounting bracket, clip type, for 1" mtg. ctrs.	.20	.15
46 D 7586	H-15S	3067, 3068	Side mounting bracket	.20	.15
46 D 7619	H-21E	220	End mounting bracket for types having ¾" mtg. ctrs.	.20	.15
46 D 7620	H-22S	220	Side mounting bracket for types having ¾" mtg. ctrs.	.20	.15
46 D 7000	H-25	3250, 3251	Stainless stacking straps. For ½" square types.	.05	.04
46 D 7001	H-26S	3250, 3251	Stainless side mounting bracket. For ½" square types.	.20	.15
46 D 7002	H-90	All types	Screwdriver for setting panel-mount models. With clip.	.35	.30

NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

BOURNS KNOBPOT®, LABPOT® POTENTIOMETERS AND ACCESSORIES

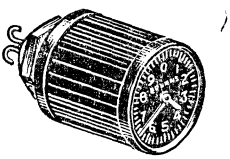
TYPE 3600S KNOBPOT POTENTIOMETER



This 10-turn unit has a readout dial with small hand that indicates number of completed turns and a large hand that cycles once every turn. Clock face has excellent readability with settings repeatable within a 0.1% voltage ratio. Phasing of readout to pot is ±0.5%. Requires virtually no back-of-panel space —only bushing and terminals are located behind panel. Front panel space required is only ¾" diameter by 1" deep. Unit uses only two holes for mounting—$^{13}/_{32}$" hole for bushing and $^{5}/_{64}$" hole for locking pin. Power ratings: 1½ watts at 25°C and ¾ watt at 75°C. Meets MIL-STD-202B specs for humidity, dielectric strength. **Quantity prices are for one resistance value only.**

Stock No.	Mfr's Type	Values Available (Specify Value Wanted)	EACH§ 1-9	10-24	25-49	50-99	100-249
46 D 7065 C	3600S	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K ohms	23.00	21.30	19.17	18.19	17.04
46 D 7081	3600S	200K, 250K ohms	34.00	31.48	28.34	26.89	25.18

TYPE 3640S KNOBPOT SENIOR POTENTIOMETER



Ten-turn pot, knob and readout dial in one small package. Repeatability, ±0.05% voltage ratio. Dial setting accuracy (including linearity) ±0.20% for 100 and 200 ohms; ±0.15%, 500-2K; ±0.10%, 10K to 500K. Tol. ±3%. Rotation, 3600°. 1000-megohm insulation res. at 500 VDC. Ambient temp. range, —65°C to +85°C. Rated 2½ W at 25°C and 1½ W at 65°C Silverweld® terminations. Self-locking for stability during vibration. 1¼" dia., 1½" long. Requires $^{13}/_{32}$" hole for bushing, $^{5}/_{64}$" for locking pin. Hook terminals. Meet MIL-STD-202B specs for humidity and dielectric strength. Also meet military specs for vibration, shock, load life. **Quantity prices are for one resistance value only.**

Stock No.	Mfr's Type	Values Available (Specify Value Wanted)	EACH§ 1-9	10-24	25-49	50-99	100-249
46 D 7633 C	3640S	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 250K ohms	23.00	21.30	19.17	18.19	17.04
46 D 7641	3640S	500K only	34.00	31.48	28.34	26.89	25.18

ACCESSORIES FOR 3600S KNOBPOT

H-93 Color Snap-Rings. Provide color-coding or style for 3600S Knobpot. Durable, high temperature plastic. **Available in red, yellow, blue, green or white—specify choice.** Wt., 2 oz.
46 D 7087 C. 1-24.....Each .35
25-99.....Each .30

H-103 Brake. For use with 3600S Knobpot listed above. Locks control setting. Snaps on easily —prevents control from slipping or shifting out of adjustment. Wt., 2 oz.
46 D 7089. 1-24.....Each 1.25
25-99.....Each 1.07

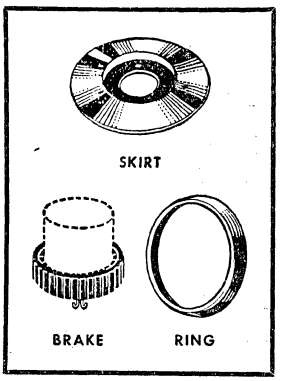
H-95 Skirt. For use with 3600S Knobpot listed above. Highly polished, stainless steel skirt lends highly attractive appearance to assembly. 1½" diameter. Wt., 2 oz.
46 D 7088. 1-24.....Each 1.50
25-99.....Each 1.25

ACCESSORIES FOR 3640S KNOBPOT

H-99 Color Snap-Rings. Provide color coding or higher style for the 3640S Knobpot. Durable, high temperature plastic. **Available in red, yellow, blue, green or white—specify choice when ordering.** Wt., 2 oz.
46 D 7650.C. 1-24.....Each .35
25-99.....Each .30

H-97 Brake. For use with 3640S Knobpot potentiometers listed above. Locks control setting in any desired position. Easy to install—prevents control setting from slipping or shifting out of adjustment. Wt., 2 oz.
46 D 7737. 1-24 ....Each 1.25
25-99.....Each 1.07

H-98 Skirt. For use with 3640S Knobpot listed above. Highly polished stainless steel. Imparts an attractive modern appearance to panel. Mounts securely through bushing and locking pin. 2½" diameter. Wt., 2 oz.
46 D 7649. 1-24.....Each 1.50
25-99.....Each 1.25



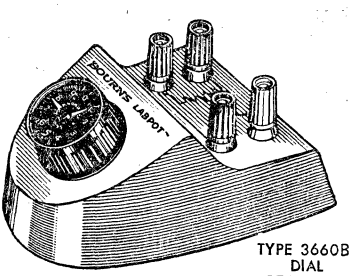
SERIES 3600 LABPOT POTENTIOMETERS

TYPE 3660B 10-TURN PRECISION POTENTIOMETER

- 10-Turn Clock Face Dial for High Readability
- Rapid Setting and Reading of Voltages
- Fused Wiper Circuit for Pot Protection
- Standard Resistances 100 ohms to 100K ohms

Self-contained, 10-turn, dial readout precision potentiometer for laboratory use. Rapid setting of precise voltages or reading of required voltages to achieve null in a bridge circuit application, and introduction of known resistance values into a circuit. High readability through 10-turn clock face dial. Exceptional setting accuracy and repeatability. Large 5-way binding post terminals permit hook-up of any lead. Rugged case of high temperature, heavy-duty plastic. Fused wiper circuit for protection. Resistance, 100 ohms (.059% resolution); 1,000 ohms(.028%); 10K(.012%); 100K(.010%). Resistance tolerance, ±1%. Operating temperature range, —65°C to 85°C. Power rating, 2 5 watt at room temperature. 200,000 dial revolutions. 2¼x 3½x4⅝". Repeatability of dial reading ±.05% voltage ratio. Av. shpg. wt., 14 oz.

Stock No.	Mfr's Type	Values (Ohms) Specify	EACH§ 1-4	5-9	10-24	25-49	50-99	100-249
46 D 7634 C	3660B	100, 1000, 10K, 100K	45.00	42.66	38.39	36.43	34.13	32.42



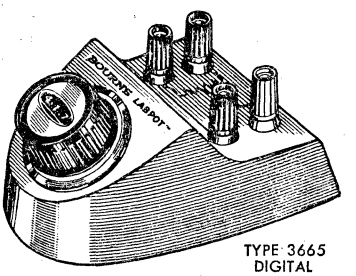
TYPE 3660B DIAL READOUT

TYPE 3665 10-TURN DIGITAL READOUT POTENTIOMETER

- Guaranteed Readout to Potentiometer Accuracy
- Fused Circuit for Potentiometer Protection
- Large Five-Way Binding Post Terminals
- For Rapid Lab Setting and Measurement

Self-contained, 10-turn, digital readout precision potentiometer for laboratory use. For rapid setting and measurement of precise voltages and for the introduction or measurement of resistance. Features: guaranteed readout accuracy; excellent readability through use of a 3 place digital readout; exceptional setting accuracy and repeatability; large 5-way binding post terminals for easy hook-up of any leads. Fused wiper circuit for protection. Resistance: 100(.047% resolution), 1000 (.022%), 10K(.012%), 100K(.008%). Tol., ±1%. Power rating: 2.5 watts at room temperature. Operating temperature range, —65°C to 85°C. Temperature coefficient, 20 PPM/°C maximum. 200,000 revolution rotational life. Weighted baseplate with cork covering keeps instrument in place when in use. Extra fuse provided for convenience. Dimensions: 2$^{9}/_{16}$x3½x4⅝" (Hx WxD). Shpg. wt., 14 oz.

Stock No.	Mfr's Type	Values (Ohms) Specify	EACH§ 1-9	10-24	25-49	50-99	100-249
46 D 7643 C	3665	100, 1000, 10K, 100K	48.00	45.50	40.95	38.86	36.40



TYPE 3665 DIGITAL READOUT

NOTE: §QUANTITY PRICES FOR ONE RESISTANCE VALUE AND TYPE ONLY

IRC Potentiometers

205 AND 255 SERIES CIRCUITRIM SUBMINIATURE TRIMMER POTENTIOMETERS

205 Series. ½" square precision miniature wirewound trimmers, rated 1 watt at 70° C. RT22C2P (205-10) and RT22C2L (205-00) styles meet all requirements of MIL-R-27208. 25-turn, self-locking anti-backlash construction provides outstanding settability. Diallyl phthalate cases completely sealed with compression-loaded Teflon® and epoxy seals. Precious metal alloy contacts. Resistance tolerance, ±5%. Dielectric strength, 900 VAC. Temperature coefficient, ±50 PPM/°C maximum over operating temperature range of —65° C to +150° C. MIL rating of ¾ watt at 85° C.

Series 255. Infinite resolution metal glaze element. MIL rating of ¾ watt at 70° C. Better high-frequency characteristics. Contact resistance variation, 3% or 20 ohms, whichever is greater. Tolerance, ±10%. Operating temperature range, —55° C to +150° C. Temperature coefficient: 100 ohms to 500 ohms, ±250 PPM/°C (+25° to +125° C); 1000 ohms to 1 meg, ±250 PPM/°C; above 1 meg, ±400 PPM/°C. Dielectric strength, 900 VAC. 25-turn self-locking, anti-backlash construction. Precious metal alloy contacts. Diallylp hthalate cases, compression loaded Teflon® and epoxy seals.

FLEXIBLE-LEAD MINIATURE TRIMMERS

205-00. Precision miniature trimmers for a wide variety of applications in military and industrial devices. Correspond to MIL Style RT22C2L. Compact, diallyl phthalate case with compression-loaded Teflon and epoxy seals. Precious metal alloy contacts for long dependable operation. Temperature coefficient, ±500 PPM/°C maximum over operating temperature range of —65° C to 150° C. Resistance tolerance, ±5%. MIL rating of ¾ watt at 85° C. Other specifications above. Three #30 AWG Teflon insulated leads, 6" long. Two .093" diameter through-holes on .523" centers for fast, easy mounting. Screwdriver slot adjustment for accurate settings. Size, ½x½x3/16". Av. shpg. wt., 2 oz.

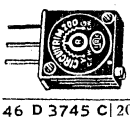
Stock No.	Mfr's Type	Resistance Values (Ohms) Specify Values Wanted		EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1729 C	205-00	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	Mil Style RT22C2L	4.72	4.48	4.25	4.01	3.78	3.39	3.16
46 D 1730	205-00	20K only		5.18	4.92	4.66	4.40	4.14	3.73	3.48
46 D 1731	205-00	50K only	50 ohms thru 20K	5.65	5.37	5.09	4.80	4.52	4.07	3.80

FLAT-MOUNTING PRINTED-CIRCUIT POTENTIOMETERS

205-10. Same as MIL Style RT22C2P. Printed circuit pins arranged for mounting on flat side. Pins are located on 0.1 inch radius for mounting in conventional transistor sockets. Thru holes of .075 inch dia. on .523 inch centers for mounting. Screwdriver slot adjustment for resistance value. Overall size, ½x½x¼". **255-10.** MIL Style RJ22BP. Infinite resolution metal glaze element. Pins are located on flat side on 0.1 inch radius for transistor socket mounting. .075 inch diameter mounting holes. Overall size, ½x½x¼". Av. shpg. wt., 2 oz.

46 D 1732 C	205-10	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	Mil Style RT22C2P	4.72	4.48	4.25	4.01	3.78	3.39	3.16
46 D 1733	205-10	20K only		5.18	4.92	4.66	4.40	4.14	3.73	3.48
46 D 1734	205-10	50K only		5.65	5.37	5.09	4.80	4.52	4.07	3.80
46 D 7532 C	255-10	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg		6.25	5.94	5.63	5.30	5.00	4.50	4.20

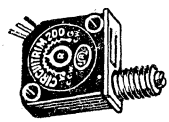
EDGE MOUNTING PRINTED-CIRCUIT POTENTIOMETERS



205-208. Precision wirewound potentiometer with 205 Series specs described above. Printed circuit pins on end to permit edge mounting. Three ½" long pins are in-line, 0.1" apart. 2 mounting holes on .523" centers. Screwdriver slot adjustment. Overall size, ½x½x3/16". **255-208.** MIL Style RJ22BW. Metal glaze element. Same pin arrangement as 205-208. ½x½x3/16". Av. shpg. wt., 2 oz.

46 D 3745 C	205-208	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	Mil Style RT22C2W	4.72	4.48	4.25	4.01	3.78	3.39	3.16
46 D 3746	205-208	20K only		5.18	4.92	4.66	4.40	4.14	3.73	3.48
46 D 3747	205-208	50K only		5.65	5.37	5.09	4.80	4.52	4.07	3.80
46 D 7533 C	255-208	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg		6.25	5.94	5.63	5.30	5.00	4.50	4.20

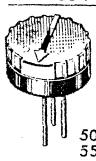
PANEL MOUNTING POTENTIOMETERS



255-60. MIL Style RJ22BL. Infinite resolution metal glaze pots. Ideal when entire circuitry must be vacuum encapsulated and still allow trimmer adjustment from exterior. Encapsulant cannot penetrate trimmer housing or seals. See specifications above. One-piece header and side flange is sealed to case. Occupy a minimal amount of panel space, only .276 by .558 inches, with depth behind panel of .550 inches. Mount by a ¼-inch long, 10-32 bushing. Mounting hardware included. Screwdriver-type slotted shaft for quick adjustment. 10" long. Teflon-insulated leads for standard point-to-point wiring. Shpg. wt., 2 oz.

46 D 7534 C	255-60	100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	7.25	6.88	6.54	6.16	5.80	5.22	4.86

SERIES 500 AND 506 TRIMMER POTENTIOMETERS



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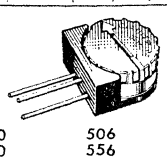


506
556

Circuitrim 500. Lightweight plastic case has fluted and slotted cover for choice of fingertip or screwdriver control. Top adjusted. Stands ¼" above board. Gold-plated PC pins on .100" radius. Positive stops at each end of its 320° electrical angle. Rated .5 watts at 25°C. Temp. range —55°C to +105°C. Tolerance ±10%. 2 oz.

Circuitrim 506. Same as Circuitrim 500, but designed for front adjustment. Plastic case has fluted and slotted cover for fingertip or screwdriver control. Mounts 3/16" above board with gold-plated PC pins on .100" radius. Positive stops at each end of its 320° electrical angle. .5 watts at 25°C; —55°C to +105°C. Tolerance ±10%. 2 oz.

CIRCUITRIM 500 AND 506 ½" ROUND WIREWOUND COMMERCIAL/INDUSTRIAL TRIMMERS

Stock No.	Mfr's Type No.	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1694 C	500	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K	2.30	2.09	1.88	1.71	1.60	1.45	1.30
46 D 1695	500	20K only	2.53	2.30	2.07	1.88	1.76	1.60	1.43
46 D 1696	500	50K only	2.88	2.61	2.35	2.14	2.00	1.81	1.63
46 D 1697 C	506	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K	3.00	2.74	2.46	2.22	2.09	1.89	1.70
46 D 1698	506	20K only	3.30	3.01	2.71	2.44	2.30	2.08	1.87
46 D 1699	506	50K only	3.75	3.43	3.08	2.78	2.61	2.36	2.13

SERIES 550 AND 556 METAL GLAZE TRIMMER POTENTIOMETERS

Type 550. Same as series 500 above, but ½" round metal glaze. Offers essentially infinite resolution and excellent high-frequency characteristics. Molded terminals. High-static stop strength. Rated ½ watt at 70° C. Temp. range, —25° to +105° C. Tolerance, ±30%. Standard mount. ½x15/64x½" dia. Av. shpg. wt., 2 oz. **Type 556.** Same as 550, but vertical mount. ½x5/16x9/16". 2 oz.

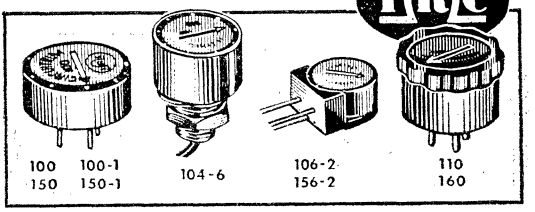
Stock No.	Mfr's Type No.	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 7535 C	550	50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 500K, 1 meg	1.75	1.66	1.57	1.54	1.49	1.40	1.31
46 D 7536 C	556	10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 500 K, 1 meg, 2 meg	2.45	2.31	2.15	2.08	1.98	1.84	1.71

Specify Stock No., Mfr's Type No. and Resistance Value When Ordering Controls

Precision Trimmers and Potentiometers

Series 100 Wirewound. Direct trimming action for close, fast response. Unaffected by mechanical or thermal shock. Platinum-palladium or gold alloy moving contacts and sliders. Gold-plated PC pins or wire leads. Teflon® ins. flexible leads. Tol., ±5%; rated 1 watt at 50°C; temp. range, —55°C to +150°C; temp. coeff., ±70 ppm/°C; mechanical and electrical rotation, 320°. Meet MIL-R-27208A environ. req. Diallyl phthalate moisture-sealed cases meet MIL-STD-202B.

Series 150 Metal Glaze. As above, but have infinite resolution metal glaze element fused on ceramic. Rated ¾ watt at 70°C; resistance tol., ±10%; contact res. variation, 3% or 20 ohms, whichever is greater; temp. range, —55°C to +150°C; temp. coeff., +250 ppm/°C below 1K, ±250 ppm/°C 1K to 1 meg. Meet MIL-R-22097B environ. req.



MODEL 100 AND 100-1 WIREWOUND, 150 AND 150-1 METAL GLAZE ½" ROUND TRIMMER POTENTIOMETERS

Moisture-sealed diallyl phthalate case, screwdriver-slot rotor. Models 150, 150-1 feature simplified design and close, fast response. Models 100, 100-1 have precision wirewound elements. Models 100 and 150 pins are .187" long for standard PC socket; 100-1 and 150-1 are .300" long for inserting into PC board and crimping. All pins on .100" radius. .225" above board. Av. wt., 2 oz.

Stock No.	Mfr's Type No.	Terminal Style or Mounting	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3185 C	100	Tr. Socket	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.30	3.00	2.70	2.45	2.30	2.20	2.05
46 D 3186	100	Tr. Socket	20K only	3.90	3.55	3.19	2.89	2.72	2.60	2.42
46 D 3187	100	Tr. Socket	50K only	4.50	4.10	3.68	3.34	3.13	3.00	2.79
46 D 3006 C	100-1	PC	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.30	3.00	2.70	2.45	2.30	2.20	2.05
46 D 3007	100-1	PC	20K only	3.90	3.55	3.19	2.89	2.72	2.60	2.42
46 D 3008	100-1	PC	50K only	4.50	4.10	3.68	3.34	3.13	3.00	2.79
46 D 3024 C	150	Tr. Socket	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 Meg	4.50	4.05	3.75	3.52	3.38	3.22	3.08
46 D 3025 C	150-1	PC	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 Meg	4.50	4.05	3.75	3.52	3.38	3.22	3.08

MODEL 104-6 WIREWOUND BUSHING-MOUNT TRIMMER POTENTIOMETERS

Model 104-6 subminiature wirewound trimmer potentiometer. Bushing-mounted—extends only 5/16" beyond mounting panel. Has ¼"-32 by ⅜" long threaded bushing with hex nut. Nickeled brass housing. Screwdriver slot adjustment on cover top. Includes three flexible 10" long No. 30 teflon-insulated leads for point-to-point wiring. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type No.	Terminal Style or Mounting	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3015 C	104-6	Tef. leads	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.55	4.10	3.79	3.56	3.41	3.25	3.12
46 D 3016	104-6	Tef. leads	20K only	5.15	4.64	4.30	4.04	3.86	3.68	3.53
46 D 3017	104-6	Tef. leads	50K only	5.75	5.17	4.80	4.50	4.31	4.11	3.94

MODEL 106-2 WIREWOUND AND 156-2 METAL GLAZE VERTICAL-MOUNT PC PIN TRIMMER POTENTIOMETERS

Models 106-2, 156-2 vertical-mount PC pin trimmers are similar to models 100 and 150. Designed for printed circuit applications where boards are stacked and adjustment from edge of board is required. In moisture-sealed diallyl phthalate case. Size, 9/16"x½"x 5/16" deep when mounted. Gold-plated pins, .020" dia. on .100" spacing. Screwdriver-slot adjustment. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type No.	Terminal Style or Mounting	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3018 C	106-2	PC	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.80	3.42	3.17	2.98	2.85	2.72	2.60
46 D 3019	106-2	PC	20K only	4.40	3.96	3.67	3.45	3.30	3.15	3.01
46 D 3020	106-2	PC	50K only	5.00	4.50	4.17	3.92	3.75	3.52	3.43
46 D 3026 C	156-2	PC	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 Meg	5.00	4.50	4.17	3.92	3.75	3.52	3.43

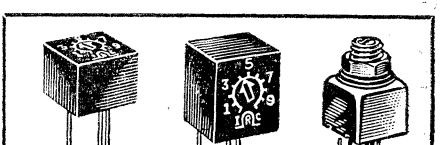
MODEL 110 WIREWOUND AND 160 METAL GLAZE FINGERTIP-ADJUST TRIMMER POTENTIOMETERS

Same as Models 100 and 150 except have round 9/16" knurled knob rotor in addition to screwdriver-slot adjustment. Wt., 2 oz.

Stock No.	Mfr's Type No.	Terminal Style or Mounting	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3000 C	110	PC	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.50	3.18	2.86	2.60	2.30	2.20	2.05
46 D 3001	110	PC	20K only	4.10	3.73	3.35	3.04	2.72	2.60	2.42
46 D 3002	110	PC	50K only	4.70	4.28	3.84	3.49	3.13	3.00	2.79
46 D 3027 C	160	PC	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 Meg	4.70	4.23	3.92	3.68	3.52	3.36	3.22

300, 310 AND 320 WIREWOUND SUBMINIATURE TRIMMING POTENTIOMETERS

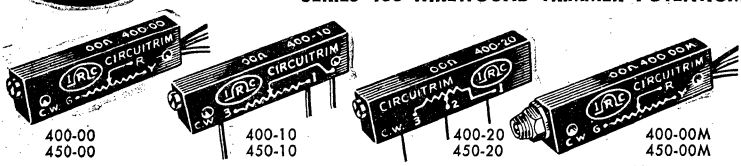
Models 300, 310. Single-turn, slotted rotor printed circuit controls with direct slider response. Sealed construction; positive stops. Electrical angle, 280°; rotation, 300°; temp. range, —55°C to +150°C; rated .6 watt at 60°C. Tolerance, ±5%. .016" pins on 0.1" grid. 300 has top screwdriver adjust; 5/16" square by 15/64" high. 310, side adjust; 19/64" square by 11/32" high. Model 320. Like above, but panel mount. Rated 1 watt at 60°C. .016" dia. dumet leads spaced .1". 10-32 bushing, ¼" long with screwdriver slot. ⅜" square by 5/8" long. All meet applicable environmental specs of MIL-R-27208A. Shpg. wt., 2 oz.



Stock No.	Mfr's Type	Screwdriver Adjust	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
45 D 7158 C	300	Top	50, 100, 200, 500, 1000, 2000, 5000	3.80	3.42	3.17	2.98	2.85	2.72	2.60
45 D 7159	300	Top	10K only	4.80	4.32	4.00	3.76	3.60	3.43	3.28
45 D 7160	300	Top	20K only	5.80	5.21	4.83	4.54	4.35	4.15	3.97
45 D 7161 C	310	Side	50, 100, 200, 500, 1000, 2000, 5000	3.95	3.56	3.29	3.10	2.96	2.83	2.70
45 D 7162	310	Side	10K only	4.95	4.45	4.12	3.88	3.71	3.55	3.38
45 D 7163	310	Side	20K only	5.95	5.36	4.95	4.67	4.47	4.27	4.07
46 D 3028 C	320	Shaft	50, 100, 200, 500, 1000, 2000, 5000	6.35	5.72	5.30	4.98	4.76	4.54	4.35
46 D 3029	320	Shaft	10K only	7.35	6.62	6.13	5.76	5.51	5.26	5.03
46 D 3030	320	Shaft	20K only	8.35	7.52	6.96	6.55	6.26	5.97	5.72

IRC Trimmer Potentiometers

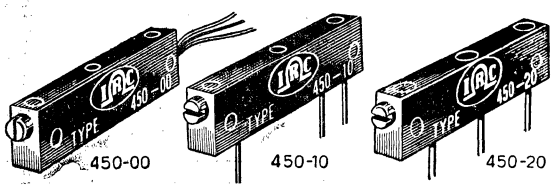
SERIES 400 WIREWOUND TRIMMER POTENTIOMETERS



MIL-R-27208. Absolute min. resistance, 1 ohm or 0.2%. Tol. ±5%. 1 W at 70° C. 22 turns. .1 oz./in. to 8 oz/in. —65° C to +150° C; coefficient, ±50 ppm/°C. Insul. res., 1000 meg. Diel. strength, 1000 VAC. Type 00 3 #30 AWG Teflon insul. leads; Type 10-in-line PC pins (MIL RT-12); Type 20-staggered pins (MIL RT-11). 1.25x.190x.315". †Panel mount, others, two .093" dia. holes. Wt., 2 oz.

Stock No.	Mfr's Type	Resistance Values (Ohms) Specify Value	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1750 C	400-00	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.75	4.27	3.96	3.73	3.56	3.40	3.25
46 D 1751	400-00	20K only	5.23	4.70	4.36	4.11	3.93	3.74	3.58
46 D 1752	400-00	50K only	5.71	5.13	4.76	4.48	4.27	4.08	3.91
46 D 1753 C	400-10	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.75	4.27	3.96	3.73	3.56	3.40	3.25
46 D 1754	400-10	20K only	5.23	4.70	4.36	4.11	3.93	3.74	3.58
46 D 1755	400-10	50K only	5.71	5.13	4.76	4.48	4.27	4.08	3.91
46 D 1756 C	400-20	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.75	4.27	3.96	3.73	3.56	3.40	3.25
46 D 1757	400-20	20K only	5.32	4.70	4.36	4.11	3.93	3.74	3.58
46 D 1758	400-20	50K only	5.71	5.13	4.76	4.48	4.27	4.08	3.91
46 D 1759 C	400-00M†	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	5.60	5.04	4.69	4.40	4.20	4.01	3.83
46 D 1760	400-00M†	20K only	6.08	5.47	5.09	4.78	4.57	4.35	4.16
46 D 1761	400-00M†	50K only	6.56	5.90	5.49	5.15	4.91	4.69	4.49

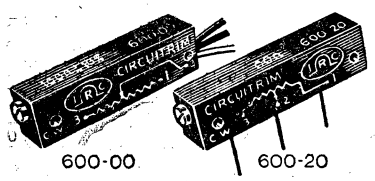
SERIES 450 METAL-GLAZE TRIMMER POTENTIOMETERS



Types 450-00, 450-10 and 450-20. Infinite resolution. Power rating is ½ watt at 70° C. Meet MIL-R 22097, Size RJ-12. Has 24-turn leadscrew adjust, humidity-proof construction. Excellent high frequency characteristics. Insulation resistance 1000 megohms; dielectric strength, 900 volts, 300 working volts, AC or DC. Type 450-00 has three 10" Teflon insulated leads. Type 450-10 and 450-20 have .028" dia. pins, ½" long. PC pin placement for 450-10 is per RJ-12 MIL style and for 450-20 pins is per RJ-11 MIL style. Mounting holes .093" dia. on 1" ctrs. †Panel mount. 1.250"x.190"x.315". 2 oz.

Stock No.	Mfr's Type	Res. Tol.	Terminal Style	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1700 C	450-00	10%	Tef. leads	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	5.00	4.50	4.17	3.92	3.75	3.58	3.43
46 D 1701 C	450-10	10%	PC pins		5.00	4.50	4.17	3.92	3.75	3.58	3.43
46 D 1725 C	450-00	20%	Tef. leads		3.00	2.85	2.70	2.57	2.43	2.29	2.15
46 D 1726 C	450-10	20%	PC pins		3.00	2.85	2.70	2.57	2.43	2.29	2.15
46 D 1727 C	450-20	10%	PC pins		5.00	4.50	4.17	3.92	3.75	3.58	3.43
46 D 1728 C	450-20	20%	PC pins		3.00	2.85	2.70	2.57	2.43	2.29	2.15
46 D1879 C	450-00M	10%	PC pins †		5.85	5.27	4.90	4.59	4.39	4.19	4.01
46 D1880 C	450-00M	20%	PC pins †		3.85	3.62	3.43	3.24	3.07	2.90	2.73

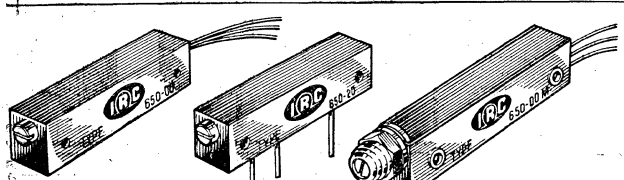
SERIES 600 WIREWOUND TRIMMER POTENTIOMETERS



MIL-R-27208. Dimensions are per MIL RT-11, 1.25x.275x.315". Rated 1 watt at 70° C. Electrical travel, 22 turns with stops and slip clutch. Temp. range, —65° C to +150° C. Coefficient, ±50 ppm/°C. Absolute min. res.: 1 ohm or 0.2%, whichever is greater. Insulation resistance, 1000 megohms. Dielectric strength, 1000 volts, AC. Torque, 0.1 oz/in. minimum, 8 oz/in. maximum. Available in two styles: Type 600-00 has three No. 30 AWG flexible Teflon insulated leads; Type 600-20 has three staggered printed circuit pins as per MIL RT-11. †In Type No. indicates panel mounting types, others have two .093" diameter mounting holes. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Resistance Values (Ohms) Specify Value	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1762 C	600-00	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.75	4.27	3.96	3.73	3.56	3.40	3.25
46 D 1763	600-00	20K only	5.23	4.70	4.36	4.11	3.93	3.74	3.58
46 D 1764	600-00	50K only	5.71	5.13	4.76	4.48	4.27	4.08	3.91
46 D 1765 C	600-20	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	4.75	4.27	3.96	3.73	3.56	3.40	3.25
46 D 1766	600-20	20K only	5.23	4.70	4.36	4.11	3.93	3.74	3.58
46 D 1767	600-20	50K only	5.71	5.13	4.76	4.48	4.27	4.08	3.91
46 D 1768 C	600-00M†	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	5.60	5.04	4.69	4.40	4.20	4.01	3.83
46 D 1769	600-00M†	20K only	6.08	5.47	5.10	4.78	4.57	4.35	4.16
46 D 1770	600-00M†	50K only	6.56	5.90	5.49	5.15	4.91	4.69	4.49

SERIES 650 METAL GLAZE POTENTIOMETERS



Metal glaze version of series 600 trimmer potentiometer above. Infinite resolution. Meets specifications of MIL-R-22097C. Power rating, ¾ watt at 85° C. Temperature range, —55° to +125° C. Temperature coefficient, ±250 PPM/°C. Dielectric strength, 1000 VAC. Insulation resistance, 1000 meg. Contact resistance variation, ±3% or 20 ohms, whichever is greater. End resistance, 2 ohms max. 650-00, three #30 AWG Teflon leads, .093" mounting holes. 650-20, staggered PC pins, per RJ-11 Mil Style. Types with "M" in Mfr's Type No. indicate panel mounting. 35/64x25/64x15/16". Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Res. Tol.	Terminal Style	Resistance Values (Ohms Specify Values Wanted)	EACH 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7553 C	650-00	5%	Teflon® leads	100, 200, 500, 1K, 2K, 5K, 10K	5.00	4.50	4.17	3.92	3.75	3.58
46 D 7554 C	650-20	5%	PC pins		5.00	4.50	4.17	3.92	3.75	3.58
46 D 7555 C	650-00M	5%	Panel mount Tef. leads		5.85	5.27	4.90	4.59	4.39	4.19
46 D 7556 C	650-20M	5%	Panel mount PC pins		5.85	5.27	4.90	4.59	4.39	4.19

Specify Stock No., Resistance and Mfr's Type No. When Ordering Controls

Precision Trimmers and Potentiometers

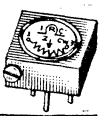
TYPE 940 WIREWOUND TRIMMERS IN DUAL-IN-LINE PACKAGE

Lead-screw activated 18-turn wirewound trimmer in new dual in-line package for simplified PC board layout. Activating screw is flush mounted so the trimmer can be handled by the same automatic assembly equipment which is now used on dual in-line integrated circuits. Trimmers are tested to meet MIL-R-27208. Stands just .200" maximum off printed circuit board. Tolerance, ±10%.

Rated 1 watt at 40° C. Temperature range: —65° to +125° C. Coefficient: ±50 PPM/° C maximum. Dielectric strength: 500 volts AC. Shaft torque: 8 oz./inches. Be sure to specify both stock number and manufacturer's type number when ordering. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Resistance Values in Ohms (Specify Values Wanted)	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1850 C	940	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.75	3.35	3.00	2.80	2.60	2.45	2.35
46 D 1851	940	20K only	4.12	3.68	3.30	3.08	2.86	2.70	2.58

TYPES 700 AND 750 ⅜" SQUARE MINIATURE TRIMMERS



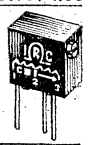
700 Series. Rated 1 watt at 70° C, ¾ watt at 85° C. Meet environmental and life requirements of MIL-R-27208. 21 (±2) turns; torque, 5.0 oz./in. max. Tol., ±5%. Temp. range; —65° to +175° C; Coefficient; ±50 PPM/° C. Ins. resistance: 1000 meg at 5000 VDC. Dielectric strength: 900 VAC. 700-10 (RT 24C2P), PC pins arranged for mounting on flat side. 700-307, PC pins for edge-mounting; side adjustment; 700-308-PC pins; top adjustment. 1 oz.

46 D 1852 C	700-10	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	6.90	6.39	5.75	5.46	5.11	4.86	4.55
46 D 1853	700-10	20K only	8.25	7.64	6.87	6.53	6.11	5.81	5.43
46 D 1854	700-10	50K only	9.60	8.89	8.00	7.59	7.11	6.76	6.32
46 D 1855 C	700-307	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	6.90	6.39	5.75	5.46	5.11	4.86	4.55
46 D 1856	700-307	20K only	8.25	7.64	6.87	6.53	6.11	5.81	5.43
46 D 1857	700-307	50K only	9.60	8.89	8.00	7.59	7.11	6.76	6.32
46 D 1858 C	700-308	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	6.90	6.39	5.75	5.46	5.11	4.86	4.55
46 D 1859	700-308	20K only	8.25	7.64	6.87	6.53	6.11	5.81	5.43
46 D 1860	700-308	50K only	9.60	8.89	8.00	7.59	7.11	6.76	6.32

750 Series. Infinite resolution metal glaze version of 700 series above. 19 (±2) turns; torque, 5 oz./in. maximum. Meet environmental and life requirements of MIL-R-22097, Characteristic "B". Temperature range: —65° to +125° C. Rated ½ watt at 70° C, 0 at 125° C. Type 750-10 (RJ 24BP) has PC pins arranged for flat mounting; Type 750-307 has PC pins for edge mounting with side adjustment; Type 750-308 has PC pins with top adjustment. Tolerance: ±10%. Specify stock number and resistance value when ordering. 1 oz.

Stock No.	Mfr's Type	Resistance Values in Ohms (Specify Values Wanted)	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1861 C	750-10	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	6.50	6.18	5.85	5.72	5.52	5.18	4.86
46 D 1862 C	750-307	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	6.50	6.18	5.85	5.72	5.52	5.18	4.86
46 D 1863 C	750-308	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	6.50	6.18	5.85	5.72	5.52	5.18	4.86

TYPE 800 AND 850 5/16" SQUARE SUBMINIATURE TRIMMERS



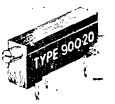
800 Series. Precision wirewound subminiature trimmer rated 0.6 watt at 70° C. Meets following environmental tests of MIL-R-27208: rotational life; load life; moisture; shock; vibration. Total of 15 (±2) turns. Torque, 3.0 oz./inches maximum. Tolerance, ±5%. Operating temperature range: —65° to +150° C. Temperature coefficient: ±50 PPM/° C maximum. Insulation resistance: 1000 megohms at 500 VDC. Dielectric strength: 900 VAC. PC pins for edge-mounting, screw adjustment on side. Be sure to specify both stock number and resistance value. 1 oz.

46 D 1864 C	800-20	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K	3.35	3.00	2.65	2.50	2.35	2.20	2.10
46 D 1865	800-20	20K only	3.85	3.50	3.15	3.00	2.85	2.70	2.60

850 Series. Infinite resolution metal glaze version of Series 800. Rated ½ watt at 70° C. 13 (±2) turns; torque; 3-oz. inches-maximum. Meets the following environmental tests of MIL-R-22097: rotational life; load life; moisture; shock and vibration. Temperature range; —65° to +125° C. PC pins for edge-mounting, screw adjustment on side. Tolerance, ±10%. Average wt., 1 oz.

46 D 1866 C	850-20	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 200K, 500K, 1 meg	3.85	3.50	3.15	3.00	2.85	2.70	2.60

TYPE 900 MINIATURE RECTANGULAR WIREWOUND TRIMMER



Miniature rectangular package. Meets MIL-STD-202, Method 103B humidity requirements. Silver brazed terminations provide 0.5% minimum resistance setting. Clutch lifts threaded wiper block off lead screw at each end of travel. Sealed housing. Rated 1 watt at 40° C. Tol.: ±10%. Temperature range: —65° to +125° C. Coefficient: ±50 PPM/° C max. Dielectric strength: 1000 VAC. Gold-plated PC pins. Total turns, 20. .85x.31x.16". 2 oz.

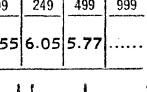
46 D 1867 C	900-20	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K	1.75	1.62	1.46	1.39	1.30	1.23	.....

TYPE 8403 AND 8500 ⅞" WIREWOUND POTENTIOMETER

Type 8403 Three-Turn. Only ⅝" deep behind panel. Tol. ±5%. 2 watts at 40° C, 1 watt at 105° C. —55° to +105° C; Coefficient; ±70 PPM/° C. Screwdriver adjustment slot; ¼" dia. shaft with ⅜" bushing. 1 oz./in. max. Insul. res. at 500 VDC, 1000 meg. Gold-plated terms. 2 oz.

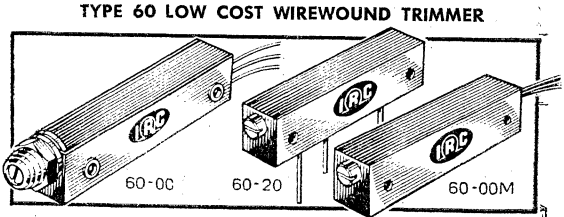
Stock No.	Mfr's Type	Resistance Values in Ohms (Specify Values Wanted)	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1869 C	8403	50, 100, 200, 500 1000, 2000, 5000, 10K, 20K, 30K, 50K	8.25	7.15	6.90	6.55	6.05	5.77	.....

Type 8500-10-turn. For wide range of industrial and commercial applications. Tol., ±5%. Rated 3.0 watts at 25° C ambient. Temperature range: —55° to +105° C. Coefficient: ±70 PPM/° C max. Screwdriver adjustment slot, .030" wide by .045" deep on ⅛" dia. shaft. 5/64" dia. holes in gold-plated terminals. Torque: 1 oz./in. max. Insul. res. at 500 VDC, 1000 meg minimum. Wt., 2 oz.



46 D 1868 C	8500	100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K	8.25	7.15	6.90	6.55	6.05	5.77	.....

TYPE 60 LOW COST WIREWOUND TRIMMER



Rated 1 watt at 70° C, with temperature range of —55° C to +125° C. Tolerance, ±10%. Rotation, 22 turns (±5). Shaft torque, 8 oz./in. maximum. Temperature coefficient, ±70 PPM/° C. 60-00 has teeth ±30 AWG Teflon® insulated leads; 60-20 has three staggered PC pins; 60-201 has two pins and one hook terminal. Meets load life, humidity, shock, vibration, seal tests. 1.250 x .275 x .315". Panel mount type available. Values: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K—specify. 2 oz.

Stock No.	Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 1870 C	60-00	3.19	2.95	2.66	2.52	2.36	2.24	2.15
46 D 1873 C	60-20	3.19	2.95	2.66	2.52	2.36	2.24	2.15
46 D 1876 C	60-210	3.19	2.95	2.66	2.52	2.36	2.24	2.15

IRC Trimmer Potentiometers

TYPE 7300 COMMERCIAL/INDUSTRIAL POT

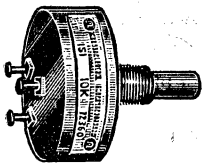
Miniature 10-turn Wirewound Pot
Rated Two Watts at 40°C

Brass bushing and front plate, black mirror-finish phenolic case. Precision drawn alloy wire wound on copper mandrel. 20" winding provides better resolution and increased reliability. Moving contacts are precious metal alloys. 1½" long by ¾" diameter. 1⁵⁄₆₄" terminals behind panel. ¼x½" long screwdriver shaft; ⅜"-32 by ⁵⁄₁₆" long bushing. Resistance tolerance, ±5%; linearity, ±.5% (100-2000 ohms), ±.25% (5000 ohms and up). Temp. range, —50° C to +85° C. Stop-mechanism, independent of mechanical elements. **Resistances Available:** 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K ohms—specify. Shpg. wt., 4 oz.

46 D 3031 C. 1-9 Ea. 7.50 10-24 Ea. 6.50
25-99 Ea. 6.00 100-499 Ea. 5.50

TYPE 151 SINGLE-TURN ROTARY TRIMMER POT

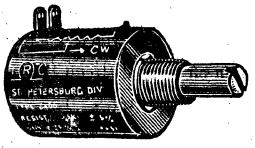
Sturdy Nickel-Plated Brass Case



Single-turn pot for industrial requirements. Panel-mounting. For high temperature conditions. Rated 3½ watts at 40° C. Nickel-plated brass case, 1½" diameter, ½" deep. 7⁄32" terminals. ¼" diameter stainless steel shaft with clear passivation extends ½" beyond ⅜"-32 by ½" bushing. Resistance tolerance, ±5%. Linearity, ±.5%. Torque, 2 oz/in. max. Meets MIL-R-27208. **Resistances Available:** 100, 500, 1000, 2500, 5000, 10K, 25K ohms. **Specify Resistance.** Operating temperature range, —55° C to +125° C. **Continuous rotation—stops available on Special Order only.** Av. wt., 2 oz.

46 D 7550 C. 1-9 ..... Each 8.75
10-24 ..... Ea. 8.31 25-99 ..... Ea. 7.88
100-199 ..... Ea. 7.44 200-499 ... Ea. 7.00

TYPE 8400 PRECISION 10-TURN POTENTIOMETER

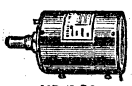


Miniature wirewound pot is only ⅞" dia.; projects 1⅛" behind panel. Precision molded nylon housing and end plates, grooved interior for 0.25% independent linearity. 20" winding. Gold-plated center terminal contact. Ribbon welded, multi-wire terminals. Screwdriver adjustment. Rated 3 watts at 40°C ambient. Tolerance, ±5%. Temp. range, —55° C to +105° C. Temp. coefficient, ±70 ppm/° C. Resolution, .070 to .013%. Takes 10g vibration, 55-2000 cycles; 55g shock. **Specify Resistance:** 100, 200, 500 ohms, 1000, 2000, 5000, 10K, 20K, 50K, 100K. 2 oz.

46 D 1741 C. 1-9 ..... Each 7.50
10-24 ..... Ea. 6.50 25-49 ..... Ea. 6.25
50-99 ..... Ea. 5.95 100-249 .... Ea. 5.50
250-499 ..... Ea. 5.25

LABORATORY AND INSTRUMENT POTENTIOMETERS (Operating Temp. —55°C to 100°C.) Power rating based on 40° C ambient.

Type HD-150. Highly stable, critical adjustment control meets requirements of industrial, military and computer instrumentation. 10-turn, 5-watt controls featuring high resolution and availability in high precision linearity up to ±0.1%. Resistance tolerance ±3%. Patented metal-to-metal stop system with mtg. bushing prevents damage if excessive force is applied against stops. Case is 1½" dia. x 2" long; ¼" dia. brass shaft ½" long beyond ⅜"-32x3⁄16" long bushing. Shpg. wt., 4 oz.

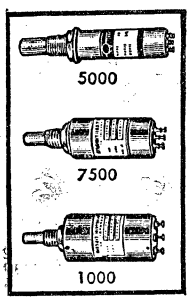


HD-150

Stock No.	Linearity	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7530 C	±0.25%	500, 1000, 2000, 5000, 10K, 20K, 30K, 50K, 100K, 200K	10.00	9.50	9.00	8.50	8.00	7.50
46 D 7531 C	±0.1%	1000, 2000, 5000, 10K, 20K, 30K, 50K, 100K, 200K	12.00	11.40	10.80	10.20	9.60	9.00

METAL-CASED POTENTIOMETERS (Operating Temp. —55°C to 125°C.) Power rating based on 40°C ambient.

Types 5000, 7500 and 1000. Extraordinarily rugged, metal encased 10-turn controls designed specifically for use in airborne and mobile equipment that is subject to extreme shock and vibration. Feature one-piece bushing and front header of nickel plated brass with moisture and dust-resistant bonding of case to headers. Shaft is moisture sealed by means of an "O" ring. Patented stop system prevents damage at ends of travel of contactor. Gold-plated turret terminals assure high reliability, excellent conductivity, and ease of soldering. Maximum starting and running torque is 2 oz./in. Shpg. wt., 4 oz.



5000

7500

1000

TYPE 5000

10-turn potentiometer with 1½-watt power rating. ½" dia. by 1 1⁵⁄32" long. Res. tol. ±5%, linearity, ±0.5%. ¼" shaft extends ½" beyond ⅜-32x½" bushing.

TYPE 7500

10-turn potentiometer with 3-watt power rating. ¾" dia. by 1²1⁄32" long. Resistance tolerance ±5%. ¼" dia. shaft extending ½" beyond ⅜-32 bushing. ½" bushing.

TYPE 1000

10-turn potentiometer with 3-watt power rating. 1" diameter by 1 1½" long. Resistance tolerance is ±5% and linearity is ±.5%. Has ¼" dia. shaft extending ½" beyond ⅜"-32 bushing. Bushing is ½" long.

Stock No.	Mfr's Type	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7635 C	5000	100, 500, 1000, 5000, 10K, 25K, 50K	10.00	9.50	9.00	8.50	8.00	7.50

Stock No.	Mfr's Type	Resistance Values (Ohms) Specify Values Wanted	EACH 1-9	10-24	25-99	100-199	200-499
46 D 7630 C	7500	100, 250, 500, 1000, 5000, 10K, 25K, 50K, 100K	12.50	11.88	11.25	10.63	10.00
46 D 7625 C	1000	500, 1000, 2500, 5000, 10K, 25K, 50K, 100K, 200K	12.50	11.88	11.25	10.63	10.00

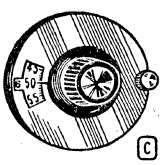
REVODEX DIALS FOR PRECISION POTENTIOMETERS

A

B

SERIES 400

1" dia. turn-counting dial for controls with shafts of ⅛" or ¼" diameter. Optional brake system allows positive locking without dial shift. Body mounts on panel; knob attaches to shaft extension up to .8" from panel. Calibrated 000-999. Anodized aluminum. 3 oz.



C

SERIES RD-1 AND RD-6

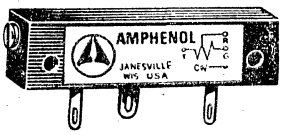
1⅞" dials with numbers grouped for easy reading. Calibrated 000-999. With zero backlash—locks without shift of dial setting. Mtg. plate fastens to pot mtg. nut; knob fastens with setscrew to pot shaft. Black or clear anodized aluminum finish. Use on ¼" dia. shafts up to 1" long from front of panel. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type With Brake	Mfr's Type Without Brake	Fig.	Fits Shaft	Finish	EACH 1-9	10-24	25-49	50-99	100-249	250-499
46 D 7551	RD-1	....	C	¼"	Black	5.75	5.46	5.18	4.89	4.60	4.31
46 D 7552	RD-6	....	C	¼"	Clear	5.75	5.46	5.18	4.89	4.60	4.31
46 D 7541	....	RD-411	B	¼"	Black	7.65	7.27	6.89	6.89	6.50	6.12
46 D 7542	RD-412	....	A	¼"	Black	8.25	7.84	7.43	7.43	7.01	6.60
46 D 7543	....	RD-421	B	⅛"	Black	7.65	7.27	6.89	6.89	6.50	6.12
46 D 7544	RD-422	....	A	⅛"	Black	8.25	7.84	7.43	7.43	7.01	6.60
46 D 7546	....	RD-461	B	¼"	Clear	7.65	7.27	6.89	6.89	6.50	6.12
46 D 7547	RD-462	....	A	¼"	Clear	8.25	7.84	7.43	7.43	7.01	6.60
46 D 7548	....	RD-471	B	⅛"	Clear	7.65	7.27	6.89	6.89	6.50	6.12
46 D 7549	RD-472	....	A	⅛"	Clear	8.25	7.84	7.43	7.43	7.01	6.60

Specify Stock No., Mfr's Type and Resistance Value When Ordering Controls

Amphenol Micropot Trimmer Potentiometers

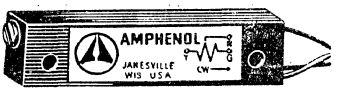
SERIES 992 WIREWOUND MICROPOT TRIMMERS



22-turn pot with ratcheting clutch mechanism, shiftproof wiper. Meets MIL-STD-202 steady-state humidity specs. Tol., ±5%. Temp., −55°C to +105°C. Values: 50, 100, 200, 500, 1000, 2000, 5000, 10K ohms. Gold-plated PC pins. ¼" shaft. 2 oz.

46 D 3522 C. 1-9.....Each 2.95 10-24.....Each 2.73
25-49.....Each 2.46 50-99.....Each 2.33
100-249...Each 2.18 250-499...Each 2.07 500-999...Each 2.04

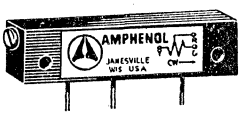
SERIES 2850 WIREWOUND MICROPOT TRIMMERS



22-turn pot meets and exceeds MIL-R-27208, RT11. Window design case and silicon "O" ring seals out humidity and dust. Extra-long high temperature ceramic mandrel, diallyl phthalate case. −65°C to +175°C. Tol., ±5%. *Suffixes: P, printed circuit pins; L, Teflon insulated stranded leads; SL, solder lugs. Values: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K—specify. 2 oz.

Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3523 C	2850P	5.21	4.83	4.53	4.27	4.04	3.78	3.59
46 D 3524 C	2850L	5.21	4.83	4.53	4.27	4.04	3.78	3.59
46 D 3525 C	2850SL	5.21	4.83	4.53	4.27	4.04	3.78	3.59

SERIES 2851 METAL-FILM MICROPOT TRIMMERS



Has performance characteristics compatible with other metal film components. 100% metallic element offers infinite resolution with excellent low-noise characteristics unsurpassed by other infinite resolution elements. 22 turns. Tolerance, ±10%. Temp. range, −55°C to +150°C. Low 100 ppm/°C temperature coefficient. Printed circuit pins. Values: 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K—specify. *See 2850 description above. Shpg. wt., 2 oz.

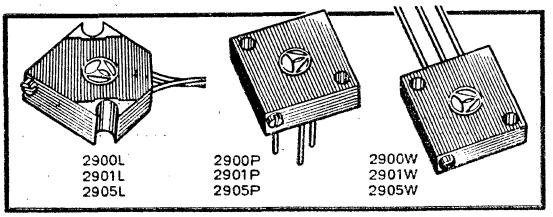
Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3526 C	2851P	7.02	6.50	5.85	5.56	5.20	4.94	4.77

SERIES 2855 CERMET ELEMENT MICROPOT TRIMMERS

Humidity-proof 1¼" rectangular pot with Cermet element for high resolution. Carbon-tipped precious metal contact; gold-plated PC pins. 22 turns. Tol., ±10%. Temp. range, −55°C to +150°C. Meets or exceeds MIL-R-22097, RJ11. Values: 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 500K, 1 megohm—specify. Av. shpg. wt., 2 oz.

46 D 3482 C. 1-9.....Each 5.72 10-24.....Each 5.26
25-49.....Each 4.81 50-99.....Each 4.51
100-249...Each 4.28 250-499...Each 4.05 500-999...Each 3.79

SERIES 2900 SQUARE MICROPOT TRIMMERS



2900L
2901L
2905L

2900P
2901P
2905P

2900W
2901W
2905W

TYPE 2900 WIREWOUND MICROPOT TRIMMERS

Precision 25-turn trimmer with non-slip wiper adjustment. Minimum number of internal components for increased reliability. Humidity-proof. Meets or exceeds MIL-R-27208, RT22. Tol., ±5%. Temp. range, −65°C to +175°C. ½" square. *Suffixes: L, color-coded Teflon insulated leads; P, gold-plated PC pins; W, uninsulated gold-plated leads. Values: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K—specify. Av. shpg. wt., 2 oz.

Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3527 C	2900L	5.43	5.04	4.79	4.45	4.21	3.94	3.73
46 D 3528 C	2900P	4.87	4.52	4.24	3.98	3.77	3.53	3.12
46 D 3529 C	2900W	5.43	5.04	4.79	4.45	4.21	3.94	3.73

TYPE 2901 METAL-FILM MICROPOT TRIMMERS

Humidity-proof 25-turn trimmers for a variety of industrial and military applications. 100% metallic element offers infinite resolution with excellent low noise characteristics. Tol., ±10%. Temp. range, −55°C to +150°C. ½" square. *Suffixes: L, color-coded Teflon insulated leads; P, gold-plated PC pins; W, uninsulated gold-plated leads. Values: 50, 100, 200, 500, 1000, 2000, 5000, 10K—specify. Av. shpg. wt., 2 oz.

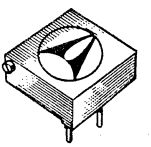
Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 7149 C	2901L	7.35	6.95	6.60	6.25	5.85	5.50	5.30
46 D 7159 C	2901P	7.35	6.95	6.60	6.25	5.85	5.50	5.30
46 D 7160 C	2901W	7.35	6.95	6.60	6.25	5.85	5.50	5.30

TYPE 2905 CERMET ELEMENT MICROPOT TRIMMERS

Infinite resolution cermet element with directly-welded gold strap terminations, carbon-tipped precious metal contact. Meets MIL-R-22097, RJ22. ±10%. −55°C to +150°C. *Suffixes: L, color-coded-Teflon insulated gold plated leads; P, gold-plated PC pins; W, uninsulated gold-plated leads. Values: 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 25K, 50K, 100K, 250K, 500K, 1 meg, 2.5 meg, 5 meg, 10 megohms—specify. 2 oz.

Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 3530 C	2905L	6.48	6.01	5.64	5.31	5.02	4.69	4.20
46 D 3483 C	2905P	6.48	6.01	5.64	5.31	5.02	4.69	4.20
46 D 3531 C	2905W	6.48	6.01	5.64	5.31	5.02	4.69	4.20

SERIES 3600 WIREWOUND MICROPOT TRIMMER

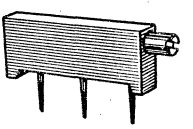


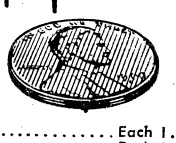
Precision 23-turn trimmer with printed circuit pins. Low-mass shock and vibration proof wiper. Up to 85% better resolution than specified by MIL-R-27208B, RT24. Circuit pins silver brazed and gold plated for corrosion proofing. Damage proof ratcheting clutch mechanism. Res. tol: ±10%. Electrical output: linear with shaft adj. Values: 100, 200, 500, 1000, 2000, 5000, 10K, 20K ohms. Specify. Wt., 2 oz.

Stock No.	*Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249	250-499	500-999
46 D 7364 C	3600P	2.95	2.73	2.46	2.33	2.18	2.07	1.97

SERIES 3800 MICROPOT COMMERCIAL TRIMMERS

TYPE 3800 WIREWOUND MICROPOT TRIMMERS





3800P
3805P
3811P

High-quality humidity-steady state general purpose trimmer. 20 turns; full-length mandrel. Commercial ¾" rectangular style with solvent-resistant nylon case and popular PC pin spacing. Tolerance, ±10%. Temp., −65°C to +125°C. Values: 10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K—specify. 2 oz.

46 D 3532 C. 1-9.....Each 1.75 10-24.....Each 1.62
25-49.....Each 1.46 50-99.....Each 1.39
100-249...Each 1.30 250-499...Each 1.23 500-999...Each 1.14

TYPE 3805 CERMET ELEMENT MICROPOT TRIMMER

Commercial ¾" rectangular style Cermet-element trimmer offers infinite resolution. 15-turn shaft adjustment. Carbon-tipped precious metal contact reduces CRV to a minimum and enhances rotational life. Solvent-resistant nylon case, popular printed circuit pin spacing. Tolerance, ±10%. Temperature range, −55°C to +125°C. Power rating, ¾-watt at 40°C derated to zero at 125°C. Dielectric strength, 900 volts rms at room temperature. Shaft torque, 8.0 oz. in. maximum. Values: 100, 200, 500, 1000, 2000, 5000, 10K, 20K, 50K, 100K, 500K—specify. Av. shpg. wt., 2 oz.

46 D 3484 C. 1-9.....Each 2.08 10-24.....Each 1.93
25-49.....Each 1.72 50-99.....Each 1.66
100-249...Each 1.55 250-499...Each 1.46 500-999...Each 1.26

TYPE 3811 METAL-FILM ELEMENT MICROPOT TRIMMERS

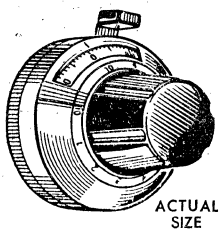
100% metallic element offers infinite resolution with excellent low noise characteristics; performance characteristics compatible with other metal film components. ¾" rectangular solvent-resistant nylon case. Silicon "O" ring seals out dust and humidity. Popular PC pin spacing. Tolerance, ±10%. Temperature range, −55°C to +125°C. 15 turns. Shaft torque, 8.0 oz. in. max. Values: 50, 100, 200, 500, 1000, 2000, 5000, 10K, 20K—specify. Av. shpg. wt., 2 oz.

46 D 3481 C. 1-9.....Each 2.94 10-24.....Each 2.77
25-49.....Each 2.59 50-99.....Each 2.44
100-249...Each 2.31 250-499...Each 2.16 500-999...Each 1.95

Amphenol Micropots and Microdials also on Next Page

Amphenol Micropots and Microdials

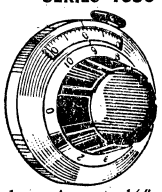
SERIES 1370 MINIATURE CONCENTRIC MICRODIAL


ACTUAL SIZE

Modern miniature dial styling is compatible with today's compact panel design. Only 7/8" diameter, yet has large, easy-to-read concentric scale. Indicates angular position of potentiometers and multi-turn devices of 10 turns or less with 1000:1 indexing accuracy. Epicyclic gears provide smooth, stepless operation. Vernier dial mounts directly to shaft, eliminating backlash. Positive fingertip disk brake. 15/16" deep. Accepts 1/4" shaft dia. With mtg. hardware. Shpg. wt., 2 oz.

46 D 3533. 1-9.....Each 6.60 10-24.....Each 6.17
25-49.....Each 5.85 50-99.....Each 5.53
100-249.....Each 5.20 250-499.....Each 4.87

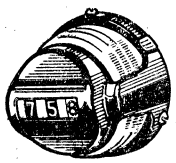
SERIES 1350 TEN-TURN CONCENTRIC MICRODIALS



Precision counting dial indicates angular position of potentiometers and multi-turn devices of 10 turns or less with 1000:1 indexing accuracy. Inner dial counts turns, large, easily readable outer vernier dial indicates hundredths. Epicyclic gear movement. Internal gear of turn dial meshes with eccentric-driven spur gear for smooth, stepless operation. Vernier dial locks rigidly onto shaft to prevent backlash. Fingertip brake holds shaft position until released. 1 13/16" diameter; 1" deep. Accepts 1/4" dia. shafts. With all mounting hardware, Allen wrench, instructions. Shpg. wt., 2 oz.

46 D 3480. 1-9.....Each 5.75 10-24.....Each 5.46
25-49....Each 5.18 50-99....Each 4.89 100-199....Each 4.60

SERIES 1300 DIRECT-READING MICRODIALS



In-line digital-type dials for Micropots and other rotary devices. Displays large, easy-to-read numerals. Indexed accuracy is 1 part in 1000. Mount directly to shaft to eliminate backlash. Exceeds MIL-E-5272C. 3-digit types are 1 21/32x1 13/16" dia.; 4-digit types are 1 5/8x2 1/16" dia. Accepts 1/8" to 5/16" dia. shafts. For use with panels up to 3/16" thick. Types marked with *include fingertip brake. Wt., 4 oz.

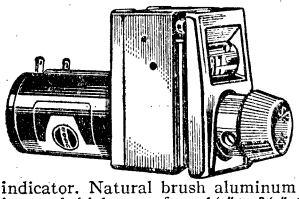
Stock No.	Mfr's Type	Digits	Turns	EACH 1-9	10-24	25-49	50-99	100-249
46 D 3472	*1309	3	10	15.60	14.80	14.04	13.25	12.50
46 D 3499	1310	3	10	14.50	13.75	13.05	12.30	11.60
46 D 7133	1304	4	100	20.00	19.00	18.00	17.00	16.00
46 D 7134	*1314	4	100	21.50	20.40	19.35	18.25	17.20

TYPE 3041-2 CONCENTRIC-SCALE MICRODIAL

Miniature 10-turn dial for any of the "Micropots" on this and preceding page. Only 1 5/32" diameter; 15/16" projection from panel. 10-division dial counts turns; 100-division dial registers increments of each turn. Includes brake. Numerals are white on black background; brake knob is black. For panels from 1/16" to 1/8" thickness. Dial face is angled to avoid direct reflections. Up to 1/4" dia. shafts. All materials except set screw are non-magnetic and corrosion-resistant. Dust-tight O-ring seal. 4 oz.

46 D 7136. 1-9..... Each 8.75 10-24.....Each 8.30
25-49....Each 7.85 50-99....Each 7.45 100-249....Each 7.00

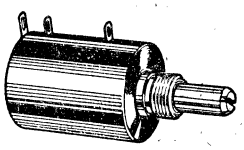
SERIES 3100 DIGITAL MINIATURE MICRODIAL



10-turn Microdial with direct-reading, miniature digital readout to 999. Convex lens provides clear reading at a distance. Dial is extremely precise; indexing accuracy is 1 part in 1000. Push knob in to apply brake, out to release. Can be used with any 10-turn pot with a 1/4" or 1/8" shaft, or as panel indicator. Natural brush aluminum finish. Mounts in 1x1 1/2" hole in panel thicknesses from 1/16" to 3/16". 3120 Series takes 1/8" dia. shaft. 3140 Series takes 1/4" dia. shaft. 1 21/32x1 1/8" (HxW). Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Shaft Dia.	Light	EACH 1-9	10-24	25-49	50-99	100-249
46 D 3519	3121	1/8"	None	13.00	12.35	11.70	11.05	10.40
46 D 3520	3141	1/4"	None	12.00	11.40	10.80	10.20	9.60
46 D 3521	3141-2	1/4"	White	13.75	13.05	12.40	11.65	11.00

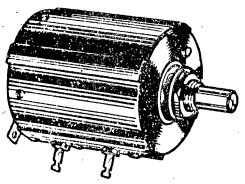
SERIES 4101B 7/8" DIA. TEN-TURN 2-WATT MICROPOT



High-performance wirewound Micropot has backlash-free wiper drive mechanism for precise repeat settings. Precious metal wiper and pickup contacts eliminate noise and corrosion problems. Resistance element is welded directly to the gold-plated terminal lugs. Rated 2 watts at 40°C for 1000 hours. Tolerance, ±5%. Temperature range, −55°C to +125°C. Rotational life, 200,000 revolutions. Starting torque, 1.5 oz. in.; running torque, 1.0 oz. in. Size: 7/8" dia., 1 3/16" length. Values: 100, 200, 1000, 2000, 5000, 10K, 20K, 50K, 100K ohms—specify. Av. shpg. wt., 3 oz.

46 D 3534 C. 1-9.....Each 5.95 10-24.....Each 5.65
25-49.....Each 5.35
50-99.....Each 5.05 100-249.....Each 4.75

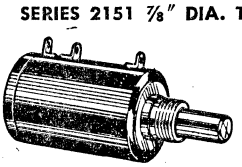
SERIES 205 1 3/4" DIA. TEN-TURN 5-WATT MICROPOT



Wirewound linear pots have resistance proportional to shaft rotation. 0.1% zero-based linearity. Extra-long resistance element for up to 64% better resolution. Anti-backlash drive mechanism. Rated 5 watts at 40°C. Tolerance, ±3%, except *±10%. Temperature range, −55°C to +105°C. Rotational life, 1,000,000 revs. Torque: starting, 3 oz. in.; running, 1.5 oz. in. Size: 1 3/4" dia., 2 1/8" length. Values: *25, 50, 100, 500, 1000, 5000, 10K, 20K, 50K, 100K—specify. Av. shpg. wt., 5 oz.

46 D 7148 C. 1-9....Each 18.50 10-24.....Each 17.55
25-49...Each 16.65 50-99...Each 15.70 100-249...Each 14.80

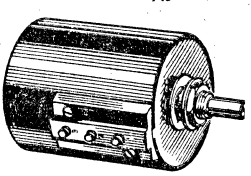
SERIES 2151 7/8" DIA. TEN-TURN 3-WATT MICROPOTS



Ten-turn potentiometer has wirewound resistance element inside high-temperature molded phenolic case. Special wiper drive mechanism eliminates backlash. Terminations are welded directly to the gold-plated terminal lugs. 1/4" common shaft assures unit-to-unit indexing accuracy and high reliability when ganging. Rated 3 watts at 40°C. Tolerance, ±3%. Temperature range, −55°C to +105°C. Rotational life, 2,000,000 revolutions. 7/8" dia., 1 1/2" length. Values: 100, 500, 1000, 5000, 10K, 20K, 30K, 50K, 100K—specify. Av. shpg. wt., 5 oz.

46 D 7139 C. 1-9....Each 10.00 10-24.....Each 9.50
25-49.....Each 9.00 50-99.....Each 8.50
100-249.....Each 8.00 250-Up.....Each 7.50

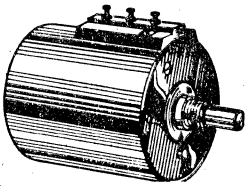
SERIES 2201 1 13/16" DIA. TEN-TURN 5-WATT MICROPOTS



Precision extra-long life 10-turn potentiometer has wirewound element wrapped around center core under maximum tension for absolute wiper-to-element concentricity. Dual brass bearing shaft support. Anti-backlash carrier. Rated 5 watts at 40°C. Tolerance, ±3%, except *±5%. Temp. range, −55°C to +105°C. Rotational life, 5,000,000 revs. 1 13/16" dia., 2 1/8" length. Values: *25, *50, 100, 500, 1000, 5000, 10K, 20K, 50K, 100K, *200K—specify. 5 oz.

46 D 7137 C. 1-9....Each 10.00 10-24.....Each 9.50
25-49.....Each 9.00 50-99.....Each 8.50
100-249.....Each 8.00 250-Up.....Each 7.50

SERIES 2251 MICROPOTS

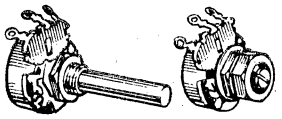


Ten-turn 1 13/16" dia. wirewound potentiometer provides good linear accuracy and long life. Precious metal wiper and anchored pickup contact for absolute continuity. Anti-backlash carrier in drive mechanism assures precise, repeat settings. Tension-wound element for high linear accuracy and longer rotational life. Dual brass bearing shaft support. Rated 5 watts at 40°C. Tolerance, ±3%, except *±5%. Temperature range, −55°C to +105°C. Rotational life, 5,000,000 revs. 2 1/8" length. Values: *25, *50, 100, 500, 1000, 5000, 10K, 20K, 50K, 100K—specify. 5 oz.

46 D 7138 C. 1-9....Each 10.00 10-24.....Each 9.50
25-49.....Each 9.00 50-99.....Each 8.50
100-249.....Each 8.00 250-Up.....Each 7.50

Industrial Controls

AW SERIES INDUSTRIAL CONTROLS



Type AW Type AWRL

Precision wirewound controls for a wide variety of industrial uses. Linear taper. Fully enclosed construction for long life and dependable operation. Full .5 watt power rating. ±10% tolerance. Voltage rating, 500 VDC operating maximum. 15/16" diameter. 3/8"-32 mounting bushing. Shaft diameter, .250". AW: non-locking, 3/8" bushing. Shaft length, 3" F. M. S. Full round shaft trim. AWRL: locking, 3/8" bushing. Shaft length, 1/2" F. M. S. Screwdriver slot trim. Av. wt., 4 oz.

Ohms	Ohms	Ohms	Ohms
10	50	500	3000
15	100	1000	5000
20	200	2000	10K
25	250	2500	.....

Stock No.	Mfr's Type	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5806 C	AW	10-10K	1.29	1.16	1.13	1.02	.97
46 D 5807 C	AWRL	10-10K	1.59	1.43	1.33	1.25	1.19

L-PAD AND T-PAD SPEAKER CONTROLS

Dependable speaker controls for a wide variety of audio applications. Handle up to 15 watts audio (5 watts DC). L-pad attenuators provide constant input-impedance. T-pad attenuators constant input and output impedance. 15/16" diameter. Depth required behind panel: L-pad, 1", T-pad, 1 1/2". 3/8" bushing permits mounting on panels up to 3/4" thick. Includes knob for making easy adjustments. Av. shpg. wt., 6 oz.

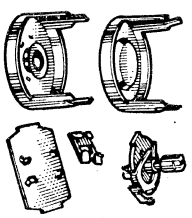
L-PAD CONTROLS

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5880	LP4A	4	2.79	2.51	2.37	2.20	2.09
46 D 5881	LP8A	8	2.79	2.51	2.37	2.20	2.09
46 D 5882	LP15A	15	2.79	2.51	2.37	2.20	2.09

T-PAD CONTROLS

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5884	TP4A	4	3.15	2.82	2.42	2.47	2.35
46 D 5885	TP8A	8	3.15	2.82	2.62	2.47	2.35
46 D 5887	TP500A	500	3.15	2.82	2.62	2.47	2.35

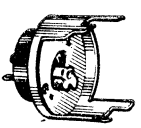
WM 4-WATT MULTISECTION "ADD-ON" CONTROLS



Can be easily attached to Types WPK, WPS, and WP, and WPRL controls to form dual control units. Multisections are ruggedly constructed for long life; handle up to 4 watts power. Linear taper design for uniform resistance change over entire operating range. 300° rotation. Multi-section adds 5/8" to control mounting depth. When ordering, specify Type WM, and ohms from Table below. Shpg. wt., 2 oz.

Stock No.	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5860 C	50, 100, 200, 500, 1K, 2K, 2.5K, 5K, 10K	1.50	1.35	1.26	1.19	1.13

SWITCHES FOR WPK, WPS, WP, WPRL CONTROLS

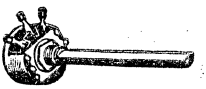


Easy to attach rotary switches. Wt., 2 oz.

46 D 5218. Type 76-11. SPST. 1-9.....Each .75
10-24.....Each .68 25-49.....Each .63
50-99.....Each .59 100-249.....Each .56

46 D 5219. Type 76-12. DPST. 1-9.....Each .75
10-24.....Each .68 25-49.....Each .63
50-99.....Each .59 100-249.....Each .56

UNIVERSAL 4-WATT WIREWOUND TYPE WPK, WPS, AND WP CONTROLS



Versatile controls for industrial uses. All have linear taper, except type with L after ohms, which has left-hand log taper for TV focus control. All have ±10% tolerance, 1 1/4" diameter, 23/32" deep, threaded bushing has 3/8" diameter, 3/8" long. Shafts have 1/4" diameter. Type WP has 3" round shaft. Type WPK has 3" "Knob Master" shaft which fits a wide variety of knobs. Type WPS has 3/4" shaft, knurled end, slotted. WM multisections (see left) attach easily to all controls. Use for 2, 3, and 4-watt audio requirements. Contactor and connector are of a long-wearing alloy that makes direct contact. Resistance element withstands high temperatures without shrinking. When ordering, be sure to specify Type No. and Ohms. Av. shpg. wt., 4 oz.

TYPE WPK CONTROLS WITH 3" SHAFT

Ohms	Ohms	Ohms	Ohms
10	100	500	2500
20	200	750L	3000
30	250	1000	5000
50	300	2000	10K

Stock No.	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5216 C	10 to 10K	1.59	1.43	1.33	1.25	1.19
46 D 5199	25K only	1.92	1.73	1.61	1.52	1.44
46 D 5856	50K only	2.19	1.97	1.84	1.73	1.64

TYPE WPS CONTROLS WITH 3/4" SLOTTED SHAFT

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
25	250	500	1000	2000	2500	5000

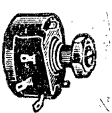
Stock No.	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5217 C	25 to 5000	1.59	1.43	1.33	1.25	1.19

TYPE WP CONTROLS WITH 3" ROUND SHAFT

Ohms	Ohms	Ohms	Ohms
2	25	250	2000
3	30	500	2500
5	50	750	3000
10	100	1000	5000
20	200	1500	10K

Stock No.	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5215 C	2 to 10K	1.50	1.35	1.26	1.19	1.13
46 D 5857 C	15K, 20K, 25K	1.80	1.52	1.42	1.42	1.35
46 D 5858	50K only	2.19	1.97	1.84	1.73	1.64

TYPE WPRL WIREWOUND CONTROLS



Selection of controls with screwdriver-slot shafts. Shafts are 1/2" in diameter and approximately 1/2" long from the mounting face. Has 3/8" locking type bushing and lock nut. Can be set and locked—ideal for controls that need only infrequent adjustment; TV sets, test instruments, other electronic equipment. Has linear taper. For applications requiring power handling capabilities of 2, 3 and 4 watts. Specify Type and Ohms. Wt., 4 oz.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
2	20	100	500	2500	7500
5	25	200	750	3000	10K
8	30	250	1000	4000	.....
10	50	400	2000	5000	.....

Stock No.	Ohms (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5859 C	2 to 10K	1.77	1.60	1.48	1.40	1.33

Stock No.	Ohms Available (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5889 C	15K, 20K, 25K	2.19	1.79	1.67	1.57	1.49
46 D 5890 C	30K, 50K	2.43	2.19	2.05	1.92	1.82

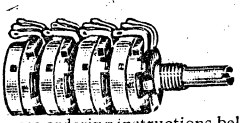
ATTENTION QUANTITY BUYERS

Make Allied your "One-Stop" Headquarters for all your industrial needs. Pay OEM factory prices, slash handling expenses and reduce paperwork in purchasing and receiving. You place one order, receive one shipment, and make one disbursement. Allied has the world's largest stock of electronic components for industry.

IRC-CTS Controls and Control Switches

SERIES 45 ½-WATT CONTROLS

Choice of 12,631,500 Combinations



Select the control you need from a choice of 12,631,500 possible combinations. Available with up to 4 sections —see ordering instructions below. Tolerance, ±20%. Rated ½-watt through 10K, ½-watt through 100K, and ¼-watt over 100K up to a maximum of 500 VDC across end-terminals. Switches rated 3 amps at 125 V, 1 amp at 250 V; DPST switch also rated 5 amps at 20 V. U.L. Component-Program Recognized. ¼"-diameter brass shafts, ⅜-dia. threaded bushings. Size behind panel: single sections, 31/64"; dual sections, 61/64"; triple sections, 1 27/64"; quadruple sections, 1 57/64". Add 33/64" for switch. Av. shpg. wt., 5 oz.

ORDERING INSTRUCTIONS

TO EXPEDITE SERVICE, YOUR ORDER SHOULD INCLUDE BOTH ALLIED'S STOCK NO. AND THE COMPLETE TYPE NO.

TO CONSTRUCT TYPE NO.:

1. Begin with 45 to identify Series 45 controls.
2. Indicate part number of desired value and taper for single control, or first (panel) section of multi-section control, from "A" columns at right.
3. Indicate part numbers of desired values and tapers for second, third and fourth sections of multi-section control, from "B" columns at right—one number for each section. Use only as many part numbers as sections desired. A 3-section control, for example, would have two part numbers from "B" columns, one from "A" columns.
4. Indicate S, for SPST switch, or D, for DPST switch. Omit if no switch is desired.
5. Indicate part number of shaft having desired length and end trim, from "C" column at right.

TO FIND STOCK NO.: See Stock No. chart at right.

EXAMPLES:

Stock No. 46 D 1889 C, Type No. 45 D 501 D 07. This is a Series 45 single control, 500 ohms, linear taper, with DPST switch and 1" flatted shaft.

Stock No. 46 D 1892 C, Type No. 45 A 103 MD 102 MA 205 18 This is a Series 45 triple-section control; 10K log taper first section, 1000-ohm linear taper second section, 2-meg log taper third section; with no switch and a 1" knurled shaft.

TYPE NUMBER SELECTION CHART

*Screwdriver slot. †Length from mounting surface. **Instructions at left describe the use of this chart and the Stock No. chart below in ordering Series 45 controls.**

Ohms (First Section)	A — Single Control or First Section, Select One		Ohms (Additional Sections)	B — Second, Third, and Fourth Section, Select One, Two, or Three		C — Shaft No. (Select One)	Shaft Description	
	Log Taper	Linear Taper		Log Taper	Linear Taper		Length FMS†	End Trim
500	....	D501	500	.....	MD501	01	½"	*SD Slot
1000	....	D102	1000	.....	MD102	02	5/8"	*SD Slot
2000	....	D202	2000	.....	MD202	03	¾"	*SD Slot
3000	....	D302	3000	.....	MD302	04	⅞"	*SD Slot
5000	....	D502	5000	.....	MD502	05	1"	*SD Slot
10K	A103	D103	10K	.....	MD103	06	⅞"	Flatted
20K	....	D203	20K	.....	.....	07	1"	Flatted
25K	....	D253	25K	.....	MD253	08	1 1/8"	Flatted
50K	A503	D503	50K	.....	MD503	09	1¼"	Flatted
100K	A104	D104	100K	MA104	MD104	10	1 3/8"	Flatted
200K	....	D204	200K	.....	.....	11	1½"	Flatted
250K	A254	D254	250K	MA254	MD254	12	1 5/8"	Flatted
500K	A504	D504	500K	MA504	MD504	13	1¾"	Flatted
1 meg	A105	D105	1 Meg.	MA105	MD105	14	1 7/8"	Flatted
2 meg	A205	D205	2 Meg.	MA205	MD205	15	2"	Flatted
3 meg	A305	....	3 Meg.	.....	.....	16	2"	Round
5 meg	....	D505	5 Meg.	.....	MD505	17	3"	Round
10 meg	....	D106	10 Meg.	.....	MD106	18	1"	Knurled
						19	1¼"	Knurled
						20	1½"	Knurled

STOCK NOS. (Include Complete Type No., Above)

Stock No.	Control	Switch	EACH 1-9	10-24	25-49	50-299
46 D 1888 C	Single	None	1.34	1.15	1.08	1.01
46 D 1889 C	Single	SPST or DPST	1.99	1.74	1.63	1.50
46 D 1890 C	Dual	None	2.22	1.90	1.79	1.67
46 D 1891 C	Dual	SPST or DPST	2.87	2.49	2.34	2.16
46 D 1892 C	Triple	None	3.10	2.65	2.50	2.33
46 D 1893 C	Triple	SPST or DPST	3.75	3.24	3.05	2.82
46 D 1894 C	Quadruple	None	3.98	3.40	3.21	2.99
46 D 1895 C	Quadruple	SPST or DPST	4.61	3.99	3.76	3.48

Q CONTROLS WITH UNIVERSAL SHAFTS

Have 3" shafts—knurled, flatted and slotted. Resistance element is permanently bonded to a phenolic laminate. Contactor is a one-piece dual contactor of thin, high-stress alloy. Body diameter is 15/16". Bushing is ¼" long. Less switches (below). Explanation of tapers is as follows: **Taper A is linear for uniform resistance change; Taper C is logarithmic for audio application.** Shpg. wt., 4 oz.

Stk. No.	Type	Ohms	Taper	Stk. No.	Type	Ohms	Taper
46 D 5395	Q11-201	250	A	46 D 5318	Q13-128	100K	C
46 D 5300	Q11-103	500	A	46 D 5374	Q11-129	200K	A
46 D 5301	Q11-108	1000	A	46 D 5319	Q11-130	250K	A
46 D 5442	Q11-109	1500	A	46 D 5320	Q13-130	250K	C
46 D 5302	Q11-110	2000	A	46 D 5322	Q11-133	500K	A
46 D 5373	Q13-111	2500	C	46 D 5323	Q13-133	500K	C
46 D 5303	Q11-112	3000	A	46 D 5325	Q11-137	1 meg	A
46 D 5304	Q11-114	5000	A	46 D 5326	Q13-137	1 meg	C
46 D 5383	Q13-114	5000	C	46 D 5328	Q11-138	1.5 meg	A
46 D 5306	Q11-116	10K	A	46 D 5329	Q11-139	2 meg	A
46 D 5309	Q11-119	20K	A	46 D 5330	Q13-139	2 meg	C
46 D 5311	Q11-120	25K	A	46 D 5331	Q11-239	2.5 meg	A
46 D 5443	Q13-120	25K	C	46 D 5332	Q11-140	3 meg	A
46 D 5314	Q11-123	50K	A	46 D 5334	Q11-141	5 meg	A
46 D 5315	Q13-123	50K	C	46 D 5335	Q11-143	10 meg	A
46 D 5317	Q11-128	100K	A	.....	.....	.....	.....

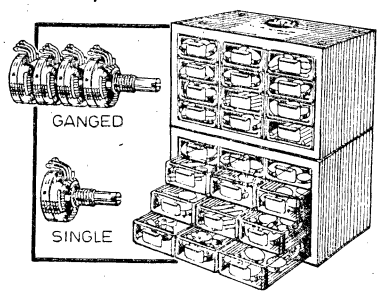
1-9.....Each 1.23 10-24.....Each 1.13 25-49.....Each 1.11
50-99.....Each .97 100-249.....Each .92

SWITCHES FOR Q CONTROLS

Attachable power switch is easily installed—just remove tab-held cover of Q control to mount switch. Type 76-4 (SPDT) is make-one, break-one. U.L. Component-Program Recognized. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5359	76-1	SPST	.75	.68	.63	.59	.56
46 D 5591	76-2	DPST	.75	.68	.63	.59	.56
46 D 5888	76-4	SPDT	.75	.68	.63	.59	.56

ELS-1, ELS-2 SERIES 45 VARIABLE RESISTOR KITS



ELS-2. Over 12,631,500 control combinations. 18 ranges—500 ohms to 10 megs. Includes 64 front control sections, 38 rear sections, 64 shafts, 20 switches (SPST and SPDT), 44 dust covers, 2 gray metal cabinets, 24 transparent spill-proof drawers with labels and separators. Cabinets, 13x 20x6".

45 D 6793 Shpg. wt., 16¼ lbs.....132.00

ELS-1. Above, but has single 6½x10x6" metal cabinet, 27 linear and 12 audio-taper front control sections, 42 shafts, 9 switches, 42 dust covers, 12 transparent spill-proof drawers.
45 D 6794. Shpg. wt., 7¼ lbs.....62.50

ELS-9 LINEAR-TAPER CARBON TRIMMER-POT KIT

Assortment of CTS Type U201 parallel mounting carbon pots. PC terminals. Slotted for front or rear adjustment. ¼ watt. With 12-drawer cabinet. Includes 5 each of 100 ohms, 250K, 1 meg; 10 each of 250, 500, 1000, 2500, 25K, 50K, 500K; 15 of 5000 ohms; 20 of 100K; 25 of 10K.
46 D 1682. Sgpg. wt., 4 lbs.....55.55

ELS-10 LINEAR-TAPER CARBON TRIMMER-POT KIT

Assorted CTS X201 pots. Above, except vertical mounting. 5 each of 250 and 250K ohms; 10 each of 100 and 500K ohms; 15 each of 500, 50K, and 1 meg; 20 each of 5000, 10K, 25K, 100K; 25 each of 1K and 25K.
46 D 1683. Shpg. wt., 4 lbs.....77.95

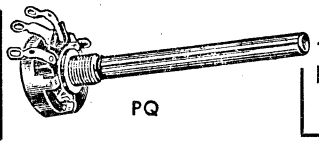
Depend on Allied for Complete Stocks, OEM Prices, Same-Day Shipment

IRC-CTS Controls and Control Switches

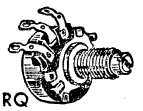
EXPLANATION OF TAPERS

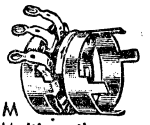
Taper A. Linear for uniform change of resistance.

Taper C. Logarithmic for audio circuit or antenna shunt control.



INDUSTRIAL CONTROLS





TYPE PQ, RQ, RQL CONTROLS AND TYPE M MULTISECTIONS

Excellent quality controls with "cushioned turn" are carefully designed and manufactured of premium materials for reliability. These versatile controls have a smooth carbon base element and "two-finger" wiper arm of thin, high-stress alloy—assures good contact and low noise. Type M multisections can easily be added to PQ, RQ or RQL types; permit exact "tailoring" of dual, triple and quadruple units. Special-purpose controls can be made up by using a Type PQ, RQ or RQL with several M multisections and a Type 76 switch (listed below). Types PQ, RQ and RQL have ⅜" threaded bushing.

Body diameter less terminals is 1 5/16" maximum; body diameter including terminals is 1 5/16" maximum; depth behind panel, 33/64". Each Type M multisection adds 19/32" to the depth. Type PQ, RQ, RQL and M sections feature 300 degree arc of rotation—with or without switch. Power rating is ½ watt, 500 volt maximum. PQ types have shaft 3" long, ¼" diameter. RQ and RQL types have short shaft with screwdriver slot; shaft extends ⅛" beyond threaded bushing.

Types RQ and RQL are identical except for RQL having a split bushing and locking nut —for permanent, vibration-proof settings. Tolerance of all types is ±10%. Conservatively rated for long dependable service. The terminals are heavily tinned for easy soldering. Ground plate on Types PQ, RQ and RQL has 2 locating tabs that may be bent down if not needed when installing in equipment. See **Explanation of Tapers** at top right. **Specify Stock No., Mfr's Type and Ohms.** Av. shpg. wt., 4 oz.

Mfr's Type	Ohms	Taper	Stock No. PQ	Stock No. RQ	Stock No. RQL	Stock No. M
11-103	500	A	46 D 5510	46 D 5542	46 D 3271	46 D 5592
11-108	1000	A	46 D 5511	46 D 5543	46 D 3272	46 D 5574
11-110	2000	A	46 D 5512	46 D 5544	46 D 3273	46 D 5593
11-112	3000	A	46 D 5513	46 D 5545	.....	.....
11-114	5000	A	46 D 5514	46 D 5546	46 D 3275	46 D 5575
11-115	7500	A	46 D 5515	.....	.....	.....
11-116	10K	A	46 D 5516	46 D 5548	46 D 3276	46 D 5576
13-116	10K	C	46 D 5517	.....	.....	.....
11-119	20K	A	46 D 5519	.....	46 D 3277	.....
11-120	25K	A	46 D 5520	.....	46 D 3278	46 D 5577
11-123	50K	A	46 D 5523	46 D 5555	46 F 3280	46 F 5578
13-123	50K	C	46 D 5524	.....	.....	.....
11-128	100K	A	46 D 5526	46 D 5558	46 D 3282	46 D 5579
13-128	100K	C	46 D 5527	.....	.....	46 D 5580
11-129	200K	A	.....	.....	46 D 3283	.....
11-130	250K	A	46 D 5528	46 D 5560	46 D 3284	46 D 5581
13-130	250K	C	46 D 5529	.....	.....	.....
11-133	500K	A	46 D 5530	46 D 5562	46 D 3286	46 D 5583
13-133	500K	C	46 D 5531	46 D 5563	46 D 3287	46 D 5584
11-137	1.0 meg	A	46 D 5532	46 D 5564	46 D 3288	46 D 5585
13-137	1.0 meg	C	46 D 5533	.....	46 D 3289	.....
11-139	2.0 meg	A	46 D 5535	.....	46 D 3291	.....
11-140	3.0 meg	A	46 D 5538	46 D 5570	.....	.....
13-140	3.0 meg	C	46 D 5539	.....	.....	46 D 5594
11-141	5.0 meg	A	46 D 5540	46 D 5572	.....	.....
11-143	10.0 meg	A	46 D 5541	46 D 5573	.....	46 D 5590

Stock No.	Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249
See above Table	PQ and RQ Controls	1.71	1.54	1.43	1.35	1.28
See above Table	M Multisections	1.62	1.46	1.36	1.28	1.22
See above Table	RQL Controls	1.77	1.59	1.48	1.40	1.33

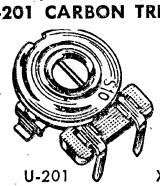
TYPE 76 ATTACHABLE SWITCHES FOR PQ, RQ, RQL AND M CONTROLS

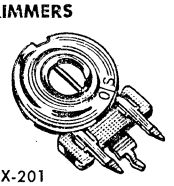
Can be easily attached to the controls listed above by bending down four metal tabs. Switch housings are made of arc-resistant material. Terminals are hydraulically staked—no openings for solder to run into the switch. Units have silver-plated alloy contacts. Type 76-1 handles up to 5 amps at 125 volts; Type 76-2 is rated 1 amp at 125 volts. Type 76-4 is make-one, break-one type for CRT spot killing. U.L. Component-Program Recog. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	EACH 1-9	10-24	25-49	50-99	100-249
46 D 5359	76-1	SPST	.75	.68	.63	.59	.56
46 D 5591	76-2	DPST	.75	.68	.63	.59	.56
46 D 5888	76-4	SPDT	.75	.68	.63	.59	.56

U-201 AND X-201 CARBON TRIMMERS

Miniature ¼-watt carbon trimmers for limited-space application. Ideal for printed circuit boards where an occasionally adjusted variable resistance is required. PC type terminals; easy-to-install, snap-in self-supporting bracket mount. U-201 mounts with adjusting knob parallel to PC board; X-201 with knob perpendicular to board. Blue nylon knurled knob, 19/32" dia.; slotted for easy front and rear adjustment. Linear taper; 260° ±5% rotation; max. voltage 500 VDC; ±20% tolerance. Av. wt., 2 oz.



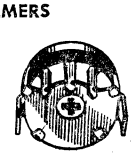


Stock No.	Type U-201	Ohms	Stock No.	Type X-201	Ohms
46 D 1800	R101B	100	46 D 1813	R101B	100
46 D 1801	R251B	250	46 D 1814	R251B	250
46 D 1802	R501B	500	46 D 1815	R501B	500
46 D 1803	R102B	1000	46 D 1816	R102B	1000
46 D 1804	R252B	2500	46 D 1817	R252B	2500
46 D 1805	R502B	5000	46 D 1818	R502B	5000
46 D 1806	R103B	10K	46 D 1819	R103B	10K
46 D 1807	R253B	25K	46 D 1820	R253B	25K
46 D 1808	R503B	50K	46 D 1821	R503B	50K
46 D 1809	R104B	100K	46 D 1822	R104B	100K
46 D 1810	R254B	250K	46 D 1823	R254B	250K
46 D 1811	R504B	500K	46 D 1824	R504B	500K
46 D 1812	R105B	1 Meg	46 D 1825	R105B	1 Meg

1-24..Ea. .39 25-49..Ea. .35 50-99..Ea. .33 100-299...Ea. .29

117 AND P-115 WIREWOUND TRIMMERS

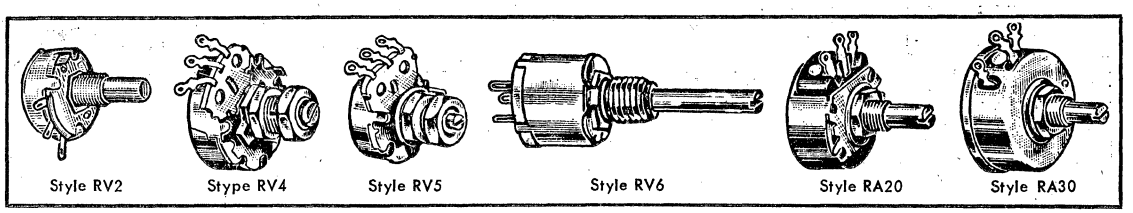
Miniature wirewound trimmers with fully enclosed construction; protects resistance unit and adjustable arm from dust and foreign objects. Assures longer life and silent operation with minimum power loss. Insulated rotor isolates tuning device from shock and prevents external interference or damage to circuit during adjustment. Cross-slot in nylon rotor permits adjustment by screwdriver or adjusting tool. Simple to mount—P-115 is twist-tab mounted; 117 is rivet-ear mounted. Printed circuit type terminals. Linear taper ±10% tolerance; rated 2 watts; 270° ±5° rotation; maximum voltage 500 VDC. Long rotational life. Av. wt., 2 oz.



Stock No.	Type 117	Ohms	Stock No.	Type P-115	Ohms
46 D 1826	R5R0A	5	46 D 1837	R5R0A	5
46 D 1827	R100A	10	46 D 1838	R100A	10
46 D 1828	R250A	25	46 D 1839	R250A	25
46 D 1829	R500A	50	46 D 1840	R500A	50
46 D 1830	R101A	100	46 D 1841	R101A	100
46 D 1831	R251A	250	46 D 1842	R251A	250
46 D 1832	R501A	500	46 D 1843	R501A	500
46 D 1833	R102A	1000	46 D 1844	R102A	1000
46 D 1834	R252A	2500	46 D 1845	R252A	2500
46 D 1835	R502A	5000	46 D 1846	R502A	5000
46 D 1836	R103A	10K	46 D 1847	R103A	10K

1-24..Ea. 1.25 25-49..Ea. 1.00 50-99..Ea. .75 100-Up...60 Ea

Variable Resistors and Potentiometers



IRC-CTS MILITARY-TYPE COMPOSITION AND WIREWOUND UNITS

MIL-R-94B STYLE RV2 1-WATT COMPOSITION

Composition variable resistors have 1 5/16" diameter. All rated 1 watt. Operational up to 150° C. Linear resistance taper. Choice of two shaft styles, plain or locking bushings. *Indicates IRC-CTS Type 90: 7/8" slotted shaft; 3/8" long plain bushing. †Indicates CTS Type 90LT: 5/8" slotted shaft; 1/2" long locking bushing. Wt., 2 oz.

Stock No.	MIL Type RV2LAYSA-	Ohms	Stock No.	MIL Type RV2NAYSD-	Ohms
46 D 5100	102A†	1000	46 D 5107	103A*	10K
46 D 5101	104A†	100K	46 D 5108	104A*	100K
46 D 5102	105B†	1.0M	46 D 5109	105B*	1.0M
46 D 5103	251A†	250	46 D 5110	252A*	2500
46 D 5104	252A†	2500	46 D 5111	502A*	5000
46 D 5105	502A†	5000	46 D 5112	503A*	50K
46 D 5106	503A†	50K			

1-9.....Each 3.25 10-49.....Each 3.00 50-99.....Each 2.76
100-249.....Each 2.41 250-Up.....Each 1.98

MIL-R-94B STYLE RV4 3-WATT COMPOSITION

Provides long life, low noise. 1 1/16" diameter. Rated 3 watts. Completely enclosed construction. Reliable carbon-ceramic element. Choice of 4 shaft styles, plain or locking bushings. CTS-Type 320LT/321LT: *5/8" slotted shaft, §7/8" shaft, 1/2" long locking bushing. 320/321: †7/8" slotted shaft, ‡2 1/2" shaft 3/8" bushing. 4 oz.

Stock No.	MIL Type RV4LAYS-	Ohms	Stock No.	MIL Type RV4NAYS-	Ohms
46 D 5113	A103A*	10K	46 D 5122	D102A†	1000
46 D 5114	A104A*	100K	46 D 5123	D103A†	10K
46 D 5115	A252A*	2500	46 D 5124	D104A†	100K
46 D 5116	A254A*	250K	46 D 5125	D253A†	25K
46 D 5117	A503A*	50K	46 D 5126	D501A†	500
46 D 5118	D102A§	1000	46 D 5127	D502A†	5000
46 D 5119	D103A§	10K	46 D 5128	K102A‡	1000
46 D 5120	D252A§	2500	46 D 5129	K103A‡	10K
46 D 5121	D501A§	500	46 D 5130	K502A‡	5000

1-9.....Each 1.95 10-49.....Each 1.75 50-99.....Each 1.62
100-249.....Each 1.46 250-Up.....Each 1.20

MIL-R-94B STYLE RV5 1/2-WATT COMPOSITION

Miniature, high-temperature composition, variable resistors. Only 3/4" diameter and 3/8" deep behind panel. 1/8" diameter slotted shafts and 1/4" threaded bushings. Linear taper. Operational up to 150° C. *65LT has 1/2" long shaft and 3/8" long locking bushing. †Type 65 has 7/8" long shaft and 1/4" long bushing. Shpg. wt., 4 oz.

Stock No.	MIL Type RV5LAYSB-	Ohms	Stock No.	MIL Type RV5NAYSD-	Ohms
46 D 5131	102A*	1000	46 D 5141	102A†	1000
46 D 5132	103A*	10K	46 D 5142	103A†	10K
46 D 5133	104A*	100K	46 D 5143	104A†	100K
46 D 5134	251A*	250	46 D 5144	251A†	250
46 D 5135	252A*	2500	46 D 5145	252A†	2500
46 D 5137	253A*	25K	46 D 5146	253A†	25K
46 D 5138	501A*	500	46 D 5147	501A†	500
46 D 5139	502A*	5000	46 D 5148	502A†	5000
46 D 5140	503A*	50K	46 D 5149	503A†	50K

1-9.....Each 3.25 10-49.....Each 3.00 50-99.....Each 2.76
100-249.....Each 2.50 250-Up.....Each 2.02

MIL-R-94B RV6 1/2-WATT COMPOSITION

1/2" diameter variable resistors. Require only 3/8" mounting space behind panel. Have 1/8" diameter slotted shafts and 1/4" bushings. *Type 300LT has 5/8" long slotted shaft and 1/2" long locking bushing. †Type 300 has 7/8" slotted shaft and 1/4" long bushing. Both have linear resistance taper; provide excellent stability, high resolution. Reliable carbon-ceramic element. Av. shpg. wt., 4 oz.

Stock No.	MIL Type RV6LAYSA-	Ohms	Stock No.	MIL Type RV6NAYSD-	Ohms
46 D 5150	101A*	100	46 D 5159	101A†	100
46 D 5151	102A*	1000	46 D 5160	102A†	1000
46 D 5152	103A*	10K	46 D 5161	103A†	10K
46 D 5153	104A*	100K	46 D 5162	252A†	2500
46 D 5154	251A*	250	46 D 5163	253A†	25K
46 D 5155	252A*	2500	46 D 5164	501A†	500
46 D 5156	501A*	500	46 D 5165	502A†	5000
46 D 5157	502A*	5000	46 D 5166	503A†	50K
46 D 5158	503A*	50K	46 D 5167	504A†	500K

1-9.....Each 4.10 10-49.....Each 3.70 50-99.....Each 2.76
100-249.....Each 2.37 250-Up.....Each 1.99

MIL-R-19A RA20 2-WATT WIREWOUND

Wirewound variable resistors in insulated housings. All are 1 17/64" dia. and require 5/8" behind panel. Have 1/4" dia. slotted shafts and 3/8"-32 threaded bushings. *252LT has 5/8" slotted shaft and 1/2" locking bushing. †252 has 7/8" slotted shaft, 3/8" bushing. 4 oz.

Stock No.	MIL Type RA20LASB-	Ohms	Stock No.	MIL Type RA20NASD-	Ohms
46 D 5169	100A*	10	46 D 5179	100A†	10
46 D 5170	102A*	1000	46 D 5180	101A†	100
46 D 5171	103A*	10K	46 D 5181	102A†	1000
46 D 5172	201A*	200	46 D 5182	103A†	10K
46 D 5173	250A*	25	46 D 5183	153A†	15K
46 D 5174	251A*	250	46 D 5184	201A†	200
46 D 5175	252A*	2500	46 D 5185	252A†	2500
46 D 5176	500A*	50	46 D 5186	500A†	50
46 D 5177	501A*	500	46 D 5187	501A†	500
46 D 5178	502A*	5000	46 D 5188	502A†	5000

1-9.....Each 2.55 10-49.....Each 2.30 50-99.....Each 1.73
100-249.....Each 1.29 250-Up.....Each 1.21

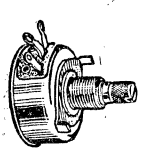
MIL-R-19A RA30 4-WATT WIREWOUND

1 17/32" dia. wirewound variable resistors. Require 1 1/16" behind panel. Have 1/4" diameter slotted shafts and 3/8"-32 threaded bushings. *Type 25LT has 5/8" slotted shaft and 1/2" locking bushing. †Type 25 has 7/8" slotted shaft and 3/8" long plain bushing. Both have linear resistance taper. Av. shpg. wt., 4 oz.

Stock No.	MIL Type RA30LASB-	Ohms	Stock No.	MIL Type RA30NASD-	Ohms
46 D 5189	101A*	100	46 D 5192	101A†	100
46 D 5190	102A*	1000	46 D 5193	252A†	2500
46 D 5191	501A*	500	46 D 5194	501A†	500

1-9.....Each 2.70 10-49.....Each 2.45 50-99.....Each 2.10
100-249.....Each 1.87 250-Up.....Each 1.45

CENTRALAB 5-WATT WIREWOUND CONTROLS



WN 3/4" SHAFT
WW 3" SHAFT

Rated five-watt wirewound controls that are smaller than two-watt units! Meets most sections of MIL-R-19B. 10% tolerance; 5-watt rating up to 40° C ambient temperature. Dielectric strength: 900 VAC-RMS to ground. Mounting bushing 3/8" long, 3/8" dia., 32 NEF-2A threads, with nut, lock washer. Body, 1 5/32" dia., 9/16" deep. Shaft, 1/4" dia. *Length mounting surface. Shpg. wt., 4 oz.

STOCK VALUES (OHMS)—SPECIFY VALUES WANTED

2	15	50	200	500	1500	3000	10K	25K
5	25	75	300	750	2000	5000	15K	50K
10	30	100	400	1000	2500	7500	20K	100K

TYPE WW—3" ROUND SHAFT*

Stock No.	Values (Ohms) Specify from Table	EACH 1-9	10-24	25-49	50-99	100-249
46 D 7140 C	2 ohms thru 7500	1.32	1.19	1.10	1.05	.99
46 D 7141 C	10K thru 25K	1.59	1.43	1.33	1.26	1.19
46 D 7142	50K only	2.01	1.81	1.68	1.59	1.51
46 D 7143	100K only	2.46	2.22	2.05	1.95	1.85

TYPE WN—3/4" KNURLED AND SLOTTED SHAFT*

46 D 7144 C	2 ohms thru 7500	1.32	1.19	1.10	1.05	.99
46 D 7145 C	10K thru 25K	1.59	1.43	1.33	1.26	1.19
46 D 7146	50K only	2.01	1.81	1.68	1.59	1.51
46 D 7147	100K only	2.46	2.22	2.05	1.95	1.85

Specify Stock No., Resistance and Mfr's Type No. When Ordering Controls

Wirewound Rheostats OHMITE

VITREOUS-ENAMELED RHEOSTATS FROM 7½ WATTS TO 300 WATTS

Vitreous enameled, (except Types 4200, —1, —2, —3, and —4), silicone-ceramic. Cannot smoke, char, shrink or shift. All have copper-graphite brushes, except *silver-graphite brushes. Ratings are at full setting. ■U.L. Recog. except types indicated by †. Types H, J, K, and L mount on panels up to ¼" thick. Type N on panels up to 1¼" thick. Depth behind panel (and dia.): Type H, 1⅜" (1⁹⁄₁₆"); Type J, 1⅜" (2⁵⁄₁₆"); Type K, 1¾" (3⅛"); Type L, 2" (4"); Type N, 2⅜" (6"). Less knobs; see knobs, dial plates, and coupling kits at bottom of page. Av. shpg. wt., 8 oz.

PRICE LOCATOR

Price Code	EACH 1-4	5-9	10-24	25-49	Price Code	EACH 1-4	5-9	10-24	25-49	Price Code	EACH 1-4	5-9	10-24	25-49
A	5.05	4.29	3.38	2.78	H	5.65	4.80	3.79	3.11	R	13.60	11.56	9.11	7.48
B	4.55	3.87	3.05	2.50	J	7.95	6.76	5.33	4.37	S	8.59	7.30	5.15	.....
C	5.35	4.55	3.58	2.94	K	8.45	7.18	5.66	4.65	T	10.48	8.02	5.60	.....
D	5.55	4.72	3.72	3.05	L	9.05	7.69	6.06	4.98	W	16.80	14.28	.....	.....
E	6.05	5.14	4.05	3.33	M	10.20	8.67	6.83	5.61	..	.....	.....	.....	.....
F	6.80	5.78	4.56	3.74	N	10.15	8.63	6.80	5.58	..	.....	.....	.....	.....
G	7.50	6.38	5.03	4.13	P	10.75	9.14	7.20	5.91	..	.....	.....	.....	.....

7½ WATT—TYPE C

Rugged ceramic and metal construction. Operate at max. hot spot temp. of 340°C. .515" dia., ⅞" behind panel. ⅛" dia. shaft, ⅝" long. §Locking shaft. 2¼ oz.

Stock No.	Mfr's Type	Ohms	Price Code
46 D 1576	4908	10	S
46 D 1577	4909	15	S
46 D 1578	4919	500	S
46 D 1579	4952§	50	T

12½-WATT—TYPE E MINIATURE RHEOSTATS

For high temperature applications; operate at maximum hot spot temperature of 340°C. Resistance ±10%. 7⁄8" diameter. 11⁄16" behind panel. ⅛" dia. shaft, ⅜" long. Less knob, below left. 2½ oz.

Stock No.	Type	Ohms	Code	Stock No.	Type	Ohms	Code	Stock No.	Tpye	Ohms	Code
46 D 7200	0101	1	A	46 D 7210	0111	75	B	46 D 7219	0120	1500	A
46 D 7201	0102	2	A	46 D 7211	0112	100	B	46 D 7220	0121	2500	A
46 D 7202	0103	3	A	46 D 7213	0114	175	B	46 D 7221	0122	3500	C
46 D 7204	0105	8	A	46 D 7214	0115	250	B	46 D 7222	0123	5000	C
46 D 7205	0106	10	A	46 D 7216	0117	500	B	46 D 7155	4190	7500	D
46 D 7206	0107	15	B	46 D 7217	0118	750	B	46 D 7156	4191	10K	D
46 D 7207	0108	25	B	46 D 7218	0119	1000	A	46 D 7158	4193	15K	E
46 D 7209	0110	50	B	.....	.....	.....	..	.....	.....	.....	..

25 WATT—TYPE H

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7223	0140*	1	A
46 D 7224	0141	2	A
46 D 7225	0142	3	A
46 D 7226	0143	6	A
46 D 7227	0144	8	A
46 D 7228	0145	10	A
46 D 7229	0146	15	B
46 D 7230	0147	25	B
46 D 7231	0148	35	B
46 D 7232	0149	50	B
46 D 7234	0150	75	B
46 D 7236	0151	100	B
46 D 7237	0152	125	B
46 D 7238	0153	175	B
46 D 7239	0154	250	B
46 D 7240	0155	350	B
46 D 7241	0156	500	B
46 D 7242	0157	750	B
46 D 7244	0158	1000	A
46 D 7245	0159	1500	A
46 D 7246	0160	2500	A
46 D 7247	0161	3500	C
46 D 7248	0162	5000	C
46 D 7150	4200†	7500	D
46 D 7151	4201†	10K	D

25 WATT—TYPE H (Cont'd)

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7152	4202†	15K	E
46 D 7153	4203†	20K	F
46 D 7154	4204†	25K	G

50 WATT—TYPE J

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7249	0308*	0.5	H
46 D 7250	0309*	1	H
46 D 7251	0310*	2	H
46 D 7252	0311	4	H
46 D 7253	0312	6	H
46 D 7254	0313	8	A
46 D 7255	0314	12	A
46 D 7256	0315	16	A
46 D 7257	0316	22	A
46 D 7258	0317	35	A
46 D 7259	0318	50	A
46 D 7260	0319	80	A
46 D 7261	0320	125	A
46 D 7262	0321	150	A
46 D 7263	0322	225	A
46 D 7264	0323	300	A
46 D 7265	0324	500	A
46 D 7266	0325	800	C
46 D 7267	0326	1000	C
46 D 7268	0327	1600	C

50 WATT—TYPE J (Cont'd)

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7269	0328	2500	C
46 D 7270	0329	3500	H
46 D 7271	0330	5000	H
46 D 7272	0331	8000	H
46 D 7273	0332	10K	H

100 WATT—TYPE K

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7274	0440*	0.5	K
46 D 7275	0441*	1	K
46 D 7276	0442*	2	K
46 D 7277	0443*	3	K
46 D 7278	0444*	5	K
46 D 7279	0445	7.5	K
46 D 7280	0446	10	K
46 D 7281	0447	16	J
46 D 7282	0448	25	J
46 D 7283	0449	50	J
46 D 7284	0450	75	J
46 D 7285	0451	100	J
46 D 7286	0452	200	J
46 D 7287	0453	300	J
46 D 7289	0455	500	J
46 D 7290	0456	750	J
46 D 7291	0457	1000	K

100 WATT—TYPE K (Cont'd)

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7293	0459	2000	K
46 D 7295	0461	5000	L
46 D 7297	0463	10K	M

150 WATT—TYPE L

Stock No.	Mfr's Type	Ohms	Price Code
46 D 7298	0524*	0.5	P
46 D 7300	0525*	1	P
46 D 7303	0528*	5	P
46 D 7304	0529*	7.5	P
46 D 7305	0530	10	P
46 D 7306	0531	15	P
46 D 7307	0532	25	N
46 D 7308	0533	35	N
46 D 7309	0534	50	N
46 D 7310	0535	75	N
46 D 7311	0536	100	N
46 D 7312	0537	150	N
46 D 7313	0538	200	N
46 D 7314	0539	250	N
46 D 7315	0540	350	N
46 D 7316	0541	500	N
46 D 7317	0542	750	P
46 D 7318	0543	1250	P
46 D 7324	0549	10K	R

300 WATT—TYPE N

Stock No.	Type	Ohms	Code	Stock No.	Type	Ohms	Code	Stock No.	Type	Ohms	Code
46 D 7325	0650*	1	W	46 D 7333	0658	25	W	46 D 7340	0665	400	W
46 D 7327	0652*	3	W	46 D 7334	0659	50	W	46 D 7341	0666	700	W
46 D 7329	0654*	5	W	46 D 7336	0661	100	W	46 D 7343	0668	1200	W
46 D 7330	0655*	7.5	W	46 D 7337	0662	150	W	46 D 7344	0669	1500	W
46 D 7331	0656*	10	W	46 D 7338	0663	200	W	46 D 7346	0671	2500	W
46 D 7332	0657*	15	W	46 D 7339	0664	300	W	.....	.....	.....	.....

DIAL PLATES AND KNOB

Type 5000 Dial Plate. For Type H, J, K and L rheostats. 2³⁹⁄₁₆" diameter. Handsomely finished with bright figures and lines on etched black background. 0-100 scale. Shpg. wt., 2 oz.
46 D 7945 1-4.....Ea. .30 5-9.....Ea. .26

Type 5001 Dial Plate. For Type N. 5½" dia. 0-100. Shpg. wt., 2 oz.
46 D 7943 1-4.....Ea. .74 5-9.....Ea. .63

Type 5104 Handwheel. With pointer. For Type N. 3¼" dia. 2 oz.
46 D 7969 1-4.....Ea. 1.45 5-9.....Ea. 1.23

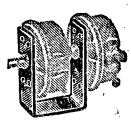
Type 5150 Knob. 1½" finger-grip type for H, J, K and L. 2 oz.
46 D 7944 1-4.....Ea. .30 5-9.....Ea. .26 10-24.....Ea. .20

DIAL PLATE AND KNOB FOR TYPE E

Type 5007 Dial Plate. For Type E. 1¼" dia. Black backgrnd. 1 oz.
46 D 7939. 1-4.....Ea. .30 5-9.....Ea. .26 10-24.....Ea. .20

Type 5151 Knob. ¾" finger-grip type for E rheostats. Black. 1 oz.
46 D 7940. 1-4.....Ea. .30 5-9.....Ea. .26 10-24.....Ea. .20

TANDEM COUPLING KITS



Include steel "U" frame, mica washer, coupling, Allen wrench and instructions. Maximum panel thickness with standard rheostat is ⅛".

Type 6533 Tandem Coupling Kit. Large frame for Types G, K, or L in front, Types H, J, G, K or L behind. Frame size, 2⁹⁄₁₆" long by 1¼" wide. Shpg. wt., 8 oz.
46 D 7941. 1-4..Ea. 2.75 5-9..Ea. 2.34 10-24..Ea. 1.84

Type 6532 Tandem Coupling Kit. Compact frame for Types H or J in front; accommodates Types H, J, G, K or L in rear position. Frame size is 2⁵⁄₃₂" long by 1¼" wide. Shpg. wt., 4 oz.
46 D 7942. 1-4.....Ea. 2.20 5-9.....Ea. 1.87 10-24.....Ea. 1.48

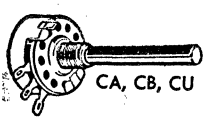
TANDEM COUPLING KIT FOR TYPE E

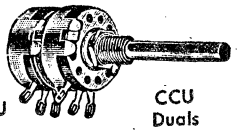
Type 6591 Tandem Coupling Kit. For assembling two Type E rheostats. Max. panel thickness, 1⁄16". Frame 1⁷⁄₁₆". long, ¾" wide. 2 oz.
46 D 1595. 1-4.....Ea. 2.20 5-9.....Ea. 1.87
10-24.....Ea. 1.48 25-49.....Ea. 1.21

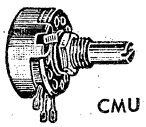
■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

OHMITE Potentiometers

TYPE "AB" MOLDED COMPOSITION 2-WATT POTENTIOMETERS







Single units are 5/8x1 5/32" dia.; double units are 1 17/64x1 5/32" dia. Mount in 3/8" hole in panels to 1/4" thick. 2" long 1/4" round shafts except CLU, slotted shaft and locking nut; CMU, 7/8" slotted shaft. CU, CCU, CMU and CLU Types linear taper; CA Types, CW log; CB Types, CCW log. ±10% tol. except *±20%. Av. shpg. wt., 3 1/2 oz.

STYLE CA, CB, CU, CCU PRICE LOCATOR

Price Code	EACH 1-9	10-49	50-99	100-Up
A	1.95	1.75	1.62	1.46
B	2.25	2.02	1.87	1.69
C	5.85	5.26	5.06	4.40

Stock No.	Mfr's Type	Ohms	Code
46 D 1500	CU5001	50	A
46 D 1501	CU1011	100	A
46 D 1596	CU1511	150	A
46 D 1502	CU2511	250	A
46 D 1597	CU3511	350	A
46 D 1503	CU5011	500	A
46 D 1598	CU7511	750	A
46 D 1504	CU1021	1000	A
46 D 1599	CU1521	1500	A
46 D 1505	CU2521	2500	A
46 D 1600	CU3521	3500	A
46 D 1506	CU5021	5000	A
46 D 1601	CU7521	7500	A
46 D 1507	CU1031	10K	A
46 D 1508	CB1031	10K	B
46 D 1602	CU1531	15K	A
46 D 1509	CU2531	25K	A
46 D 1510	CB2531	25K	B
46 D 1603	CU3531	35K	A
46 D 1511	CU5031	50K	A
46 D 1512	CB5031	50K	B
46 D 1604	CU7531	75K	A
46 D 1513	CU1041	100K	A
46 D 1514	CA1041	100K	B
46 D 1605	CU1541	150K	A
46 D 1515	CU2541	250K	A
46 D 1516	CA2541	250K	B
46 D 1606	CU3541	350K	A
46 D 1517	CU5041	500K	A
46 D 1518	CA5041	500K	B
46 D 1607	CU7542	750K*	A
46 D 1519	CU1052	1 meg*	A
46 D 1520	CA1052	1 meg*	B
46 D 1608	CU1552	1.5 meg*	A
46 D 1548	CU2052	2.0 meg*	A
46 D 1521	CU2552	2.5 meg*	A
46 D 1522	CA2552	2.5 meg*	B
46 D 1609	CU3552	3.5 meg*	A
46 D 1523	CU5052	5 meg*	A
46 D 1541	CCU1031	10K	C
46 D 1542	CCU2531	25K	C
46 D 1543	CCU5031	50K	C
46 D 1544	CCU1041	100K	C
46 D 1545	CCU2541	250K	C
46 D 1546	CCU5041	500K	C
46 D 1547	CCU1052	1 meg*	C

TYPE CS-1 SPST SWITCH FOR "AB" SERIES

Single-pole single-throw switch for Ohmite "AB" potentiometers listed above. For single-unit type potentiometers only. Wt., 2 oz.

46 D 1524. 1-9.....Each .66 10-49.....Each .62
50-99.....Each .59 100-Up.....Each .55

STYLE CLU LOCKING-SHAFT TYPES—MEET MIL-R-94B (±10% tol. except *±20%, Av. shpg. wt., 2 oz.)

EXPLANATION OF MIL NOS. Example: RV4NAYSB104B.
RV4, variable composition control. N, bushing—N for std., L for locking, S for shaft and panel seal. A, switch—A for none, B for SPST. Y, temperature and moisture resistance: X for 120° C max. ambient temperature, ±14% max. resistance change in humidity test, 50 megohm min. insulation resistance in humidity test; Y for 120° ambient, ±10% resistance change, 100 megohms insulation test. SB, operating shaft: First letter for style—F for flatted, S for slotted; second letter for length from mtg. surface—A-5/8, B-1/2, D-7/8, G-1 1/4, K-2 1/2" (flatted all K). 104, ohms resistance—first two digits are significant figures, third is zeros to add. B, resistance characteristic and tolerance: A, linear ±10%; B, linear ±20%; C, 10% res. at 50% CW ±10%; D, 10% res. at 50% CW ±20%; E, 10% res. at 50% CCW ±10%; F, 10% res. at 50% CCW ±20%.

Stock No.	Type	MIL Type	Ohms
46 D 1525	CLU5001	RV4LAYSA500A	50
46 D 1526	CLU1011	RV4LAYSA101A	100
46 D 1527	CLU2511	RV4LAYSA251A	250
46 D 1528	CLU5011	RV4LAYSA501A	500
46 D 1529	CLU1021	RV4LAYSA102A	1000
46 D 1530	CLU2521	RV4LAYSA252A	2500
46 D 1531	CLU5021	RV4LAYSA502A	5000
46 D 1532	CLU1031	RV4LAYSA103A	10K
46 D 1533	CLU2531	RV4LAYSA253A	25K
46 D 1534	CLU5031	RV4LAYSA503A	50K
46 D 1535	CLU1041	RV4LAYSA104A	100K
46 D 1536	CLU2541	RV4LAYSA254A	250K
46 D 1537	CLU5041	RV4LAYSA504A	500K
46 D 1538	CLU1052	RV4LAYSA105B	1 meg*
46 D 1549	CLU2052	RV4LAYSA205B	2 meg*
46 D 1539	CLU2552	RV4LAYSA255B	2.5 meg*
46 D 1540	CLU5052	RV4LAYSA505B	5 meg*

1-9.....Each 2.55 10-49.....Each 2.29
50-99.....Each 2.12 100-Up.....Each 1.90

1-9.....Each 2.55 10-49.....Each 2.29
50-99.....Each 2.12 100-Up.....Each 1.90

STYLE CMU SLOTTED-SHAFT TYPES—MEET MIL-R-94B (±10% tol. except *±20%, Av. shpg. wt., 2 oz.)

Stock No.		MIL Type	Ohms
46 D 1612	CMU5001	RV4NAYSD500A	50
46 D 1613	CMU1011	RV4NAYSD101A	100
46 D 1614	CMU2511	RV4NAYSD251A	250
46 D 1615	CMU5011	RV4NAYSD501A	500
46 D 1616	CMU1021	RV4NAYSD102A	1000
46 D 1617	CMU2521	RV4NAYSD252A	2500
46 D 1618	CMU5021	RV4NAYSD502A	5000
46 D 1619	CMU1031	RV4NAYSD103A	10K
46 D 1620	CMU2531	RV4NAYSD253A	25K
46 D 1621	CMU5031	RV4NAYSD503A	50K
46 D 1622	CMU1041	RV4NAYSD104A	100K
46 D 1623	CMU2541	RV4NAYSD254A	250K
46 D 1624	CMU5041	RV4NAYSD504A	500K
46 D 1625	CMU1052	RV4NAYSD105B	1 meg*
46 D 1626	CMU2052	RV4NAYSD205B	2 meg*
46 D 1627	CMU2552	RV4NAYSD255B	2.5 meg*
46 D 1628	CMU5052	RV4NAYSD505B	5 meg*

1-9.....Each 1.95 10-49.....Each 1.75
50-99.....Each 1.62 100-Up.....Each 1.46

1-9.....Each 1.95 10-49.....Each 1.75
50-99.....Each 1.62 100-Up.....Each 1.46

LOCKING

STANDARD BUSHING

"AS" ½-WATT MINIATURE CONTROLS

Linear-taper controls with molded composition resistance and collector tracks, dust-proof sealed enclosures, specially plated terminals. Available in 5/8" screwdriver slotted, locking types or standard bushing types with 7/8" slotted shaft. Rated 350 V. 1/4" dia. 11/16" long. Meet QQ-M-151, MIL-R-94, MIL Type RV6LAYSA (locking type) or RV6NAYSD (7/8" shaft) and EIA specs. ±10% except *, ±20%. Av. shpg. wt., 3 oz.

Stock No.	Locking, 5/8" Shaft Mfr's Type	Ohms	Stock No.	St. Bush., 7/8" Shaft Mfr's Type
46 D 1580	AS3601	100	46 D 1645	ASM6661
46 D 1581	AS3602	250	46 D 1646	ASM6662
46 D 1582	AS3603	500	46 D 1647	ASM6663
46 D 1583	AS3604	1000	46 D 1648	ASM6664
46 D 1584	AS3605	2500	46 D 1649	ASM6665
46 D 1585	AS3606	5000	46 D 1650	ASM6666
46 D 1586	AS3607	10K	46 D 1651	ASM6667
46 D 1587	AS3608	25K	46 D 1652	ASM6668

Stock No.	Locking, 5/8" Shaft Mfr's Type	Ohms	Stock No.	St. Bush, 7/8" Shaft Mfr's Type
46 D 1588	AS3609	50K	46 D 1653	ASM6669
46 D 1589	AS3610	100K	46 D 1654	ASM6670
46 D 1590	AS3611	250K	46 D 1655	ASM6671
46 D 1591	AS3612	500K	46 D 1656	ASM6672
46 D 1592	AS3613*	1.0 meg	46 D 1657	ASM6673*
46 D 1644	AS3684*	2.0 meg	46 D 1658	ASM6674*
46 D 1593	AS3614*	2.5 meg	46 D 1659	ASM6675*
46 D 1594	AS3615*	5.0 meg	46 D 1660	ASM6676*

1-9.....Each 5.10 10-49.....Each 4.59 50-99.....Each 4.23 100-Up.....Each 3.58

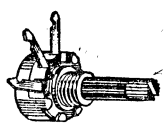
Mallory Controls

TYPE R 3-WATT WIREWOUND CONTROLS

Three-watt wirewound potentiometers. Excellent for use as voltage dividers and bias controls. Insulated-contact arm type, linear taper. Special dual-contactor mechanism. 900 volts AC insulation between resistance element and chassis. 290° rotation. Linear taper. 1 25/64" dia. All have thumb knurled, screwdriver-slotted stub shaft. All have 3/8" bushing. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-49	50-99	100-249	250-499
46 D 3835	R20L	20	.93	.84	.78	.70	.62
46 D 3837	R25L	25	.93	.84	.78	.70	.62
46 D 3838	R30L	30	.93	.84	.78	.70	.62
46 D 3840	R50L	50	.93	.84	.78	.70	.62
46 D 3864	R100L	100	.93	.84	.78	.70	.62
46 D 3841	R250L	250	.93	.84	.78	.70	.62
46 D 3834	R500L	500	.93	.84	.78	.70	.62
46 D 3842	R1000L	1000	.93	.84	.78	.70	.62
46 D 3843	R1500L	1500	.93	.84	.78	.70	.62
46 D 3844	R2500L	2500	.93	.84	.78	.70	.62
46 D 3846	R3000L	3000	.93	.84	.78	.70	.62
46 D 3845	R5000L	5000	.93	.84	.78	.70	.62
46 D 3693	R10ML	10K	1.08	.97	.90	.81	.72
46 D 3695	R20ML	20K	1.08	.97	.90	.81	.72

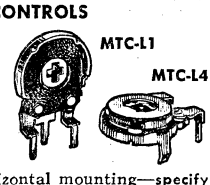
TYPE MRB 3-WATT WIREWOUND CONTROLS



MR controls 3/4" diameter are used in AGC, convergence, hum-balance circuits, etc. All-metal construction, fully enclosed case. Bushing mount: bushings 3/8"-32x1/4". Shaft: 1/4" dia.x1 1/4" long. Wattage: 3 at 40°C. Rotation: 250° mechanical; 248° electrical. Tol.: ±20%. Voltage breakdown: 900 VAC rms. 2 oz.

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-49	50-99	100-249	250-499
46 D 1122	MR10B	10	.93	.84	.77	.69	.62
46 D 1123	MR50B	50	.93	.84	.77	.69	.62
46 D 1124	MR100B	100	.93	.84	.77	.69	.62
46 D 1125	MR250B	250	.93	.84	.77	.69	.62
46 D 1126	MR500B	500	.93	.84	.77	.69	.62
46 D 1127	MR1000B	1000	.93	.84	.77	.69	.62
46 D 1128	MR2500B	2500	.93	.84	.77	.69	.62
46 D 1129	MR5000B	5000	.93	.84	.77	.69	.62
46 D 1130	MR10KB	10K	1.08	.97	.90	.81	.72
46 D 1131	MR15KB	15K	1.08	.97	.90	.81	.72

MINIATURE TRIMMER CONTROLS



Miniature 1/4-watt trimmers designed especially for printed circuits. Can be used in transistorized or tube circuits—wherever an occasionally adjusted, variable resistance is needed. Have flush, open, crossed slot; adjustments can be made with either blade or Phillips type screwdriver. All have linear taper; 270° rotation; 500 V max. rating. All are 9/16" dia. In 2 types—vertical or horizontal mounting—specify type wanted. See table "A" below for resistance values. 3 oz.

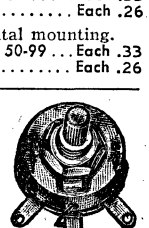
TABLE "A"—RESISTANCES AVAILABLE—SPECIFY WHEN ORDERING

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs
100	300	1000	3000	6800	20K	100K	250K	500K	3.5
200	500	1500	5000	10K	25K	120K	325K	1 meg	.....
250	750	2000	6000	15K	50K	180K	450K	2 meg	.....

Type MTC-L1. Terminals arranged for stand-up, vertical mounting.
46 D 3673 C. 1-24...Each .39 25-49...Each .35 50-99...Each .33
100-299.....Each .29 300-499.....Each .26

Type MTC-L4. Terminals arranged for flat, horizontal mounting.
46 D 3674 C. 1-24...Each .39 25-49...Each .35 50-99...Each .33
100-299.....Each .29 300-499.....Each .26

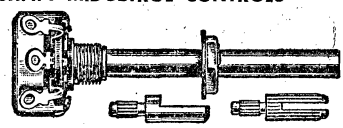
TYPE TSA-10 THEATER SPEAKER CONTROL



Rugged speaker control especially designed for drive-in theaters. Completely weatherproofed to withstand severe climatic conditions. Unit is L-pad type; has durable steel construction. Has 10-ohm input impedance; 4-ohm output impedance. With 1 1/16" diameter case, 1/2" long shaft. Supplied with mounting nut. Av. shpg. wt., 4 oz.

46 D 3847. 1-9.....Each 1.35 10-24.....Each 1.26
25-49.....Each 1.13 50-99.....Each 1.02
100-249.....Each .97 250-499.....Each .90

TYPE U METAL-SHAFT MIDGETROL CONTROLS

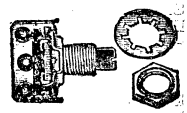


For audio, tone and similar control circuits in home receivers, audio amplifiers, portables, TV sets, and industrial electronic equipment. Available in a full line of resistances, tapers, and taps. Round, hollow shaft—easily cut to desired length. Two spline-shank knob adapters furnished with each Midgetrol—see illustration above. Taper No. 1: for audio or antenna shunt circuits (1/2 watt). Taper No. 4: Linear (1 watt). For voltage control. With nut and lockwasher. 15/16" diameter. Brass shaft, 2 3/8" long, 1/4" dia. Less switch (below). Av. shpg. wt., 4 oz.

Stock No.	Type	Ohms	Taper	Stock No.	Type	Ohms	Taper
46 D 3714	U-1	100	4	46 D 3763	U-35	50K	4
46 D 3709	U-2	500	4	46 D 3765	U-39	100K	1
46 D 3785	U-4	1000	4	46 D 3767	U-41	100K	4
46 D 3787	U-8	3000	4	46 D 3768	U-42	150K	1
46 D 3751	U-12	5000	1	46 D 3770	U-44	250K	1
46 D 3752	U-14	5000	4	46 D 3772	U-46	250K	4
46 D 3753	U-18	10K	1	46 D 3773	U-48	500K	1
46 D 3755	U-20	10K	4	46 D 3774	U-50	500K	4
46 D 3756	U-21	15K	1	46 D 3776	U-53	1 meg	1
46 D 3783	U-26	20K	4	46 D 3777	U-54	1 meg	4
46 D 3712	U-28A	25K	1	46 D 3781	U-56	2 meg	4
46 D 3760	U-29	25K	4	46 D 3789	U-82	10 meg	4
46 D 3761	U-33	50K	1	.....	.....	.....	.....

1-24.....Each 1.02 25-49.....Each .92 50-99.....Each .85
100-174...Each .77 175-299....Each .73 300-499.....Each .68

TYPE SU MIDGETROLS



For use as exact replacements in television sets and special applications. Have 5/8" long x 1/4" dia. fixed, knurled and slotted phenolic shaft extending 1/4" beyond bushing. 15/16" dia. Rated 1/2-watt. Linear taper. With washer and nut. Av. shpg. wt., 4 oz.

Stock No.	Type	Ohms	Stock No.	Type	Ohms
46 D 3646	SU-6	1500	46 D 3813	SU-41	100K
46 D 3647	SU-8	3000	46 D 3828	SU-46	250K
46 D 3832	SU-14	5000	46 D 3814	SU-50	500K
46 D 3826	SU-20	10K	46 D 3829	SU-54	1 meg
46 D 3812	SU-29	25K	46 D 3815	SU-67	5 meg
46 D 3827	SU-35	50K	.....	.....	.....

1-24.....Each .93 25-49.....Each .84 50-99.....Each .78
100-174....Each .70 175-299.....Each .66 300-499.....Each .62

SWITCHES FOR MIDGETROLS (EXCEPT TYPE SU)

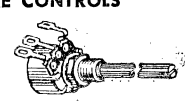
"Push-on, stay-on" switches for Midgetrols. Av. wt., 2 oz.
46 D 3620. US-26 SPST Switch. 1-24.....Each .42
25-49.....Each .38 50-99.....Each .35 100-174.....Each .32
175-299.....Each .30 300-499.....Each .28

46 D 3622. US-27 DPST Switch. 1-24.....Each .51
25-49.....Each .46 50-99.....Each .43 100-174.....Each .38
175-299.....Each .36 300-499.....Each .34

46 D 3623. US-28 SPDT Switch. 1-24.....Each .51
25-49.....Each .46 50-99.....Each .43 100-174.....Each .38
175-299.....Each .36 300-499.....Each .34

Type USB-29 Circuit Breaker. A high-quality combination AC line switch (SPST) and circuit breaker for TV, radio, etc. Carries 1.6 amps, breaks at 2.5 amps. Resets by turning to "OFF" position. Fits all Mallory U type controls. Shpg. wt., 4 oz.
46 D 3791.....Each .98

MLC 1/2" DIAMETER SUBMINIATURE CONTROLS



Rated 1/4-W linear, 1/8-W audio. 1/4"-32 bushing, nut. Shaft: steel, 1/8" dia.x1 7/16". *Taper No. 1 for audio, antenna shunts. †Taper No. 4 is Linear, for voltage control. Bushing mount. Av. shpg. wt., 1 oz.

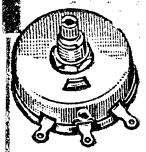
Stock No.	Type	Ohms	Taper	Stock No.	Type	Ohms	Taper
46 D 1132	MLC13L	1000	†4	46 D 1139	MLC15L	100K	†4
46 D 1133	MLC252A	2500	*1	46 D 1140	MLC25L	200K	†4
46 D 1134	MLC53A	5000	*1	46 D 1141	MLC254L	250K	†4
46 D 1135	MLC53L	5000	†4	46 D 1142	MLC55A	500K	*1
46 D 1136	MLC14L	10K	†4	46 D 1143	MLCN55L	500K	†4
46 D 1137	MLC54L	50K	†4	46 D 1144	MLCN16A	1 meg	*1
46 D 1138	MLC15A	100K	†1	46 D 1145	MLCN16L	1 meg	*1

1-24.....Each 1.14 25-49....Each 1.03 50-99....Each .95
100-174....Each .86 175-299....Each .81 300-499....Each .76

Type 1910K Knob. For use with type MLC series sub-miniature control. Size, 3/4"x3/4". Shpg. wt., 1 oz.
46 D 1146.....Each .20

Mallory Controls and Attenuators

TYPE M 4-WATT WIREWOUND CONTROLS



Designed for use as bias controls and voltage dividers. Linear taper. All have power handling capabilities of 4 watts. Arm insulated from shaft. 275° rotation. Knurled ¼" shaft is ⅜" long, has screwdriver slot. "M" shaft is hollow to accept extension shafts and bushings. All are 1⅝" diameter by ⅝" deep. Mount in ⅜" hole. Tolerance ±10%. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-49	50-99	100-249	250-499
46 D 3424	M1PK	1	1.35	1.22	1.13	1.01	.90
46 D 3425	M3PK	3	1.35	1.22	1.13	1.01	.90
46 D 3426	M6PK	6	1.35	1.22	1.13	1.01	.90
46 D 3427	M10PK	10	1.35	1.22	1.13	1.01	.90
46 D 3400	M15PK	15	1.35	1.22	1.13	1.01	.90
46 D 3401	M20PK	20	1.35	1.22	1.13	1.01	.90
46 D 3402	M25PK	25	1.35	1.22	1.13	1.01	.90
46 D 3403	M30PK	30	1.35	1.22	1.13	1.01	.90
46 D 3404	M40PK	40	1.35	1.22	1.13	1.01	.90
46 D 3405	M50PK	50	1.35	1.22	1.13	1.01	.90
46 D 3406	M60PK	60	1.35	1.22	1.13	1.01	.90
46 D 3408	M100PK	100	1.35	1.22	1.13	1.01	.90
46 D 3409	M200PK	200	1.35	1.22	1.13	1.01	.90
46 D 3410	M400PK	400	1.35	1.22	1.13	1.01	.90
46 D 3411	M500PK	500	1.35	1.22	1.13	1.01	.90
46 D 3412	M600PK	600	1.35	1.22	1.13	1.01	.90
46 D 3413	M1MPK	1000	1.35	1.22	1.13	1.01	.90
46 D 3431	M1.5MPK	1500	1.35	1.22	1.13	1.01	.90
46 D 3414	M2MPK	2000	1.35	1.22	1.13	1.01	.90
46 D 3432	M2.5MPK	2500	1.35	1.22	1.13	1.01	.90
46 D 3415	M3MPK	3000	1.35	1.22	1.13	1.01	.90
46 D 3417	M5MPK	5000	1.35	1.22	1.13	1.01	.90
46 D 3418	M10MPK	10K	1.35	1.22	1.13	1.01	.90
46 D 3419	M15MPK	15K	1.47	1.32	1.23	1.10	.98
46 D 3420	M20MPK	20K	1.47	1.32	1.23	1.10	.98
46 D 3421	M25MPK	25K	1.47	1.32	1.23	1.10	.98
46 D 3422	M50MPK	50K	1.74	1.57	1.45	1.31	1.16
46 D 3434	M100MPK	100K	2.46	2.21	2.05	1.85	1.64

RHEOSTATS

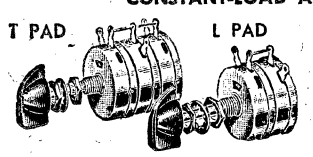
Have open or off position counter-clockwise.

Stock No.	Type	Ohms	Amps
46 D 3456	M6RK	6	.82
46 D 3457	M10RK	10	.63
46 D 3461	M30RK	30	.37
46 D 3463	M50RK	50	.28
46 D 3466	M100RK	100	.20

1-9.....Each .93 10-49.....Each .84 50-99.....Each .78
100-249.....Each .70 250-499.....Each .62

46 D 3651. Type 395 Dial Plate. For "M" controls.....Each .21

CONSTANT-LOAD ATTENUATORS



Widely used to control the level of low-impedance audio circuits in sound systems. Rated 4 watts continuous DC; 15 watts, peak audio. Have 2" shafts. ⅜" diameter bushing. With bar knob, 0-10 dial plate. Av. shpg. wt., 7 oz.

T-Pad Attenuators. Present a constant source-impedance as well as constant load. Size, 1⅝" dia. x 1 1/16".

Ohms	Stock No.	Type	Ohms	Stock No.	Type
4	46 D 3869	T4	600	46 D 3866	T600
8	46 D 3871	T8	1000	46 D 3867	T1000
15	46 D 3872	T15	2000	46 D 3877	T2000
50	46 D 3873	T50	3000	46 D 3878	T3000
500	46 D 3876	T500			

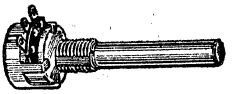
1-9.....Each 3.54 10-24.....Each 3.36
25-49.....Each 3.19 50-99.....Each 2.95
100-249.....Each 2.66 250-499.....Each 2.36

L-Pad Attenuators. Present a constant load-impedance at all control settings. Size, 1⅝" dia. x 1⅛" long.

Ohms	Stock No.	Type	Ohms	Stock No.	Type
4	46 D 3884	L4	600	46 D 3921	L600
8	46 D 3892	L8	1000	46 D 3922	L1000
15	46 D 3886	L15	2000	46 D 3891	L2000
50	46 D 3887	L50	4000	46 D 3708	L4000
500	46 D 3890	L500			

1-9.....Each 2.73 10-24.....Each 2.59
25-49.....Each 2.46 50-99.....Each 2.28
100-249.....Each 2.05 250-499.....Each 1.82

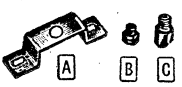
TYPE VW 5-WATT WIREWOUND CONTROLS



Miniature 5-watt potentiometers. Very small size for this rating; ideal for limited space applications. Only ¾" dia., 7/16" deep. Bushing: ⅜x⅜" dia. and length. ¼" plain round shaft, 2" long from mtg. surface. Linear taper. ±5% tol. 305° mechanical rotation; 275° electrical rotation. High-quality construction. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Ohms	EACH 1-9	10-49	50-99	100-249	250-499
46 D 1087	VW-1	1	1.38	1.24	1.15	1.04	.92
46 D 1088	VW-2	2	1.38	1.24	1.15	1.04	.92
46 D 1089	VW-3	3	1.38	1.24	1.15	1.04	.92
46 D 1090	VW-5	5	1.38	1.24	1.15	1.04	.92
46 D 1092	VW-8	8	1.38	1.24	1.15	1.04	.92
46 D 1093	VW-10	10	1.38	1.24	1.15	1.04	.92
46 D 1094	VW-15	15	1.38	1.24	1.15	1.04	.92
46 D 1095	VW-20	20	1.38	1.24	1.15	1.04	.92
46 D 1096	VW-25	25	1.38	1.24	1.15	1.04	.92
46 D 1097	VW-30	30	1.38	1.24	1.15	1.04	.92
46 D 1098	VW-40	40	1.38	1.24	1.15	1.04	.92
46 D 1099	VW-50	50	1.38	1.24	1.15	1.04	.92
46 D 1100	VW-60	60	1.38	1.24	1.15	1.04	.92
46 D 1102	VW-100	100	1.38	1.24	1.15	1.04	.92
46 D 1103	VW-200	200	1.38	1.24	1.15	1.04	.92
46 D 1104	VW-250	250	1.38	1.24	1.15	1.04	.92
46 D 1105	VW-300	300	1.38	1.24	1.15	1.04	.92
46 D 1106	VW-400	400	1.38	1.24	1.15	1.04	.92
46 D 1107	VW-500	500	1.38	1.24	1.15	1.04	.92
46 D 1110	VW-1K	1000	1.38	1.24	1.15	1.04	.92
46 D 1111	VW-1P5K	1500	1.44	1.30	1.20	1.08	.96
46 D 1112	VW-2K	2000	1.44	1.30	1.20	1.08	.96
46 D 1113	VW-2P5K	2500	1.44	1.30	1.20	1.08	.96
46 D 1114	VW-3K	3000	1.44	1.30	1.20	1.08	.96
46 D 1115	VW-4K	4000	1.44	1.30	1.20	1.08	.96
46 D 1116	VW-5K	5000	1.44	1.30	1.20	1.08	.96
46 D 1118	VW-10K	10K	1.50	1.35	1.25	1.13	1.00
46 D 1119	VW-15K	15K	1.56	1.40	1.30	1.17	1.04
46 D 1120	VW-20K	20K	1.56	1.40	1.30	1.17	1.04
46 D 1121	VW-25K	25K	1.65	1.49	1.38	1.24	1.10

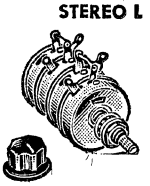
CONTROL MOUNTING ACCESSORIES



Useful accessories include mounting brackets with adjustable mounting centers, in two sizes; extender that extends body of controls ⅝" away from mounting surface; and bushing adapter for ¼" panel. 2 oz.

Stock No.	Type	Fig.	Description	EACH
46 D 3676	RB249	A	Mtg. bracket. mtg. ctrs. 2½"	.05
46 D 3675	RB248	A	Mtg. bracket. mtg. ctrs. 1¾"	.05
46 D 3661	EB247	C	Extender	.13
47 D 4092	119	B	¼" bushing (Package of 5)	.75

STEREO L PADS AND MONOPHONIC L, T PADS



Type "LL" Pads. For low-impedance stereo audio. Rated 4 watts DC, 15 watts peak. Have 2 "L" pads on common shaft for adjusting 2 channels. 1⅝x2 1/16". Shpg. wt., 7 oz.

Type "LA" Pads. For level control in monophonic equipment. Rated at 4 watts DC, 15 watts peak. Maintains constant imp. between control and amp. With 1" bushing, 2 nuts, 2 lock washers. 1⅝x1⅛". Shpg. wt., 7 oz.

Type "MRL" L Pads. Rated at 3 watts continuous DC and 10 watts peak. For monophonic use. Size, ¾x⅞". Av. shpg. wt., 7 oz.

Type "MRT" T Pads. Rated 3 watts DC; 10 watts peak. Maintain equal input and output impedances. Monophonic. With ¾x1" bushing, knob, and wiring instructions. Size, ¾x1 5/16". Av. shpg. wt., 7 oz.

SERIES "LL" AND "LA" L PADS

Stock No.	Mfr's Type	Imp., Ohms	EACH 1-9	10-24	25-49	50-99	100-249	250-499
46 D 3097	LL8	8	5.70	5.42	5.13	4.75	4.28	3.80
46 D 3098	LL16	16	5.70	5.42	5.13	4.75	4.28	3.80
46 D 3071	L8A	8	2.85	2.71	2.57	2.38	2.14	1.90
46 D 3072	L16A	16	2.85	2.71	2.57	2.38	2.14	1.90

SERIES "MRL" L PADS

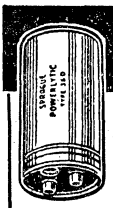
46 D 3112	MRL8	8	2.52	2.39	2.27	2.10	1.89	1.68
46 D 3113	MRL16	16	2.52	2.39	2.27	2.10	1.89	1.68

SERIES "MRT" T PADS

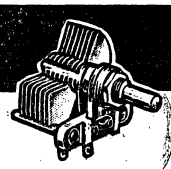
46 D 3116	MRT8	8	3.33	3.16	3.00	2.78	2.50	2.22
46 D 3117	MRT16	16	3.33	3.16	3.00	2.78	2.50	2.22

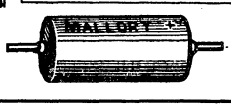
Depend on Allied for Complete Stocks, OEM Prices, Same-Day Shipment

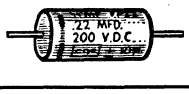
HANDY INDEX TO CAPACITORS



ALLIED CARRIES THE WORLD'S LARGEST STOCK OF CAPACITORS FOR IMMEDIATE DELIVERY







✓ All Capacitors Are in Stock **✓ Unlimited Quantities** **✓ Factory Prices**

Allied stocks in-depth and ready for delivery a large variety of capacitors meeting all types of commercial, industrial, and military requirements. All capacitors stocked by Allied are produced to exacting specifications by leading manufacturers and carefully selected by Allied to provide maximum value for all applications. You're dollars ahead when you use Allied's convenient warehouse, OEM prices, and extensive stock to meet your capacitor needs. See page 3 for the location of your nearest Allied facility.

MANUFACTURERS' INDEX—with OEM Quantities and Page References

Manufacturer and Type	OEM Prices To	Page
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C1	999	197
CE	1000	196
CF	1000	196
CK	5000	196
CV11 (825)	249	197
DA	5000	196
DD	5000	196
DD2	1000	196
DD16	1000	196
DD30	1000	196
DD60	1000	196
DDA	1000	196
DM	1000	196
FT, MFT	1000	197
UK	1000	197
822, 823, 827	249	197
825 (CV11)	249	197
829	999	197
850-858	249	197
COMPONENTS CORPORATION		
2A(-1, -2, -3)	249	181
M100, M115, M150	249	181
CORNELL-DUBILIER		
BBR, BBRD	999	183
BBRQ, BBRT, BR	999	183
CD (6, 7, 10, 15)	1000-up	185
CD (19, 30, 42)	1000-up	185
CM (15, 20, 30, 35)	1000-up	184
CP70 (T Series)	1000-up	184
CP07 Brackets	Each	184
DMF	999	182
DPMS	999	182
DYR	1000-up	187
IF Filters	Each	187
KBL, KKL, KNL, KTL	100-up	182
KKSCR, KMSCR	999	186
MCR	1000-up	187
MFP	1000-up	189
MMW	1000-up	188
MPY	1000-up	188
NLW	1000-up	186
PKM	1000-up	189
SCR	999	186
UHL	1000-up	189
WMF	999	188
ELMENCO		
30 Padders		
40, 42, 46 Trimmers	999	203
DM	4999	202
DM-5	4999	202
SCDM	4999	202
HAMMARLUND		
HF	Each	203
MC	Each	203

Manufacturer and Type	OEM Prices To	Page
JFD ELECTRONICS		
DV11	999	199
LC	299	199
MC	499	198
MT	499	199
NMC, NMQ	499	198
NQS, NSC	499	198
NVC	499	198
SC	499	198
UY Series	999	199
VAM	499	199
VC	499	198
VC900	499	199
Tuning Tools	Each	199
E. F. JOHNSON		
L-167	99	203
M-160	99	203
R-149	99	203
S-148	99	203
U-189	99	203
MALLORY		
CG,	100-up	192
CGS	249	192
CS13	999	190
FP	249	194
HC	249	193
MTA	1000-up	193
MTP	999	191
MTV	1000-up	193
NP	249	193
PWP	249	194
SX	1000-up	193
TAC	999	191
TAS	999	190
TIM	999	191
WP	249	194
NYTRONICS		
DC	499	200
HC	499	200
NC	499	200
NCU	999	201
PLASTIC CAPACITORS, INC.		
EP	249	201
OF	249	201
RADIO CONDENSER	999	195
SPRAGUE		
AB	25-up	180
BL	1000	178
C-23	499	178
C-751 Indicator	Each	176
CL25 (112D)	999	169
CP53	499	176
CS13 (150D)	999	166-167
CSR13	999	168

Manufacturer and Type	OEM Prices To	Page
SPRAGUE—(Cont'd)		
EK KITS	Each	181
FF-1	Each	174
HY	9900	178
J-135	Each	179
MB (160P)	249	177
PCL	249	172
PQ	Each	174
PS (220P)	499	177
TE (30D)	499	174
TG	4900	178
TK Kits	Each	181
TL (31D)	250-up	180
TM (160P)	249	177
TVA	250-up	171
TVL	249	172-173
5GA, 5HK	9900	178
10TCC, 10TCU	9900	179
20DK, 30DK	Each	176
30D (TE)	499	174
30GA	1000	178
31D (TL)	250-up	180
36D	249	170
39D	99	176
96P	999	176
112D (CL25)	999	169
118P	999	179
121P	999	176
150D (CS13)	999	166-167
160P (MB, TM)	249	177
162D	999	169
164D	999	169
192P	499	180
196D	999	170
220P (PS)	499	177
225P	499	177
431P	249	179
500D	999	175
600D	999	173
TRW		
601PE	999	195
608	999	195
X663F	999	195
663UW	999	195
VITRAMON		
CY (13, 17, 22, 32)	999	201

MILITARY TYPES AVAILABLE

Spec. MIL-	MIL Type	Page
C-25C	CP-53	176
	CP-70	184
C-81A	CV11	197
C-3965B	CL-25	169
C-11272B	CY (13C, 17C, 22C, 32C)	201
C-26655B	CS13	166, 167, 190
C-39003A	CSR13	168

SPRAGUE — Polarized Solid Tantalums, ± 10% Tolerance

COMMERCIAL 150D AND MILITARY CS13 WITH PLASTIC INSULATING SLEEVE

Both types are *identical and interchangeable*, but Military Type has MIL-C-26655B marking

All capacitors on this page are subminiature, hermetically sealed units meeting MIL-C-26655B. All are interchangeable with, and superior to MIL-C-26655A. Life test: 2000 hours. Temperature range: —55 to +85°C. Tighter leakage current and dissipation-factor characteristics over MIL-C-26655A. High-frequency performance; impedance remains low above 1 MHz. 2000-cycle vibration test and 50g shock test without any adverse effects. Withstand severe humidity. NOTE: CS12 with uninsulated bare can is available on Special Order in same values listed below; deduct 2¢ each, from prices shown. See facing page for note on ordering, and note on interchangeability of MIL-C-26655B and MIL-C-26655A. 1 oz. **For price and size, see Code (*), then refer to Price and Size Locator.**

NOTE: Allied reserves the right to ship the Military CS13 types in all instances where this listing shows both Military and Commercial designations. The Military types are directly interchangeable with the corresponding Commercial types.

PRICE AND SIZE LOCATOR

Price & Size Code	Diameter x Length Inches	EACH 1-24	25-49	50-99	100-499	500-999	Price & Size Code	Diameter x Length Inches	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.286	1.35	1.09	.96	.79	.64	F	.289x.686	2.57	2.07	1.42	1.16	.98
B	.135x.286	1.34	1.08	.75	.62	.53	G	.289x.686	4.28	3.43	2.90	2.47	2.26
C	.135x.286	2.48	1.99	1.68	1.45	1.31	H	.351x.786	4.75	3.81	2.81	2.29	1.91
D	.185x.474	1.57	1.27	.77	.64	.54	J	.351x.786	7.98	6.39	5.39	4.60	4.20
E	.185x.474	2.62	2.10	1.77	1.52	1.39							

Stock No.	Military CS13 MIL-C-26655B	Commercial Type 150D	µF	WV DC	Price & Size Code*
43 D 0026	.....	150D472X9035A2	.0047	35	A
43 D 0027	.....	150D562X9035A2	.0056	35	A
43 D 3315	.....	150D103X9035A2	.01	35	A
43 D 3316	.....	150D153X9035A2	.015	35	A
43 D 3405	.....	150D153X9050A2	.015	50	C
43 D 3317	.....	150D223X9035A2	.022	35	A
43 D 3406	.....	150D223X9050A2	.022	50	C
43 D 3318	.....	150D333X9035A2	.033	35	B
43 D 3319	.....	150D393X9035A2	.039	35	B
43 D 3320	.....	150D473X9035A2	.047	35	B
43 D 0081	.....	150D473X9050A2	.047	50	C
43 D 3321	.....	150D563X9035A2	.056	35	B
43 D 3409	.....	150D563X9050A2	.056	50	C
43 D 3322	.....	150D683X9035A2	.068	35	B
43 D 3416	.....	150D823X9035A2	.082	35	B
43 D 3323	.....	150D104X9035A2	.1	35	B
43 D 4150	.....	150D104X9050A2	.1	50	C
43 D 3418	.....	150D124X9050A2	.12	50	C
43 D 3325	.....	150D154X9035A2	.15	35	B
43 D 3326	.....	150D184X9035A2	.18	35	B
43 D 0055	.....	150D184X9050A2	.18	50	C
43 D 3327	.....	150D224X9035A2	.22	35	B
43 D 4151	.....	150D224X9050A2	.22	50	C
43 D 3328	.....	150D274X9035A2	.27	35	B
43 D 3419	.....	150D274X9050A2	.27	50	C
43 D 2500	CS13BF334K	150D334X9035A2	.33	35	B
43 D 4171	.....	150D334X9050A2	.33	50	C
43 D 2501	CS13BF394K	150D394X9035A2	.39	35	B
43 D 0059	.....	150D394X9050A2	.39	50	C
43 D 2502	CS13BF474K	150D474X9035A2	.47	35	B
43 D 4172	.....	150D474X9050A2	.47	50	C
43 D 2503	CS13BF564K	150D564X9035A2	.56	35	B
43 D 3420	.....	150D564X9050A2	.56	50	C
43 D 2504	CS13BF684K	150D684X9035A2	.68	35	B
43 D 3421	.....	150D684X9050A2	.68	50	C
43 D 2505	CS13BF824K	150D824X9035A2	.82	35	B
43 D 0063	.....	150D824X9050A2	.82	50	C
43 D 2506	CS13BF105K	150D105X9035A2	1.0	35	B
43 D 2507	CS13BG105K	150D105X9050A2	1.0	50	C
43 D 2508	CS13BE125K	150D125X9020A2	1.2	20	B
43 D 2509	CS13BF125K	150D125X9035B2	1.2	35	D
43 D 2511	CS13BE155K	150D155X9020A2	1.5	20	B
43 D 2512	CS13BF155K	150D155X9035B2	1.5	35	D
43 D 2513	CS13BG155K	150D155X9050B2	1.5	50	E
43 D 2514	CS13BE185K	150D185X9020A2	1.8	20	B
43 D 2515	CS13BF185K	150D185X9035B2	1.8	35	D
43 D 2518	CS13BE225K	150D225X9020A2	2.2	20	B
43 D 2519	CS13BF225K	150D225X9035B2	2.2	35	D
43 D 2520	CS13BG225K	150D225X9050B2	2.2	50	E
43 D 2521	CS13BD275K	150D275X9015A2	2.7	15	B
43 D 2523	CS13BF275K	150D275X9035B2	2.7	35	D
43 D 2525	CS13BD335K	150D335X9015A2	3.3	15	B
43 D 2526	CS13BF335K	150D335X9035B2	3.3	35	D
43 D 2527	CS13BG335K	150D335X9050B2	3.3	50	E
43 D 2528	CS13BC395K	150D395X9010A2	3.9	10	B
43 D 2529	CS13BF395K	150D395X9035B2	3.9	35	D
43 D 2531	CS13BG395K	150D395X9050B2	3.9	50	E
43 D 2532	CS13BC475K	150D475X9010A2	4.7	10	B
43 D 2533	CS13BF475K	150D475X9035B2	4.7	35	D
43 D 2534	CS13BG475K	150D475X9050B2	4.7	50	E

Stock No.	Military CS13 MIL-C-26655B	Commercial Type 150D	µF	WV DC	Price & Size Code*
43 D 2536	CS13BB565K	150D565X9006A2	5.6	6	B
43 D 2537	CS13BF565K	150D565X9035B2	5.6	35	D
43 D 2538	CS13BG565K	150D565X9050R2	5.6	50	G
43 D 2539	CS13BB685K	150D685X9006A2	6.8	6	B
43 D 2541	CS13BF685K	150D685X9035B2	6.8	35	D
43 D 2543	CS13BE825K	150D825X9020B2	8.2	20	D
43 D 2545	CS13BF825K	150D825X9035R2	8.2	35	F
43 D 2546	CS13BG825K	150D825X9050R2	8.2	50	G
43 D 2547	CS13BE106K	150D106X9020B2	10.0	20	D
43 D 2548	CS13BF106K	150D106X9035R2	10.0	35	F
43 D 2550	CS13BG106K	150D106X9050R2	10.0	50	G
43 D 2551	CS13BE126K	150D126X9020B2	12.0	20	D
43 D 2552	CS13BF126K	150D126X9035R2	12.0	35	F
43 D 2553	CS13BG126K	150D126X9050R2	12.0	50	G
43 D 2554	CS13BE156K	150D156X9020B2	15.0	20	D
43 D 2555	CS13BF156K	150D156X9035R2	15.0	35	F
43 D 2556	CS13BG156K	150D156X9050R2	15.0	50	G
43 D 2557	CS13BD186K	150D186X9015B2	18.0	15	D
43 D 2558	CS13BF186K	150D186X9035R2	18.0	35	F
43 D 2559	CS13BG186K	150D186X9050R2	18.0	50	G
43 D 2560	CS13BD226K	150D226X9015B2	22.0	15	D
43 D 2561	CS13BF226K	150D226X9035R2	22.0	35	F
43 D 2562	CS13BG226K	150D226X9050 S2	22.0	50	J
43 D 2563	CS13BC276K	150D276X9010B2	27.0	10	D
43 D 2564	CS13BE276K	150D276X9020R2	27.0	20	F
43 D 2565	CS13BF276K	150D276X9035 S2	27.0	35	H
43 D 2566	CS13BC336K	150D336X9010B2	33.0	10	D
43 D 2567	CS13BE336K	150D336X9020R2	33.0	20	F
43 D 2568	CS13BF336K	150D336X9035 S2	33.0	35	H
43 D 2569	CS13BC396K	150D396X9010B2	39.0	10	D
43 D 2570	CS13BE396K	150D396X9020R2	39.0	20	F
43 D 2571	CS13BF396K	150D396X9035 S2	39.0	35	H
43 D 2572	CS13BB476K	150D476X9006B2	47.0	6	D
43 D 2573	CS13BE476K	150D476X9020R2	47.0	20	F
43 D 2574	CS13BF476K	150D476X9035 S2	47.0	35	H
43 D 2575	CS13BB566K	150D566X9006B2	56.0	6	D
43 D 2576	CS13BD566K	150D566X9015R2	56.0	15	F
43 D 2578	CS13BD686K	150D686X9015R2	68.0	15	F
43 D 2579	CS13BE686K	150D686X9020 S2	68.0	20	H
43 D 2580	CS13BC826K	150D826X9010R2	82.0	10	F
43 D 2582	CS13BC107K	150D107X9010R2	100.0	10	F
43 D 2583	CS13BE107K	150D107X9020 S2	100.0	20	H
43 D 2584	CS13BC127K	150D127X9010R2	120.0	10	F
43 D 2585	CS13BD127K	150D127X9015 S2	120.0	15	H
43 D 2586	CS13BB157K	150D157X9006R2	150.0	6	F
43 D 2587	CS13BD157K	150D157X9015R2	150.0	15	H
43 D 2588	CS13BB187K	150D187X9006R2	180.0	6	F
43 D 2589	CS13BC187K	150D187X9010 S2	180.0	10	H
43 D 2590	CS13BC227K	150D227X9010 S2	220.0	10	H
43 D 2591	CS13BB277K	150D277X9006 S2	270.0	6	H
43 D 2592	CS13BB337K	150D337X9006 S2	330.0	6	H

ONE ORDER FILLS THE BILL

Cut costs by making "one order" purchases from Allied. You lower handling expense by reducing paperwork in purchasing and receiving. You also get prompt shipment from the world's largest stock of electronic equipment.

Polarized Solid Tantalums, ±20% Tolerance

SPRAGUE
THE MARK OF RELIABILITY

Life Test: 2000 Hours

COMMERCIAL 150D AND MILITARY CS13—PLASTIC INSULATING SLEEVE

Both are *identical and interchangeable,* but CS13 has MIL-C-26655B marking

Subminiature, hermetically sealed MIL-C-26655B units. See facing page for specs and information on ordering CS12 uninsulated bare-can types. For price and size, see Code (*), then refer to Price and Size Locator.

USERS OF CS13 CHARACTERISTIC "A" TANTALUMS—TAKE NOTE

MIL-C-26655A and MIL-C-26655B capacitors are interchangeable per paragraph 6.8 of MIL-C-26655B. "Interchangeability—characteristic B capacitors of this specification shall unilaterally supersede and be acceptable alternates for characteristic A capacitors of specification MIL-C-26655A of equivalent capacitance, tolerance and voltage ratings in the same case size."

NOTE ON ORDERING

Values listed below and on the facing page combine the highest voltages with smallest case sizes. For example, if you require a 6-volt, 0.33 μF unit, it pays to order the 35-volt capacitor. You get added protection at no extra cost. Here's why. Both the 6-volt and the 35-volt units have the *same* case size. Since the *price is based on case size,* the price for both units is the same.

NOTE: Allied reserves the right to ship the Military CS13 types in all instances where this listing shows both Military and Commercial designations. The Military types are directly interchangeable with the corresponding Commerical types.

PRICE AND SIZE LOCATOR

Price & Size Code	Diameter x Length Inches	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.286	1.32	1.06	.93	.76	.61
B	.135x.286	1.31	1.05	.72	.59	.50
C	.135x.286	1.92	1.54	1.30	1.11	1.02
D	.135x.286	2.87	2.30	1.94	1.66	1.52
E	.135x.286	3.73	2.98	2.52	2.15	1.97
F	.135x.286	4.10	3.28	2.77	2.36	2.17
G	.185x.474	1.54	1.24	.74	.61	.51
H	.185x.474	2.02	1.62	1.37	1.17	1.07
J	.185x.474	3.02	2.42	2.05	1.75	1.60
K	.185x.474	3.92	3.14	2.66	2.27	2.07
L	.185x.474	4.31	3.45	2.93	2.50	2.28
M	.289x.686	2.54	2.04	1.39	1.13	.95
N	.289x.686	3.30	2.64	2.24	1.91	1.75
P	.289x.686	4.94	3.95	3.35	2.86	2.62
R	.351x.786	4.72	3.78	2.78	2.26	1.88
S	.351x.786	6.14	4.92	4.16	3.54	3.24
T	.351x.786	9.20	7.37	6.23	5.30	4.85

Stock No.	Military CS13 MIL-C-26655B	Commercial Type 150D	μF	WV DC	Price & Size Code*
43 D 3300	.....	150D472X0035A2	.0047	35	A
43 D 4550	.....	150D682X0035A2	.0068	35	A
43 D 3301	.....	150D103X0035A2	.01	35	A
43 D 0040	.....	150D103X0050A2	.01	50	C
43 D 3302	.....	150D153X0035A2	.015	35	A
43 D 3303	.....	150D223X0035A2	.022	35	A
43 D 0044	.....	150D223X0050A2	.022	50	C
43 D 3304	.....	150D333X0035A2	.033	35	B
43 D 3305	.....	150D473X0035A2	.033	35	B
43 D 0048	.....	150D473X0050A2	.047	50	C
43 D 4552	.....	150D683X0035A2	.068	35	B
43 D 4553	.....	150D683X0050A2	.068	50	C
43 D 3306	.....	150D104X0035A2	.1	35	B
43 D 0052	.....	150D104XC050A2	.1	50	C
43 D 2466	CS13BH104M	150D104X0075A2	.1	75	B
43 D 2469	CS13BJ104M	150D104X0100A2	.1	100	E
43 D 4556	.....	150D104X0125A2	.1	125	F
43 D 3283	.....	150D154X0035A2	.15	35	B
43 D 4559	.....	150D154X0125A2	.15	125	F
43 D 3307	.....	150D224X0035A2	.22	35	B
43 D 0056	.....	150D224X0050A2	.22	50	C
43 D 2478	CS13BJ224M	150D224X0100A2	.22	100	E
43 D 4562	.....	150D224X0125A2	.22	125	F
43 D 2408	CS13 BF334M	150D334X0035A2	.33	35	B
43 D 0058	.....	150D334X0050A2	.33	50	C
43 D 2480	CS13BJ334M	150D334X0100A2	.33	100	E
43 D 4565	.....	150D334X0125A2	.33	125	F
43 D 2409	CS13BF474M	150D474X0035A2	.47	35	B
43 D 0060	.....	150D474X0050A2	.47	50	C
43 D 2481	CS13BH474M	150D474X0075A2	.47	75	D
43 D 2483	CS13BJ474M	150D474X0100A2	.47	100	E
43 D 4568	.....	150D474X0125B2	.47	125	L
43 D 2410	CS13BF684M	150D684X0035A2	.68	35	B
43 D 0062	.....	150D684X0050A2	.68	50	C
43 D 2484	CS13BH684M	150D684X0075A2	.68	75	D
43 D 2485	CS13BJ684M	150D684X0100B2	.68	100	K
43 D 4571	.....	150D684X0125B2	.68	125	L
43 D 2411	CS13BF105M	150D105X0035A2	1.0	35	B
43 D 2413	CS13BG105M	150D105X0050A2	1.0	50	C
43 D 2487	CS13BH105M	150D105X0075B2	1.0	75	J
43 D 2488	CS13BJ105M	150D105X0100B2	1.0	100	K
43 D 4574	.....	150D105X0125B2	1.0	125	L
43 D 2414	CS13BE155M	150D155X0020A2	1.5	20	B
43 D 2415	CS13BF155M	150D155X0035B2	1.5	35	G
43 D 2416	CS13BG155M	150D155X0050B2	1.5	50	H
43 D 2491	CS13BH155M	150D155X0075B2	1.5	75	J
43 D 4578	.....	150D155X0125B2	1.5	125	L
43 D 2418	CS13BE225M	150D225X0020A2	2.2	20	B
43 D 2419	CS13BF225M	150D225X0035B2	2.2	35	G
43 D 2420	CS13BG225M	150D225X0050B2	2.2	50	H
43 D 2495	CS13BH225M	150D225X0075B2	2.2	75	J
43 D 2497	CS13BJ225M	150D225X0100B2	2.2	100	K
43 D 4581	.....	150D225X0125B2	2.2	125	L
43 D 2421	CS13BD335M	150D335X0015A2	3.3	15	B
43 D 2422	CS13BF335M	150D335X0035B2	3.3	35	G
43 D 2423	CS13BG335M	150D335X0050B2	3.3	50	H
43 D 2498	CS13BH335M	150D335X0075B2	3.3	75	J
43 D 2424	CS13BC475M	150D475X0010A2	4.7	10	B
43 D 2426	CS13BF475M	150D475X0035B2	4.7	35	G
43 D 2427	CS13BG475M	150D475X0050B2	4.7	50	H
43 D 2499	CS13BH475M	150D475X0075R2	4.7	75	P
43 D 2428	CS13BB685M	150D685X0006A2	6.8	6	B
43 D 2429	CS13BF685M	150D685X0035B2	6.8	35	G
43 D 2430	CS13BG685M	150D685X0050R2	6.8	50	N
43 D 2497	CS13BH685M	150D685X0075R2	6.8	75	P
43 D 2431	CS13BE106M	150D106X0020B2	10	20	G
43 D 2432	CS13BF106M	150D106X0035R2	10	35	M
43 D 2433	CS13BG106M	150D106X0050R2	10	50	N
43 D 2598	CS13BH106M	150D106X0075R2	10	75	P
43 D 2434	CS13BE156M	150D156X0020B2	15	20	G
43 D 2435	CS13BF156M	150D156X0035R2	15	35	M
43 D 2436	CS13BG156M	150D156X0050R2	15	50	N
43 D 2599	CS13BH156M	150D156X0075S2	15	75	T
43 D 2437	CS13BD226M	150D226X0015B2	22	15	G
43 D 2438	CS13BF226M	150D226X0035R2	22	35	M
43 D 2440	CS13BG226M	150D226X0050S2	22	50	S
43 D 2443	CS13BC336M	150D336X0010B2	33	10	G
43 D 2445	CS13BE336M	150D336X0020R2	33	20	M
43 D 2446	CS13BF336M	150D336X0035S2	33	35	R
43 D 2447	CS13BB476M	150D476X0006B2	47	6	G
43 D 2448	CS13BE476M	150D476X0020R2	47	20	M
43 D 2450	CS13BF476M	150D476X0035S2	47	35	R
43 D 3289	.....	150D606X0006B2	60	6	G
43 D 2451	CS13BD686M	150D686X0015R2	68	15	M
43 D 2457	CS13BC107M	150D106X0010R2	100	10	M
43 D 2458	CS13BE107M	150D107X0020S2	100	20	R
43 D 3279	.....	150D127X0010R2	120	10	M
43 D 2460	CS13BB157M	150D157X0006R2	150	6	M
43 D 2462	CS13BD157M	150D157X0015S2	150	15	R
43 D 3277	.....	150D187X0006T2	180	6	M
43 D 2463	CS13BC227M	150D227X0010S2	220	10	R
43 D 2464	CS13BB337M	150D337X0006S2	330	6	R

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CSR13 Solid-Tantalum ±10% Tol. Capacitors

SUBMINIATURE HERMETICALLY SEALED—PLASTIC INSULATING SLEEVE

Life Test: 10,000 Hours

Subminiature hermetically sealed units meet new MIL-C-39003/1A specifications. Life test 10,000 hours. Tighter leakage current and dissipation factor over MIL-C-26655B. Low impedance above 1 MHz. 2000-cycle vibration test. 50g shock test. Temp., —55°C to +125°C. Leads: Type N1 of MIL-STD-1276, tin coated 0.50 to 1.50 mil. Temperature cycling and voltage aging: Method 102, Condition C, of MIL-STD-202, followed by exposure at +85°C for 40 hrs. minimum, with rated voltage applied. Plastic insulating sleeve. Wt., 2 oz.

1% (M) FAILURE RATE PRICE AND SIZE LOCATOR

Case Size	Diameter x Length	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.286"	1.99	1.60	1.10	.90	.77
B	.185x.474"	2.34	1.88	1.13	.93	.78
C	.289x.686"	3.83	3.08	2.11	1.72	1.45
D	.351x.786"	7.10	5.66	4.20	3.40	2.85
E	.135x.286"	3.69	2.95	2.49	2.15	1.93
F	.185x.474"	3.91	3.11	2.63	2.25	2.05
G	.289x.686"	6.40	5.10	4.34	3.69	3.35
H	.351x.786"	11.95	9.54	8.07	6.86	6.28
J	.135x.286"	5.57	4.44	3.75	3.20	2.92
K	.185x.474"	5.86	4.67	3.96	3.37	3.11
L	.289x.686"	9.59	7.66	6.54	5.53	5.09
M	.351x.786"	17.92	14.31	12.14	10.29	9.45

2% (L) FAILURE RATE PRICE AND SIZE LOCATOR

Case Size	Diameter x Length	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.286"	1.46	1.17	.80	.65	.53
B	.185x.474"	1.71	1.37	.83	.69	.54
C	.289x.686"	2.82	2.25	1.55	1.25	.98
D	.351x.786"	5.21	4.15	3.08	2.49	1.91
E	.135x.286"	2.71	2.17	1.83	1.58	1.31
F	.185x.474"	2.86	2.29	1.94	1.65	1.39
G	.289x.686"	4.70	3.75	3.19	2.70	2.26
H	.351x.786"	8.76	7.00	5.92	5.03	4.20
J	.135x.286"	4.08	3.26	2.75	2.34	2.14
K	.185x.474"	4.30	3.42	2.90	2.48	2.27
L	.289x.686"	7.04	5.61	4.79	4.05	3.73
M	.351x.786"	13.15	10.49	8.91	7.55	6.93

Stock No.	Type CSR13-	Cap., µF	WV DC	Case Size
43 D 4700 A	B685KM	6.8	6	A
43 D 4701 A	B476KM	47	6	B
43 D 4702 A	B157KM	150	6	C
43 D 4703 A	B337KM	330	6	D
43 D 4704 A	C475KM	4.7	10	A
43 D 4705 A	C336KM	33	10	B
43 D 4706 A	C107KM	100	10	C
43 D 4707 A	C227KM	220	10	D
43 D 4708 A	D335KM	3.3	15	A
43 D 4709 A	D226KM	22	15	B
43 D 4710 A	D686KM	68	15	C
43 D 4711 A	D157KM	150	15	D
43 D 4715 A	E155KM	1.5	20	A
43 D 4716 A	E225KM	2.2	20	A
43 D 4718 A	E106KM	10	20	B
43 D 4722 A	E156KM	15	20	B
43 D 4723 A	E336KM	33	20	C
43 D 4726 A	E476KM	47	20	C
43 D 4727 A	E686KM	68	20	D
43 D 4728 A	E107KM	100	20	D
43 D 4729 A	F685KM	6.8	35	B
43 D 4730 A	F226KM	22	35	C
43 D 4731 A	F336KM	33	35	D
43 D 4732 A	F476KM	47	35	D
43 D 4733 A	G472KM	.0047	50	E
43 D 4736 A	G682KM	.0068	50	E
43 D 4737 A	G103KM	.01	50	E
43 D 4740 A	G153KM	.015	50	E
43 D 4741 A	G223KM	.022	50	E
43 D 4743 A	G333KM	.033	50	E
43 D 4744 A	G473KM	.047	50	E
43 D 4745 A	G683KM	.068	50	E
43 D 4746 A	G104KM	.1	50	E
43 D 4747 A	G154KM	.15	50	E
43 D 4748 A	G224KM	.22	50	E
43 D 4749 A	G334KM	.33	50	E
43 D 4750 A	G474KM	.47	50	E
43 D 4751 A	G684KM	.68	50	E
43 D 4752 A	G105KM	1	50	E
43 D 4753 A	G155KM	1.5	50	F
43 D 4754 A	G225KM	2.2	50	F
43 D 4755 A	G335KM	3.3	50	F
43 D 4756 A	G475KM	4.7	50	F
43 D 4757 A	G685KM	6.8	50	G
43 D 4758 A	G106KM	10	50	G
43 D 4759 A	G156KM	15	50	G
43 D 4761 A	G226KM	22	50	H
43 D 4763 A	H104KM	.1	75	J
43 D 4764 A	H154KM	.15	75	J
43 D 4765 A	H224KM	.22	75	J
43 D 4766 A	H334KM	.33	75	J
43 D 4767 A	H474KM	.47	75	J
43 D 4768 A	H684KM	.68	75	J
43 D 4769 A	H105KM	1	75	K
43 D 4770 A	H155KM	1.5	75	K
43 D 4771 A	H225KM	2.2	75	K
43 D 4773 A	H335KM	3.3	75	K
43 D 4776 A	H475KM	4.7	75	L
43 D 4777 A	H685KM	6.8	75	L
43 D 4779 A	H106KM	10	75	L
43 D 4780 A	H156KM	15	75	M

Stock No.	Type CSR13-	Cap., µF	WV DC	Case Size
43 D 4781 A	B685KL	6.8	6	A
43 D 4782 A	B476KL	47	6	B
43 D 4784 A	B157KL	150	6	C
43 D 4786 A	B337KL	330	6	D
43 D 4788 A	C475KL	4.7	10	A
43 D 4873 A	C336KL	33	10	B
43 D 4874 A	C107KL	100	10	C
43 D 4875 A	C227KL	220	10	D
43 D 4893 A	D335KL	3.3	15	A
43 D 4894 A	D226KL	22	15	B
43 D 4895 A	D686KL	68	15	C
43 D 4896 A	D157KL	150	15	D
43 D 4897 A	E155KL	1.5	20	A
43 D 4898 A	E225KL	2.2	20	A
43 D 4899 A	E106KL	10	20	B
43 D 4900 A	E156KL	15	20	B
43 D 4901 A	E336KL	33	20	C
43 D 4902 A	E476KL	47	20	C
43 D 4903 A	E686KL	68	20	D
43 D 4904 A	E107KL	100	20	D
43 D 4905 A	F685KL	6.8	35	B
43 D 4906 A	F226KL	22	35	C
43 D 4907 A	F336KL	33	35	D
43 D 4908 A	F476KL	47	35	D
43 D 4909 A	G472KL	.0047	50	E
43 D 4910 A	G682KL	.0068	50	E
43 D 4911 A	G103KL	.01	50	E
43 D 4912 A	G153KL	.015	50	E
43 D 4913 A	G223KL	.002	50	E
43 D 4920 A	G333KL	.033	50	E
43 D 4923 A	G473KL	.047	50	E
43 D 4925 A	G683KL	.068	50	E
43 D 4926 A	G104KL	.1	50	E
43 D 4927 A	G154KL	.15	50	E
43 D 4933 A	G224KL	.22	50	E
43 D 4934 A	G334KL	.33	50	E
43 D 4935 A	G474KL	.47	50	E
43 D 4936 A	G684KL	.68	50	E
43 D 4937 A	G105KL	1	50	E
43 D 4938 A	G155KL	1.5	50	E
43 D 4939 A	G225KL	2.2	50	F
43 D 4940 A	G335KL	3.3	50	F
43 D 4941 A	G475KL	4.7	50	F
43 D 4942 A	G685KL	6.8	50	G
43 D 4944 A	G106KL	10	50	G
43 D 4945 A	G156KL	15	50	G
43 D 4950 A	G226KL	22	50	H
43 D 4951 A	H104KL	.1	75	J
43 D 4952 A	H154KL	.15	75	J
43 D 4953 A	H224KL	.22	75	J
43 D 4954 A	H334KL	.33	75	J
43 D 4955 A	H474KL	.47	75	J
43 D 4956 A	H684KL	.68	75	J
43 D 4957 A	H105KL	1	75	K
43 D 4958 A	H155KL	1.5	75	K
43 D 4959 A	H225KL	2.2	75	K
43 D 4960 A	H335KL	3.3	75	K
43 D 4961 A	H475KL	4.7	75	L
43 D 4962 A	H685KL	6.8	75	L
43 D 4963 A	H106KL	10	75	L
43 D 4964 A	H156KL	15	75	M

All capacitance values, failure rate .1% (P), and tolerance per MIL 39003/1A not listed above are available from Allied. Contact your nearest Allied facility for complete information.

Be Sure to Specify Stock No., Mfr's Type and Capacitance When Ordering

Solid and Foil Tantalums

TYPE 164D POLARIZED SOLID TANTALUM CAPACITORS

SPRAGUE
THE MARK OF RELIABILITY

164D PRICE AND SIZE LOCATOR (±10% Tolerance)

* Price Code	Diameter x Length	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.322"	1.15	.93	.65	.54	.46
B	.135x.322"	2.11	1.69	1.43	1.24	1.12
C	.185x.510"	1.42	1.15	.70	.60	.50
D	.185x.510"	2.36	1.89	1.60	1.37	1.25
E	.289x.722"	2.06	1.85	1.26	1.04	.87
F	.289x.722"	2.37	1.91	1.31	1.07	.91
G	.289x.722"	3.94	3.16	2.67	2.27	2.08
H	.351x.822"	4.28	3.38	2.23	1.82	1.52
K	.351x.822"	4.52	3.62	2.67	2.18	1.82
L	.351x.822"	7.58	6.07	5.12	4.37	3.99

Low-cost compact, metal-cased capacitors. Ideal for computers. Excellent where hermetically-sealed, military quality units are not necessary. Plastic resin end-seal. Priced comparable to older style electrolytics. Have plastic insulating sleeves. Tolerance, ±10%. Operating temperature range, —80° to +85° C. Metal case provides excellent moisture protection. Voltage ratings from 6 through 50 WVDC. Av. shpg. wt., 2 oz.

Stock No.	Type 164D-	μF	WVDC	*
43 D 5618	472X9035A2	.0047	35	A
43 D 5620	682X9035A2	.0068	35	A
43 D 5622	103X9035A2	.01	35	A
43 D 5623	103X9050A2	.01	50	B
43 D 5626	223X9035A2	.022	35	A
43 D 5629	333X9050A2	.033	50	B
43 D 5630	473X9035A2	.047	35	A
43 D 5632	683X9035A2	.068	35	A
43 D 5634	104X9035A2	.1	35	A
43 D 5635	104X9050A2	.1	50	B
43 D 5638	224X9035A2	.22	35	A
43 D 5640	334X9035A2	.33	35	A
43 D 5641	334X9050A2	.33	50	B
43 D 5642	474X9035A2	.47	35	A
43 D 5643	474X9050A2	.47	50	B
43 D 5644	684X9035A2	.68	35	A
43 D 5646	105X9035A2	1.0	35	A
43 D 5647	105X9050A2	1.0	50	B
43 D 5877	125X9020A2	1.2	20	A
43 D 5648	155X9020A2	1.5	20	A
43 D 5649	155X9035B2	1.5	35	C
43 D 5651	225X9020A2	2.2	20	A
43 D 5652	225X9035B2	2.2	35	C
43 D 5654	335X9015A2	3.3	15	A
43 D 5655	335X9035B2	3.3	35	C
43 D 5656	335X9050B2	3.3	50	D
43 D 5657	475X9010A2	4.7	10	A
43 D 5658	475X9035B2	4.7	35	C
43 D 5883	565X9006A2	5.6	6	A
43 D 5900	565X9035B2	5.6	35	C
43 D 5660	685X9006A2	6.8	6	A
43 D 5661	685X9035B2	6.8	35	C
43 D 5663	106X9020B2	10	20	C
43 D 5664	106X9035R2	10	35	F
43 D 5665	106X9050R2	10	50	G
43 D 5666	156X9020B2	15	20	C
43 D 5667	156X9035R2	15	35	F
43 D 5669	226X9015B2	22	15	C
43 D 5679	226X9035R2	22	35	F
43 D 5680	226X9050S2	22	50	L
43 D 5976	276X9010B2	27	10	C
43 D 5681	336X9010B2	33	10	C
43 D 5682	336X9020R2	33	20	E
43 D 5977	396X9010B2	39	10	C
43 D 5686	476X9006B2	47	6	C
43 D 5687	476X9020R2	47	20	E
43 D 5690	476X9035S2	47	35	K
43 D 5978	566X9006B2	56	6	C
43 D 5979	566X9015R2	56	15	E
43 D 5691	686X9015R2	68	15	E
43 D 5693	107X9010R2	100	10	E
43 D 5694	107X9020S2	100	20	H
43 D 5980	127X9010R2	120	10	E
43 D 5695	157X9006R2	150	6	E
43 D 5696	157X9015S2	150	15	H
43 D 5982	187X9006R2	180	6	E
43 D 5698	227X9010S2	220	10	H
43 D 5699	337X9006S2	330	6	H

TYPE 162D MINIATURE POLARIZED TANTALUMS

Extremely small and compact tantalum capacitors designed for use on printed circuit wiring boards, in packaged circuit modules, and in applications where space is a critical factor. Excellent for use in hearing aids and ultra-miniature radios. Have solid, non-corrosive electrolyte. Exceptionally long shelf and service life. All have plastic resin end-seal; plastic insulating sleeve. Tolerance, ±10%. Operating temperature range, —55° to +85°C, derating. Axial leads. Av. shpg. wt., 2 oz.

Stock No.	Type 162D-	μF	WVDC	*
43 D 5831	683X9100AA2	.068	100	F
43 D 5833	104X9050AA2	.1	50	E
43 D 5834	154X9035AA2	.15	35	A
43 D 5835	474X9020AA2	.47	20	A
43 D 5837	684X9015AA2	.68	15	A
43 D 5839	105X9010AA2	1.0	10	A
43 D 5840	105X9020AB2	1.0	20	B
43 D 5841	225X9015AB2	2.2	15	B
43 D 5842	475X9020BA2	4.7	20	C
43 D 5843	685X9015BA2	6.8	15	C
43 D 5845	106X9010BA2	10	10	C
43 D 5847	156X9015CA2	15	15	D
43 D 5848	226X9010CA2	22	10	D
43 D 5849	476X 9004CA2	47	4	D

162D AXIAL-LEAD PRICE AND SIZE LOCATOR

Price Code*	Diameter x Length	EACH 1-24	25-49	50-99	100-499	500-999
A	.080x.135"	1.22	.72	.54	.50	.46
B	.080x.185"	1.22	.72	.54	.50	.46
C	.105x.265"	1.28	.76	.57	.53	.49
D	.145x.265"	1.40	.83	.62	.58	.53
E	.080x.135"	1.85	1.09	.82	.76	.70
F	.080x.135"	3.62	2.12	1.58	1.46	1.34

CL25 (TYPE 112D) TANTALEX® FOIL CAPACITORS

CL25 (112D) PRICE AND SIZE LOCATOR

Price Code*	Diameter & Length	EACH 1-9	10-24	25-49	50-99	100-499	500-999
A	13/64x3/4"	4.24	3.37	2.46	1.74	1.23	.88
B	19/64x15/16"	7.59	4.98	3.84	2.74	1.91	1.50
C	25/64x1 1/8"	12.64	8.69	6.69	4.77	3.31	2.64
D	25/64x2 3/16"	20.59	14.15	10.87	7.74	5.35	4.69
E	25/64x2 13/16"	27.39	18.80	14.48	10.30	7.14	5.94

Polarized, etched-foil tantalum capacitors with virtually leakproof fluorocarbon end-seals. Specially designed for applications up to 150 volts in both military and industrial equipment. Excellent low temperature performance. Feature exceptionally high degree of stability at all operating temperatures. Operating temperature range is —50° to +85°C. Engineered to meet MIL-C-3965B specifications. Have float-design for higher insulation resistance, ultra-low leakage current, and longer service life. With tubular aluminum cases and outer plastic insulating sleeve. Av. shpg. wt., 2 oz.

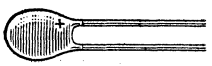
Stock No.	MIL CL25- / Type 112D-	μF	WVDC	Case Size*
43 D 4647	BQ010SP3 / 105C3150D1	1	150	A
43 D 4644	BN020SP3 / 205C3100D1	2	100	A
43 D 4648	BQ040SP3 / 405C3150G1	4	150	B
43 D 4634	BJ4R5TP3 / 455C5050D1	4.5	50	A
43 D 2981	BG100UP3/ 106C7025D1	10	25	A
43 D 4640	BL120TP3 / 126C5075G1	12	75	B
43 D 4635	BJ180TP3 / 186C5050G1	18	50	B
43 D 4646	BN250SP3 / 256C3100J1	25	100	C
43 D 4641	BL300TP3 / 306C5075J1	30	75	C
43 D 2982	BG400UP3/ 406C7025G1	40	25	B
43 D 2977	BE600UP3 / 606C7015G1	60	15	B
43 D 4636	BJ600TP3 / 606C5050J1	60	50	C
43 D 4637	BJ101TP3 / 107C5050M1	100	50	D
43 D 4643	BL101TP3 / 107C5075P1	100	75	E
43 D 2999	BH111UP3/ 117C7030J1	110	30	C
43 D 4638	BJ151TP3 / 157C5050P1	150	50	E
43 D 3000	BH221UP3/ 227C7030M1	220	30	D
43 D 2984	BG251UP3/ 257C7025M1	250	25	D
43 D 3001	BH301UP3/ 307C7030P1	300	30	E
43 D 2985	BG351UP3/ 357C7025P1	350	25	E
43 D 2979	BE401UP3 / 407C7015M1	400	15	D

ATTENTION INDUSTRIAL BUYERS

Allied maintains complete stocks of Sprague capacitors. For information on any types not listed in this catalog, simply contact the Allied facility nearest you. Depend on Allied for fast service, prompt shipment and OEM prices.

Type 196D and 36D Capacitors

TYPE 196D SOLID TANTALUM EPOXY-DIPPED CAPACITORS



Low-cost space-saving units. Epoxy-resin coating resistant to moisture and mechanical damage. Tinned nickel leads. Temperature, —55° to +85°C. Tolerance, ±20%. Av. shpg. wt., ½ oz.

SIZE TABLE

Case Code	Height	Width	Thickness	Case Code	Height	Width	Thickness
A	.400″	.250″	.200″	C	.450″	.450″	.250″
B	.350″	.400″	.225″	D	.670″	.600″	.275″

4 WVDC

Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6826	336X0004EB	33	B	.81	.64	.44	.32	.29
43 D 6827	157X0004FB	150	C	1.35	1.08	.74	.54	.49

6 WVDC

Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6828	226X0006EB	22	B	.81	.64	.44	.32	.29
43 D 6829	107X0006FB	100	C	1.35	1.08	.74	.54	.49
43 D 6830	337X0006GB	330	D	3.45	2.76	1.90	1.38	1.24

10 WVDC

Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6831	156X0010EB	25	B	.81	.64	.44	.32	.29
43 D 6845	686X0010FB	68	C	1.35	1.08	.74	.54	.49
43 D 6848	227X0010GB	220	D	3.45	2.76	1.90	1.38	1.24

15 WVDC

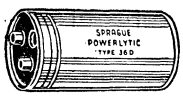
Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6849	106X0015EB	10	B	.81	.64	.44	.32	.29
43 D 6850	336X0015FB	33	C	1.20	.96	.66	.48	.43
43 D 6851	476X0015FB	47	C	1.35	1.08	.74	.54	.49
43 D 6853	157X0015GB	150	D	3.45	2.76	1.90	1.38	1.24

20 WVDC

Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6854	225X0020EB	2.2	B	.81	.64	.44	.32	.29
43 D 6856	475X0020EB	4.7	B	.81	.64	.44	.32	.29
43 D 6857	685X0020EB	6.8	B	.81	.64	.44	.32	.29
43 D 6858	106X0020FB	10	C	.87	.68	.47	.32	.29
43 D 6860	226X0020FB	22	C	1.35	1.08	.74	.54	.49
43 D 6862	107X0020GB	100	D	3.45	2.76	1.90	1.38	1.24

35 WVDC

Stock No.	Type 196D-	Cap. µF	Case Size Code	EACH 1-24	25-49	50-99	100-499	500-999
43 D 6864	104X0035DB	.1	A	.81	.64	.44	.32	.29
43 D 6865	224X0035DB	.22	A	.81	.64	.44	.32	.29
43 D 6867	334X0035DB	.33	A	.81	.64	.44	.32	.29
43 D 6868	474X0035DB	.47	A	.81	.64	.44	.32	.29
43 D 6870	684X0035DB	.68	A	.81	.64	.44	.32	.29
43 D 6871	105X0035DB	1.0	A	.81	.64	.44	.32	.29
43 D 6872	105X0035EB	1.0	B	.81	.64	.44	.32	.29
43 D 6873	155X0035EB	1.5	B	.81	.64	.44	.32	.29
43 D 6874	225X0035FB	2.2	C	1.02	.80	.55	.40	.36
43 D 6876	335X0035FB	3.3	C	1.02	.80	.55	.40	.36
43 D 6896	475X0035FB	4.7	C	1.11	.88	.61	.44	.40
43 D 6900	685X0035FB	6.8	C	1.11	.88	.61	.44	.40
43 D 6906	276X0035GB	27	D	3.45	2.76	1.90	1.38	1.24



IMPROVED TYPE 36D "POWERLYTIC" INSULATED COMPUTER-GRADE ALUMINUM ELECTROLYTICS

Provides maximum capacitance in a given size. Low ESR and leakage currents. Long life. Plastic insulating tube withstands military environment conditions including —55° storage tests. Pressure safety vents. Terminal tapped 10-32. —20° +65°C. Tol.: 3-50 WV, —10%, +75%; 75-450 WV, —10%, +50%. Av., 1½ lbs.

*Code	Dia. x L.	*Code	Dia. x L.	*Code	Dia. x L.	*Code	Dia. x L.	*Code	Dia. x L.	*code	Dia. x L.
A	1 7/16x2½″	C	1 7/16x4½″	E	2 1/16x4½″	G	2 9/16x4½″	I	3 1/16x4½″	K	3 1/16x6″
B	1 7/16x3½″	D	2 1/16x3½″	F	2 9/16x3½″	H	2 9/16x5″	J	3 1/16x5″	.....	.....

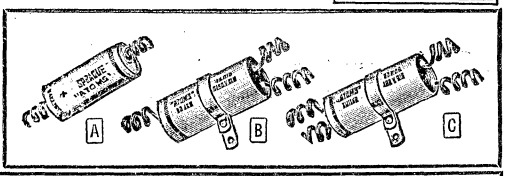
Stock No.	Type 36D. .2A	µF	WV DC	*	EACH 1-24	25-49	50-99	100-249
43 D 5020	274G003DF	270000	3	K	13.80	11.04	9.66	7.45
43 D 5021	124G006DC	120000	6	I	10.25	8.20	7.17	5.54
43 D 5022	194G006DF	190000	6	K	13.80	11.04	9.66	7.46
43 D 5023	602G010AA	6000	10	A	2.31	1.85	1.62	1.25
43 D 5025	123G010AB	12000	10	B	2.79	2.23	1.95	1.51
43 D 5026	183G010AC	18000	10	C	3.21	2.57	2.25	1.74
43 D 5027	283G010BB	28000	10	D	4.29	3.43	3.00	2.32
43 D 5028	423G010BC	42000	10	E	5.19	4.15	3.64	2.81
43 D 5029	483G010CB	48000	10	F	5.82	4.66	4.08	3.15
43 D 5030	104G010DC	100000	10	I	10.34	8.27	7.24	5.58
43 D 5031	164G010DF	160000	10	K	13.87	11.10	9.71	7.49
43 D 5032	462G015AA	4600	15	A	2.31	1.85	1.62	1.25
43 D 5156	922G015AB	9200	15	B	2.79	2.24	1.96	1.51
43 D 5154	133G015AC	13000	15	C	3.22	2.58	2.26	1.73
43 D 5035	213G015BB	21000	15	D	4.31	3.45	3.02	2.33
43 D 5155	313G015BC	31000	15	E	5.20	4.16	3.64	2.81
43 D 5037	363G015CB	36000	15	F	5.85	4.68	4.10	3.16
43 D 5038	543G015CC	54000	15	G	7.67	6.14	5.37	4.14
43 D 5039	633G015CD	63000	15	H	8.59	6.87	6.01	4.64
43 D 5040	803G015DC	80000	15	I	9.97	7.97	6.98	5.38
43 D 5041	272G025AA	2700	25	A	2.31	1.85	1.62	1.25
43 D 5042	552G025AB	5500	25	B	2.80	2.24	1.96	1.51
43 D 5050	822G025AC	8200	25	C	3.23	2.59	2.26	1.75
43 D 5051	183G025BC	18000	25	E	5.22	4.18	3.66	2.82
43 D 5052	323G025CC	32000	25	G	7.72	6.18	5.41	4.17
43 D 5053	473G025DC	47000	25	I	9.99	7.99	7.00	5.40
43 D 5054	553G025DD	55000	25	J	11.89	9.51	8.33	6.42
43 D 5055	713G025DF	71000	25	K	13.74	10.99	9.62	7.42
43 D 5056	363G030DC	36000	30	I	10.07	8.05	7.05	5.44
43 D 5057	423G030DD	42000	30	J	11.94	9.56	8.36	6.45
43 D 5058	552G040AC	5500	40	C	3.25	2.60	2.28	1.76
43 D 5059	842G040BB	8400	40	D	4.37	3.50	3.06	2.36
43 D 5060	123G040BC	12000	40	E	5.32	4.26	3.73	2.88
43 D 5061	213G040CC	21000	40	G	7.78	6.22	5.45	4.20
43 D 5062	253G040CD	25000	40	H	8.77	7.02	6.14	4.74
43 D 5063	132G050AA	1300	50	A	2.32	1.86	1.63	1.26
43 D 5064	262G050AB	2600	50	B	2.82	2.26	1.98	1.53
43 D 5065	392G050AC	3900	50	C	3.26	2.61	2.29	1.76
43 D 5066	602G050BB	6000	50	D	4.39	3.52	3.08	2.38
43 D 5067	902G050BC	9000	50	E	5.34	4.27	3.74	2.88
43 D 5068	153G050CC	15000	50	G	7.80	6.24	5.46	4.22
43 D 5069	223G050DC	22000	50	E	10.12	8.09	7.08	5.47
43 D 5085	252F075AC	2500	75	C	3.27	2.62	2.29	1.77
43 D 5086	392F075BB	3900	75	D	4.41	3.53	3.09	2.38
43 D 5087	592F075BC	5900	75	E	5.34	4.28	3.74	2.89
43 D 5088	113F075CD	11000	75	H	8.85	7.08	6.20	4.78
43 D 5089	143F075DC	14000	75	I	10.17	8.14	7.12	5.49
43 D 5090	223F075DF	22000	75	K	14.40	11.52	10.08	7.78
43 D 5091	451F100AA	450	100	A	2.32	1.86	1.63	1.26
43 D 5097	132F100AC	1300	100	C	3.25	2.60	2.28	1.76
43 D 5099	302F100BC	3000	100	E	5.30	4.24	3.71	2.86
43 D 5100	532F100CC	5300	100	G	7.78	6.22	5.45	4.20
43 D 5101	782F100DC	7800	100	I	10.62	8.50	7.44	5.74
43 D 5102	301F150AA	300	150	A	2.32	1.86	1.63	1.25
43 D 5103	901F150AC	900	150	C	3.22	2.58	2.26	1.74
43 D 5104	142F150BB	1400	150	D	4.31	3.45	3.02	2.33
43 D 5105	212F150BC	2100	150	E	5.22	4.18	3.66	2.82
43 D 5106	362F150CC	3600	150	G	7.80	6.24	5.46	4.22
43 D 5107	532F150DC	5300	150	I	10.52	8.42	7.37	5.68
43 D 5108	782F150DF	7800	150	K	14.24	11.39	9.97	7.69
43 D 5109	251F200AA	250	200	A	2.31	1.85	1.62	1.25
43 D 5110	431F200AB	430	200	B	2.77	2.22	1.94	1.50
43 D 5111	641F200AC	640	200	C	3.20	2.56	2.24	1.28
43 D 5112	142F200BC	1400	200	E	5.14	4.11	3.60	2.78
43 D 5113	162F200CB	1600	200	F	5.87	4.70	4.11	3.17
43 D 5114	372F200DC	3700	200	I	10.26	8.21	7.18	5.54
43 D 5115	552F200DF	5500	200	K	14.19	11.35	9.93	7.66
43 D 5116	531F250AC	530	250	C	3.19	2.55	2.23	1.72
43 D 5130	122F250BC	1200	250	E	5.11	4.09	3.58	2.76
43 D 5131	302F250DC	3000	250	I	10.23	8.19	7.16	5.53
43 D 5132	452F250DF	4500	250	K	14.11	11.29	9.88	7.62
43 D 5133	241F300AB	240	300	B	2.75	2.20	1.92	1.49
43 D 5134	821F300BC	820	300	E	5.09	4.07	3.56	2.75
43 D 5135	212F300DC	2100	300	I	10.20	8.16	7.14	5.51
43 D 5136	950F350AA	95	350	A	2.30	1.84	1.61	1.24
43 D 5137	191F350AB	190	350	B	2.72	2.17	1.90	1.47
43 D 5138	421F350BB	420	350	D	3.97	3.17	2.78	2.14
43 D 5139	651F350BC	650	350	E	5.05	4.04	3.53	2.73
43 D 5140	112F350CC	1100	350	G	7.38	5.91	5.17	3.99
43 D 5141	162F350DC	1600	350	I	10.07	8.05	7.05	5.44
43 D 5142	252F350DF	2500	350	K	13.85	11.08	9.69	7.48
43 D 5143	421F400BC	420	400	E	5.02	4.02	3.52	2.71
43 D 5144	500F450AA	50	450	A	2.25	1.80	1.58	1.22
43 D 5150	141F450AC	140	450	C	3.13	2.51	2.20	1.69
43 D 5151	221F450BB	220	450	D	4.03	3.23	2.82	2.18
43 D 5152	331F450BC	330	450	E	4.99	3.99	3.49	2.70
43 D 5153	861F450DC	860	450	I	10.47	8.37	7.33	5.65
.....	.....	.....	.....	.....	.....	.....	.....	.....

Specify Stock No., Mfr's Type No. and Capacitance When Ordering

TVA Atom Midget Electrolytics

SPRAGUE
THE MARK OF RELIABILITY

Sprague Atom electrolytics offer dependable performance, compact size and the ability to operate at high temperatures. Ultra-compact size makes these dry electrolytics excellent for use in circuits for television, AC-DC home radios, auto radios, and radio-phonograph combinations. Easy to install—even in crowded chassis. Capacitors will perform efficiently at temperatures up to 85°C (185°F) and withstand high surge voltages and ripple currents as found in television circuits. All have extremely low leakage and long shelf life. All have metal cases with outer cardboard insulating case except †, cardboard.



NOTE: Sizes given in Table below may be considered maximum, since Sprague is systematically reducing the size specifications for the entire TVA series. Allied will ship the newer, smaller units as soon as they become available.

A SINGLE SECTION TYPE TVA Av. shpg. wt., 3 oz.

Stock No.	Type TVA	μF	WV DC	Size (Inches)	EACH 1-24	25-49	50-99	100-249	250-Up
43 D 6231	1102	250	6	9/16x1 5/16	.81	.64	.50	.40	.33
43 D 6232	1103	500	6	5/8x1 9/16	.93	.73	.57	.46	.37
43 D 5801	1104	1000	6	3/4x1 13/16	1.14	.89	.70	.56	.46
43 D 6266	1105	1500	6	13/16x2 1/16	1.26	.98	.76	.61	.50
43 D 5861	1106	2000	6	13/16x2 5/16	1.38	1.08	.84	.67	.55
43 D 6234	1130	100	12	9/16x1 5/16	.72	.52	.40	.32	.26
43 D 5862	1131	250	12	5/8x1 5/16	.87	.68	.53	.43	.35
43 D 5863	1132	500	12	11/16x1 9/16	1.02	.79	.62	.49	.41
43 D 6235	1133	1000	12	13/16x1 13/16	1.35	1.05	.82	.65	.54
43 D 6236	1160	100	15	9/16x1 5/16	.75	.52	.41	.33	.27
43 D 6237	1161	250	15	5/8x1 9/16	.93	.74	.60	.46	.38
43 D 6238	1162	500	15	11/16x1 13/16	1.05	.83	.64	.52	.42
43 D 6239	1163	1000	15	13/16x1 13/16	1.38	1.07	.84	.67	.55
43 D 5803	1170	2000	15	15/16x2 13/16	1.92	1.29	1.00	.81	.66
43 D 6271	1201	2	25	5/16x5/8	.54	.39	.31	.25	.20
43 D 5207	1203	5	25	5/16x5/8	.60	.42	.32	.26	.21
43 D 5205	1204	10	25	5/16x1 3/16	.60	.42	.33	.27	.22
43 D 5805	1204.5	20	25	3/8x1 3/16	.60	.43	.34	.27	.23
43 D 5206	1205	25	25	3/8x1 3/16	.60	.44	.35	.28	.23
43 D 5208	1206	50	25	9/16x1 5/16	.66	.47	.37	.30	.24
43 D 5867	1207	100	25	9/16x1 11/16	.81	.58	.45	.36	.30
43 D 6272	1207.5	150	25	13/16x1 9/16	.87	.63	.49	.39	.32
43 D 5868	1208	250	25	11/16x1 9/16	1.02	.79	.61	.49	.40
43 D 5869	1209	500	25	3/4x1 13/16	1.38	1.07	.84	.67	.55
43 D 5864	1211	1000	25	13/16x2 5/16	1.98	1.79	1.39	1.11	.91
43 D 5870	1300	1	50	5/16x5/8	.54	.39	.31	.25	.20
43 D 5871	1301	2	50	5/16x5/8	.54	.39	.31	.25	.20
43 D 5200	1303	5	50	7/16x1 3/16	.60	.42	.32	.26	.21
43 D 5201	1304	10	50	3/8x1 3/16	.60	.42	.33	.27	.22
43 D 6273	1305	15	50	3/8x1 9/16	.60	.43	.34	.27	.23
43 D 5183	1305.5	20	50	3/8x1 5/16	.60	.43	.34	.27	.22
43 D 5202	1306	25	50	3/8x1 5/16	.63	.44	.35	.28	.23
43 D 5203	1308	50	50	5/8x1 5/16	.72	.52	.40	.32	.27
43 D 5876	1310	100	50	5/8x1 9/16	.84	.60	.47	.40	.31
43 D 5858	1311	150	50	3/4x1 9/16	.93	.66	.51	.41	.34
43 D 5859	1312	250	50	13/16x1 9/16	1.05	.83	.64	.52	.42
43 D 5806	1315	500	50	1x1 15/16	1.44	1.11	.86	.69	.57
43 D 5182	1400	1	150	5/16x5/8	.57	.41	.32	.26	.22
43 D 5192	1402	4	150	3/8x1 5/16	.60	.43	.33	.27	.22
43 D 6241	1403	5	150	3/8x1 5/16	.60	.43	.34	.27	.22
43 D 5193	1405	8	150	7/16x1 7/8	.63	.45	.35	.28	.23
43 D 5226	1406	10	150	9/16x1 5/16	.63	.46	.36	.29	.24
43 D 6274	1407	12	150	9/16x3/16	.66	.47	.37	.29	.24
43 D 5195	1409	16	150	9/16x1 9/16	.69	.49	.38	.31	.25
43 D 5196	1410	20	150	5/8x1 9/16	.72	.50	.39	.32	.26
43 D 6242	1411	25	150	3/4x1 9/16	.75	.53	.41	.33	.27
43 D 5197	1412	30	150	13/16x1 9/16	.78	.55	.43	.35	.28
43 D 5198	1413	40	150	13/16x1 9/16	.81	.58	.45	.36	.30
43 D 5199	1414	50	150	13/16x1 13/16	.84	.60	.47	.38	.31
43 D 6243	1415	60	150	15/16x1 9/16	.90	.63	.49	.40	.33
43 D 5878	1418	80	150	15/16x1 9/16	.96	.69	.54	.43	.35
43 D 6619	1420	100	150	15/16x2 1/16	1.05	.75	.58	.47	.38
43 D 6240	1422	150	150	11/16x2 1/16	1.14	.82	.64	.48	.42
43 D 6244	1423	200	150	11/16x2 9/16	1.32	.93	.72	.58	.47
43 D 6275	1424	250	150	1 1/4x4 3/8	2.16	1.60	1.25	1.00	.82
43 D 6245	1425†	300	150	11/16x3 5/16	1.68	1.25	.97	.78	.64
43 D 6279	1430	80	175	11/16x2 1/16	.99	.81	.63	.51	.42
43 D 5179	1445	100	200	11/16x2 5/16	1.14	.90	.70	.56	.46
43 D 5191	1447	150	200	1 3/8x3 3/8	1.68	1.26	.98	.79	.65
43 D 6246	1480†	200	200	1 3/8x3 3/8	1.89	1.42	1.10	.89	.73
43 D 5185	1501	4	250	9/16x1 5/16	.66	.48	.37	.30	.25
43 D 5186	1503	8	250	9/16x1 9/16	.69	.54	.42	.34	.28
43 D 6617	1504	10	250	5/8x1 9/16	.72	.56	.43	.35	.29
43 D 5187	1505	12	250	5/8x1 9/16	.75	.57	.45	.36	.29
43 D 5865	1507	16	250	13/16x1 5/16	.78	.60	.47	.38	.31
43 D 5189	1508	20	250	13/16x1 5/16	.81	.64	.50	.40	.33
43 D 6618	1510	30	250	13/16x1 13/16	.87	.68	.53	.43	.35
43 D 5190	1511	40	250	13/16x2 1/16	.93	.74	.57	.46	.38
43 D 5807	1512	50	250	15/16x1 13/16	1.02	.81	.63	.50	.41
43 D 5808	1513	60	250	1x1 13/16	1.08	.84	.66	.53	.43
43 D 6282	1522	100	250	11/16x2 5/16	1.47	.96	.75	.60	.50
43 D 6283	1528	200	250	1 3/8x3 1/8	2.10	1.35	1.05	.84	.69
43 D 6285	1573	100	300	11/16x3 1/16	1.59	.98	.77	.61	.50
43 D 6247	1575†	140	300	1 3/8x3 3/8	2.19	1.64	1.28	1.02	.84
43 D 6265	1578	200	300	1 3/8x4 5/8	2.70	1.61	1.25	1.00	.72
43 D 6616	1601	4	350	11/16x15/16	.63	.49	.38	.31	.25
43 D 5181	1603	8	350	11/16x1 9/16	.72	.55	.43	.35	.28
43 D 5872	1607	16	350	13/16x1 9/16	.84	.66	.51	.41	.34
43 D 5184	1608	20	350	13/16x1 13/16	.87	.68	.53	.42	.35
43 D 5809	1610	30	350	13/16x2 1/16	.99	.77	.60	.48	.40
43 D 5983	1611	40	350	15/16x2 1/16	1.05	.80	.62	.50	.41
43 D 5984	1613	60	350	11/16x2 1/16	1.17	.91	.71	.57	.47
43 D 5812	1620	100	350	11/16x2 13/16	1.86	1.11	.86	.69	.57
43 D 6286	1622	150	350	1 3/8x3 3/8	2.22	1.46	1.14	.91	.75
43 D 6287	1624	200	350	1 3/8x4 1/8	3.12	1.88	1.46	1.17	.97
43 D 5873	1700	1	450	9/16x1 5/16	.66	.51	.40	.32	.26
43 D 6615	1701	2	450	9/16x1 5/16	.66	.52	.41	.33	.27
43 D 5170	1702	4	450	11/16x1 5/16	.69	.54	.42	.34	.28
43 D 5171	1704	8	450	3/4x1 9/16	.75	.60	.46	.37	.31
43 D 5225	1705	10	450	13/16x1 9/16	.78	.60	.47	.37	.31
43 D 5173	1708	16	450	13/16x1 13/16	.84	.68	.53	.42	.35
43 D 5174	1709	20	450	15/16x1 13/16	.93	.73	.57	.46	.37
43 D 5169	1711	30	450	15/16x2 1/16	1.02	.80	.63	.50	.41
43 D 5178	1712	40	450	11/16x2 1/16	1.08	.83	.65	.52	.43
43 D 6248	1714	60	450	11/16x2 13/16	1.41	1.16	.90	.72	.59
43 D 5985	1716	80	450	11/16x3 13/16	1.95	1.46	1.14	.91	.75
43 D 8219	1718†	100	450	11/16x4 1/16	1.92	1.69	1.31	1.05	.86
43 D 5175	1902	8	500	15/16x1 13/16	.78	.61	.48	.38	.31
43 D 5177	1906	20	500	11/16x2 5/16	.96	.75	.58	.47	.38
43 D 6249	1962	8	600	11/16x3 3/16	1.83	1.37	1.07	.85	.70
43 D 6256	1963	10	600	11/16x3 3/16	2.19	1.64	1.28	1.02	.84
43 D 6257	1965	16	600	11/16x4 3/16	2.49	1.87	1.46	1.17	.96
43 D 6258	1966	20	600	11/16x4 3/16	2.58	1.93	1.50	1.20	.99

B DUAL SECTION TYPE TVA Av. shpg. wt., 5 oz.

Stock No.	Type TVA	μF	WV DC	Size (Inches)	EACH 1-24	25-49	50-99	100-249	250-Up
43 D 6289	2315	10-10	50	13/16x1 5/16	.96	.73	.57	.46	.38
43 D 5247	2428	20-20	150	13/16x1 9/16	1.05	.80	.62	.50	.41
43 D 5252	2438	40-20	150	15/16x1 9/16	1.14	.84	.65	.52	.43
43 D 5251	2434	30-30	150	15/16x1 9/16	1.08	.85	.66	.53	.43
43 D 5243	2445	40-40	150	15/16x2 1/16	1.11	.88	.69	.55	.45
43 D 5244	2450	50-30	150	15/16x2 1/16	1.17	.88	.69	.55	.45
43 D 5305	2453	50-50	150	15/16x2 1/16	1.26	.93	.72	.58	.47
43 D 5306	2460	80-30	150	15/16x2 9/16	1.32	.94	.73	.59	.48
43 D 5258	2461	80-40	150	15/16x2 9/16	1.32	.96	.75	.60	.49
43 D 6259	2462	80-50	150	15/16x2 9/16	1.41	.99	.77	.62	.51
43 D 5256	2463	100-50	150	11/16x2 13/16	1.59	1.04	.81	.65	.54
43 D 6262	2464†	100-100	150	1 3/8x3 3/8	1.92	1.32	1.03	.82	.68
43 D 5257	2515	20-20	250	15/16x1 13/16	1.11	.88	.69	.55	.45
43 D 5220	2720	8-8	450	15/16x1 13/16	1.17	.88	.69	.55	.45
43 D 5884	2722	10-10	450	15/16x2 1/16	1.23	.92	.72	.58	.47
43 D 5227	2730	20-20	450	15/16x2 13/16	1.50	1.19	.92	.74	.61
43 D 5986	2735	30-30	450	11/16x3 5/16	1.95	1.46	1.13	.91	.75
43 D 5987	2740	40-40	450	11/16x4 1/16	2.25	1.69	1.40	1.12	.92

C TRIPLE SECTION TYPE TVA Av. shpg. wt., 6 oz.

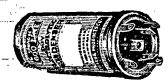
Stock No.	Type TVA	μF	WV DC	Size (Inches)	EACH 1-24	25-49	50-99	100-249	250-Up
43 D 5811	3422.9	40-20/20	150/25	15/16x1 13/16	1.80	1.33	1.04	.83	.68
43 D 5813	3425	40-40/20	150/25	15/16x2 5/16	1.86	1.38	1.08	.86	.71
43 D 5307	3440	20-20-20	150	15/16x1 13/16	1.77	1.32	1.03	.82	.68
43 D 5874	3442	30-25-20	150	15/16x2 5/16	1.80	1.36	1.06	.85	.70
43 D 5875	3444	30-30-30	150	15/16x2 5/16	1.86	1.39	1.08	.86	.71
43 D 5800	3446	40-20-20	150	15/16x2 1/16	1.80	1.36	1.06	.84	.70
43 D 5308	3448	40-30-20	150	15/16x2 5/16	1.86	1.38	1.08	.86	.71
43 D 5814	3450	40-40-20	150	15/16x2 9/16	1.86	1.40	1.09	.88	.72
43 D 5309	3451	40-40-40	150	11/16x2 9/16	1.92	1.44	1.12	.90	.74
43 D 8222	3453	50-30-20	150	11/16x2 9/16	1.89	1.40	1.09	.88	.72
43 D 5327	3455	80-40-20	150	11/16x3 1/16	1.98	1.49	1.16	.93	.76
43 D 6227	3456	80-40-40	150	11/16x3 1/16	2.04	1.53	1.19	.95	.78
43 D 6228	3712	5-80-4	400-400	11/16x4 1/8	2.76	2.07	1.61	1.29	1.06
43 D 6229	3740	40-20-20	450	11/16x4 1/16	2.58	1.93	1.50	1.20	.99

SPRAGUE
THE MARK OF RELIABILITY

Twist-Prong Electrolytic Capacitors

TVL "TWIST-LOK" AND PCL "PRINT-LOK" MIDGET CAN CAPACITORS

NOW AVAILABLE IN SMALLER SIZES!



Type TVL "Twist-Lok" electrolytics come in hermetically sealed, aluminum cans for long life and dependable performance—excellent for use in high-ripple selenium rectifier circuits. Withstand extremely high temperatures often encountered in TV, auto radio and hi-fi cabinets; all types are designed for 85°C (185°F) operation. Up to 150 WVDC, capacity tolerance is —10% to +100%; above 150 WVDC, tolerance is —10% to +50%. Can is common negative. Easy to mount—unit locks firmly in place with a twist of the tabs. Supplied with both phenolic and metal mounting washers. Terminals are welded to capacitor cathodes and tinned for easy soldering. Asterisks in tables below indicate type PCL "Print-Lok" electrolytics, universal printed circuit version of TVL "Twist-Loks." "Print-Lok" types fit all printed circuit mountings or standard twist-base mountings. Lock in position with a touch of the pliers.

For Equivalent-Type Electrolytics, See Listings on Page 192 of This Catalog

TWIST-PRONG CAPACITOR SIZE CHART

Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L
A	¾x2"	C	1x2½"	E	1x3½"	G	1⅜x2"	J	1⅜x3"	L	1⅜x4"
B	1x2"	D	1x3"	F	1x4"	H	1⅜x2½"	K	1⅜x3½"	M	1x1½"
										N	1⅜x4½"

SINGLE SECTION Av. shpg. wt., 1 lb.

Stock No.	Type TVL-*PCL-	Capacity, μF	WVDC	Size	EACH 1-24	25-49	50-99	100-Up
43 D 9620	1160	225	15	A	1.20	.65	.52	.39
43 D 9364	1165	1000	15	M	1.77	2.04	.84	.63
43 D 9365	1168	2000	15	G	2.37	1.60	1.28	.96
43 D 9366	1170	3000	15	G	2.94	2.00	1.60	1.20
43 D 9603	1173	4000	15	K	2.58	2.40	1.92	1.44
43 D 9362	1220	500	25	M	1.77	.96	.77	.58
43 D 9363	1230	1000	25	G	2.46	1.44	1.15	.87
43 D 9357	1317	100	50	A	1.14	.64	.51	.39
43 D 9604	1324	250	50	B	1.38	.84	.68	.51
43 D 9358	1330	500	50	H	1.83	1.20	.96	.72
43 D 9359	1338	1000	50	H	2.58	1.61	1.29	.97
43 D 9360	1341	1500	50	H	3.05	2.01	1.61	1.21
43 D 9344	1415	50	150	M	1.14	.73	.59	.44
43 D 9346	1423	100	150	M	1.38	.82	.66	.49
43 D 9606	1426	120	150	H	1.50	1.01	.81	.61
43 D 9348	1428	140	150	C	1.50	.90	.72	.54
43 D 9609	1428*	140	150	E	1.50	.90	.72	.54
43 D 9349	1429	150	150	B	1.50	.91	.73	.55
43 D 9350	1430	150	150	G	1.50	1.06	.85	.64
43 D 9351	1431	200	150	G	1.68	1.15	.92	.69
43 D 9352	1434	300	150	G	1.95	1.33	1.06	.80
43 D 9302	1471	150	200	D	1.95	1.03	.82	.62
43 D 9343	1473	160	200	G	2.19	1.19	.96	.72
43 D 9610	1473*	160	200	J	2.19	1.19	.96	.72
43 D 9339	1519	40	250	B	1.29	.78	.62	.47
43 D 9341	1540	150	250	G	2.13	1.29	1.04	.78
43 D 9342	1547	200	250	H	2.52	1.46	1.17	.88
43 D 9330	1541	160	250	H	2.13	1.41	1.13	.85
43 D 9338	1541.1	160	250	F	2.13	1.19	.95	.72
43 D 9336	1584	150	300	K	2.43	1.49	1.19	.90
43 D 9337	1590	250	300	J	3.84	1.89	1.51	1.14
43 D 9611	1617	30	350	B	1.32	.80	.64	.48
43 D 9329	1621	40	350	B	1.38	.86	.69	.51
43 D 9332	1638	125	350	H	2.73	1.46	1.17	.88
43 D 9333	1642	150	350	H	2.73	1.60	1.28	.96
43 D 9314	1705	10	450	M	1.02	.72	.58	.44
43 D 9316	1714	20	450	B	1.26	.80	.64	.48
43 D 9317	1720	30	450	C	1.35	.89	.71	.54
43 D 9324	1725	40	450	C	1.41	.97	.78	.53
43 D 9325	1728	50	450	C	1.62	1.05	.84	.63
43 D 9622	1730	60	450	H	1.80	1.28	1.02	.77
43 D 9326	1735	80	450	H	2.10	1.45	1.16	.87
43 D 9327	1750	100	450	H	2.37	1.61	1.29	.97
43 D 9328	1760	125	450	J	2.64	1.83	1.47	1.10
43 D 9613	1820	40	475	G	1.68	1.17	.94	.71
43 D 9308	1943	20	500	C	1.26	.86	.69	.52
43 D 9309	1947	30	500	C	1.38	.98	.78	.59
43 D 9310	1950	40	500	C	1.71	1.09	.87	.66
43 D 9311	1958	80	500	H	2.49	1.69	1.35	1.01
43 D 9312	1960	90	500	J	2.40	1.80	1.44	1.08

DUAL SECTION Av. shpg. wt., 1½ lbs.

43 D 9120	2160	1000-1000	15	C	3.03	1.54	1.23	.93
43 D 9626	2161	1000-1000	15	H	3.03	1.71	1.37	1.03
43 D 9117	2326	100-100	50	M	1.44	.90	.72	.54
43 D 9102	2428	40-40	150	M	1.32	.88	.70	.53
43 D 9104	2432*	50-30	150	B	1.38	.88	.70	.53
43 D 9105	2435	50-50	150	M	1.50	.91	.73	.55
43 D 9107	2442	80-40	150	G	1.59	1.11	.89	.67
43 D 9108	2442.1	80-50	150	G	1.65	.97	.77	.58
43 D 9114	2444	200-5	150	G	1.86	1.26	1.01	.76
43 D 9623	2446	200-150	150	J	2.58	2.33	2.15	1.94
43 D 9115	2447	200-200	150	H	2.76	1.62	1.30	.98
43 D 9634	2464	100-100	200	J	2.40	1.42	1.14	.86
43 D 9405	2470	200-5	200	G	2.10	1.41	1.13	.85
43 D 9402	2515	20-20	250	M	1.32	.87	.69	.52
43 D 9403	2520	40-40	250	B	1.71	1.00	.80	.60
43 D 9404	2535	150-150	250	H	3.54	1.91	1.53	1.15
43 D 9636	2538	200-200	250	L	4.17	2.27	1.82	1.37
43 D 9395	2625	15-15	350	B	1.56	1.41	1.13	.85
43 D 9396	2626	20-20	350	B	1.59	.95	.76	.57
43 D 9397	2628	30-30	350	C	2.01	1.06	.85	.64
43 D 9639	2639	100-60	350	K	3.30	1.77	1.41	1.06
43 D 9640	2655	100-30	400-50	H	2.70	1.63	1.31	.98
43 D 9641	2656	80-80	400-200	K	2.73	1.71	1.37	1.03
43 D 9394	2677	80-60	400	J	3.24	1.92	1.54	1.16
43 D 9642	2679	120-40	400	L	3.63	2.09	1.67	1.26
43 D 9376	2750	10-10	450	B	1.32	.90	.72	.54
43 D 9379	2755	20-20	450	C	1.77	1.06	.85	.64
43 D 9381	2759	30-30	450	G	2.10	1.38	1.11	.83
43 D 9382	2762	40-20	450	G	2.25	1.38	1.11	.83
43 D 9383	2764	40-40	450	H	2.37	1.56	1.25	.94
43 D 9384	2767	50-50	450	J	2.64	1.73	1.39	1.04
43 D 9386	2772	60-60	450	J	3.09	1.89	1.52	1.14
43 D 9387	2776	80-10	450	J	2.49	1.65	1.32	.99
43 D 9389	2778	80-40	450	K	3.48	1.91	1.53	1.15
43 D 9390	2780	100-40	450	K	3.33	2.07	1.66	1.24
43 D 9643	2813	20-100	475-400	J	3.09	1.83	1.46	1.10
43 D 9304	2808	80-160	475-250	N	3.84	2.26	1.81	1.36
43 D 9368	2933	10-10	500	B	1.35	.96	.76	.57
43 D 9369	2935	20-20	500	G	1.95	1.34	1.07	.80
43 D 9370	2937	30-30	500	H	2.25	1.56	1.25	.94
43 D 9371	2940	40-40	500	H	2.97	1.79	1.44	1.08
43 D 9372	2944	60-40	500	K	3.18	2.04	1.64	1.23

TRIPLE SECTION Av. shpg. wt., 1½ lbs.

43 D 9624	3426.4	40-40-250	150-150-25	C	2.16	1.95	1.80	1.62
43 D 9625	3432	80-40-20	150-150-25	B	1.92	1.05	.84	.63
43 D 9186	3437	40-20-20	150	M	1.65	.96	.77	.58
43 D 9187	3438	40-30-20	150	B	1.71	.98	.79	.59
43 D 9188	3440	40-40-40	150	B	1.80	1.03	.83	.62
43 D 9190	3442	50-50-50	150	B	2.07	1.09	.87	.65
43 D 9191	3443	60-40-20	150	B	1.89	1.03	.83	.62
43 D 9194	3450	200-100-60	150	H	3.15	1.65	1.32	.99
43 D 9627	3453	250-200-10	150	L	3.27	1.87	1.50	1.13
43 D 9184	3461.4	60-200-140	200-150-150	J	3.30	1.78	1.42	1.07
43 D 9700	3532	20-20-20	250	B	1.80	1.02	.82	.61
43 D 9177	3562	100-60-20	300-250-250	J	3.39	3.06	2.83	2.55
43 D 9614	3574.7	140-100-60	300-300-50	K	4.17	2.11	1.69	1.27
43 D 9803	3585.5	140-100-20	300	L	4.29	2.18	1.75	1.31
43 D 9615	3608.6	60-200-30	350-150-150	J	3.45	1.74	1.39	1.04
43 D 9811	3610	125-5-100	350-200-75	J	3.66	1.76	1.41	1.06
43 D 9812	3636	30-20-20	350-350-25	B	2.13	1.10	.88	.66
43 D 9616	3641	60-50-50	350	H	3.39	1.86	1.49	1.12
43 D 9820	3642	80-60-60	350	K	3.84	2.10	1.69	1.26
43 D 9306	3652	80-80-100	400-200-50	J	3.33	1.87	1.50	1.12
43 D 9618	3684	80-40-150	400-400-50	L	3.63	2.03	1.62	1.22
43 D 9822	3685	100-10-20	400-400-50	H	3.09	1.80	1.44	1.08
43 D 9163	3689.3	100-10-80	400-400-350	K	4.20	2.25	1.80	1.35
43 D 9823	3708.2	10-100-200	450-200-25	E	2.49	2.25	2.08	1.87
43 D 9619	3713.7	10-40-10	450-300-150	G	2.13	1.92	1.78	1.60
43 D 9158	3731	10-10-20	450-450-25	B	1.65	.99	.80	.60
43 D 9160	3739	20-20-20	450-450-25	D	2.10	1.17	.94	.70
43 D 9161	3744	40-40-20	450-450-25	H	2.70	1.68	1.34	1.01
43 D 9157	3757	80-20-100	450-450-50	K	3.30	1.91	1.53	1.15
43 D 9129	3776	10-10-10	450	B	1.80	1.06	.85	.64

Order from Your Nearest Allied Facility for Fastest Service

Twist-Prong Electrolytic Capacitors

SPRAGUE — THE MARK OF RELIABILITY

TWIST-PRONG CAPACITOR SIZE CHART

Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L	Code	Dia. x L
A	¾x2″	C	1x2½″	E	1x3½″	G	1⅜x2″	J	1⅜x3″	L	1⅜x4″		
B	1x2″	D	1x3″	F	1x4″	H	1⅜x2½″	K	1⅜x3½″	M	1x1½″		

TRIPLE SECTION (Cont'd) Av. shpg. wt., 1½ lbs.

Stock No.	Type TVL-	Capacity, μF	WVDC	Size	EACH 1-24	25-49	50-99	100-Up	Stock No.	Type TVL-	Capacity, μF	WVDC	Size	EACH 1-24	25-49	50-99	100-Up
43 D 9130	3778	15-15-10	450	D	2.07	1.16	.93	.70	43 D 9139	3789	60-20-20	450	J	3.18	1.83	1.46	1.10
43 D 9131	3779	20-10-10	450	D	2.01	1.16	.93	.70	43 D 9151	3793	80-40-20	450	J	3.72	2.15	1.72	1.29
43 D 9132	3780	20-20-20	450	G	2.49	1.48	1.18	.89	43 D 9315	3817	20-10-100	475-475-50	G	2.25	1.36	1.09	.82
43 D 9136	3785	40-40-10	450	H	2.85	1.73	1.39	1.04	43 D 9826	3816	40-80-10	475-450-450	L	3.78	2.14	1.72	1.29
43 D 9137	3786	40-40-20	450	H	3.06	1.81	1.45	1.09	43 D 9124	3935	40-40-100	500-500-200	L	3.99	2.17	1.74	1.30
43 D 9138	3787	40-40-40	450	J	3.39	1.99	1.59	1.20	43 D 9122	3956	30-20-20	500	J	2.91	1.78	1.42	1.07

FOUR SECTION Av. shpg. wt., 1½ lbs.

43 D 9091	4414	60-40-20-200	150-150-150-10	G	2.37	1.36	1.09	.81	43 D 9722	4579	40-40-20-10	300	G	3.15	1.54	1.23	.92
43 D 9087	4431	80-40-40-20	150-150-150-25	G	2.10	1.89	1.75	1.58	43 D 9050	4670	80-40-30-40	400-400-400-25	K	4.11	2.21	1.77	1.33
43 D 9097	4440	250-200-10-25	150-150-150-50	J	3.69	3.33	3.08	2.78	43 D 9875	4671.2	80-40-10-100	400-400-400-200	L	4.38	2.30	1.84	1.38
43 D 9079	4441	40-40-40-30	150	G	2.28	2.06	1.90	1.71	43 D 9876	4672	80-40-30-4	400-400-400-350	L	4.08	2.19	1.88	1.32
43 D 9828	4450	200-200-60-30	175	K	3.84	2.34	1.87	1.41	43 D 9878	4720	40-40-30-30	450-450-350-350	L	4.08	2.11	1.69	1.26
43 D 9831	4559	10-200-140-30	300-150-150-150	K	3.51	3.16	2.93	2.64	43 D 9042	4724.2	20-20-20-20	450-450-450-25	G	2.85	1.57	1.25	.94
43 D 9072	4561	100-10-200-30	300-300-150-150	K	4.08	1.98	1.58	1.19	43 D 9043	4734	40-30-10-20	450-450-450-25	J	3.09	1.76	1.41	1.06
43 D 9833	4574	150-30-30-150	300-300-300-50	L	4.20	2.12	1.70	1.27	43 D 9046	4739	40-40-40-40	450-450-450-25	J	3.78	2.10	1.68	1.26
43 D 9853	4605.3	140-100-20-20	350-300-300-300	L	5.31	2.48	1.99	1.49	43 D 9031	4760	10-10-10-10	450	G	2.31	1.39	1.11	.84
43 D 9866	4605.5	160-60-10-4	350-300-300-300	K	4.35	2.29	1.83	1.38	43 D 9034	4769.4	30-30-20-20	450	J	3.60	1.91	1.53	1.15
43 D 9867	4608	60-20-80-100	350-350-150-50	J	3.39	3.06	2.83	2.55	43 D 9036	4773	40-40-20-20	450	H	3.84	2.04	1.63	1.22
43 D 9066	4609	60-40-60-20	350-350-200-150	J	3.48	1.81	1.41	1.08	43 D 9037	4774	40-40-30-30	450	L	4.17	2.27	1.82	1.36
43 D 9869	4631	70-40-10-50	350-350-350-50	J	3.63	1.77	1.42	1.06	43 D 9038	4775	40-40-40-40	450	K	4.44	2.41	1.93	1.45
43 D 9872	4635.3	40-40-40-40	350	L	3.84	1.99	1.60	1.20	43 D 9887	4801	20-80-20-10	475-300-300-300	K	3.45	1.78	1.43	1.07
43 D 9055	4635.7	80-60-40-20	350	K	4.41	2.18	1.75	1.32	43 D 9896	4805.2	10-80-40-100	475-400-400-50	L	3.99	2.17	1.74	1.30
43 D 9052	4654	40-80-100-25	400-350-200-50	K	4.11	2.06	1.65	1.24	43 D 9023	4832	20-20-10-10	475	H	3.00	1.66	1.33	1.00
43 D 9873	4666.2	100-10-20-20	400-400-350-50	J	5.67	2.01	1.61	1.21	43 D 9024	4834	20-20-20-20	475	H	3.51	1.85	1.48	1.11
43 D 9033	4763	20-20-20-20	450	H	3.24	1.73	1.39	1.04	43 D 9025	4840	40-20-10-10	475	H	3.51	1.85	1.48	1.11
									43 D 9020	4940	10-10-10-10	500	G	2.40	1.51	1.21	.91

TYPE 600D 125°C EXTRALYTIC HIGH-GRADE ALUMINUM ELECTROLYTICS

SPRAGUE EXTRALYTIC

High-grade aluminum electrolytics. Operating temperature range from —55°C to +125°C and voltage ratings up to 150 VDC. Approximate electrical requirements of MIL-C-39018. Moreover units are available for operation at 125°C at higher voltages than shown in military spec. Dual-rated, may be employed for either 85°C or 125°C operation. Storage capacity, five years minimum. Withstand 200-hour life test at either temperature and corresponding working voltage. Withstand vibration from 10-2000 cycles at 15g without internal damage. Tolerance is —10% and +75% up to 75 WVDC; —10% and +50% for 100 VDC up. All types include insulating sleeve. Sizes in chart for bare can only; add 1/64″ to dia. and 1/16″ to length, for insulating sleeve. Average shpg. wt., 3 oz.

PRICE AND SIZE LOCATOR

*Price, Size Code	Dia. x L., Inches	EACH 1-9	10-24	25-49	50-99	100-499	500-999	*Price, Size Code	Dia. x L., Inches	EACH 1-9	10-24	25-49	50-99	100-499	500-999
A	9/32x15/16	3.06	2.29	1.54	1.34	.97	.89	E	3/8x1 5/8	6.14	4.60	3.08	2.69	1.93	1.78
B	3/8x15/16	3.06	2.29	1.54	1.34	.97	.89	F	3/8x2 3/16	6.58	4.93	3.30	2.88	2.07	1.90
C	3/8x1 1/8	3.98	2.98	2.00	1.75	1.26	1.16	G	3/8x2 11/16	9.94	7.45	4.98	4.35	3.12	2.87
D	3/8x1 3/8	5.98	4.48	3.00	2.62	1.88	1.73								

Stock No.	Mfr's Type 600 D-	μF	WVDC@ 85° C	125° C	*
43 D 0813	127G007KD4	120	7	5	A
43 D 0815	227G007DD4	220	7	5	B
43 D 0818	277G007DE4	270	7	5	C
43 D 0819	397G007DG4	390	7	5	D
43 D 0963	567G007DJ4	560	7	5	E
43 D 0820	827G007DL4	820	7	5	F
43 D 0821	108G007DX4	1000	7	5	G
43 D 0823	107G010KD4	100	10	7	A
43 D 0824	187G010DE4	180	10	7	C
43 D 0825	227G010DE4	220	10	7	C
43 D 0826	337G010DG4	330	10	7	D
43 D 0827	477G010DJ4	470	10	7	E
43 D 0829	687G010DL4	680	10	7	F
43 D 0834	827G010DX4	820	10	7	G
43 D 0845	686G015KD4	68	15	10	A
43 D 0846	826G015KD4	82	15	10	A
43 D 0847	157G015DD4	150	15	10	B
43 D 0850	187G015DE4	180	15	10	C
43 D 0851	277G015DG4	270	15	10	D
43 D 0969	397G015DJ4	390	15	10	E
43 D 0892	567G015DL4	560	15	10	F
43 D 0893	687G015DX4	680	15	10	G
43 D 0895	686G020KD4	68	20	15	A
43 D 0972	107G020DD4	100	20	15	B
43 D 0973	147G020DE4	140	20	15	C
43 D 0974	227G020DG4	220	20	15	D
43 D 0975	297G020DJ4	290	20	15	E
43 D 0976	447G020DL4	440	20	15	F
43 D 0896	607G020DX4	600	20	15	G
43 D 0897	336G030DK4	33	30	20	A
43 D 0898	476G030KD4	47	30	20	A
43 D 0899	826G030DD4	82	30	20	B

Stock No.	Mfr's Type 600 D-	μF	WVDC@ 85° C	125° C	*
43 D 0900	107G030DE4	100	30	20	C
43 D 0902	127G030DG4	120	30	20	D
43 D 0903	157G030DG4	150	30	20	D
43 D 0904	227G030DJ4	220	30	20	E
43 D 0906	337G030DL4	330	30	20	F
43 D 0911	397G030DX4	390	30	20	G
43 D 0912	306G040KD4	30	40	30	A
43 D 0984	506G040DD4	50	40	30	B
43 D 0985	706G040DE4	70	40	30	C
43 D 0986	107G040DG4	100	40	30	D
43 D 0987	147G040DJ4	140	40	30	E
43 D 0988	217G040DL4	210	40	30	F
43 D 0914	287G040DX4	280	40	30	G
43 D 0918	226G050KD4	22	50	40	A
43 D 0922	336G050DD4	33	50	40	B
43 D 0925	476G050DE4	47	50	40	C
43 D 0926	566G050DG4	56	50	40	D
43 D 0933	686G050DG4	68	50	40	D
43 D 0993	107G050DJ4	100	50	40	E
43 D 0994	157G050DL4	150	50	40	F
43 D 0935	187G050DX4	180	50	40	G
43 D 0936	176G060KD4	17	60	50	A
43 D 0996	256G060DD4	25	60	50	B
43 D 0997	406G060DE4	40	60	50	C
43 D 0998	606G060DG4	60	60	50	D
43 D 0999	806G060DJ4	80	60	50	E
43 D 1031	127G060DL4	120	60	50	F
43 D 0940	167G060DX4	160	60	50	G
43 D 0941	126F075KD4	12	75	60	A
43 D 0942	226F075DD4	22	75	60	B
43 D 0943	336F075DE4	33	75	60	C
43 D 0944	476F075DG4	47	75	60	D

Stock No.	Mfr's Type 600 D-	μF	WVDC@ 85° C	125° C	*
43 D 0945	686F075DJ4	68	75	60	E
43 D 0946	107F075DL4	100	75	60	F
43 D 0947	127F075DX4	120	75	60	G
43 D 0948	825F100KD4	8.2	100	75	A
43 D 0949	126F100DD4	12	100	75	B
43 D 0950	156F100DE4	15	100	75	C
43 D 0951	226F100DG4	22	100	75	D
43 D 0952	336F100DJ4	33	100	75	E
43 D 0953	476F100DL4	47	100	75	F
43 D 0954	686F100DX4	68	100	75	G
43 D 0955	475F150KD4	4.7	150	100	A
43 D 0957	565F150KD4	5.6	150	100	A
43 D 0960	825F150DD4	8.2	150	100	B
43 D 1049	126F150DE4	12	150	100	C
43 D 1050	186F150DG4	18	150	100	D
43 D 1000	226F150DJ4	22	150	100	E
43 D 1002	336F150DL4	33	150	100	F
43 D 1011	566F150DX4	56	150	100	G
43 D 1012	405F200KD4	4	200	150	A
43 D 1055	605F200DD4	6	200	150	B
43 D 1056	805F200DE4	8	200	150	C
43 D 1057	136F200DG4	13	200	150	D
43 D 1060	176F200DJ4	17	200	150	E
43 D 1061	266F200DL4	26	200	150	F
43 D 1015	396F200DX4	39	200	150	G
43 D 1016	335F250KD4	3.3	250	200	A
43 D 1017	565F250DD4	5.6	250	200	B
43 D 1039	685F250DX4	6.8	250	200	C
43 D 1052	106F250DG4	10	250	200	D
43 D 1058	126F250DJ4	12	250	200	E
43 D 1059	226F250DL4	22	250	200	F
43 D 1064	276F250DX4	27	250	200	G

Subminiature and Storage Capacitors

TE "LITTL-LYTIC" (30D) SUBMINIATURE ELECTROLYTICS

- For All Types of Transistorized Equipment
- Dependable All-Welded Construction
- Plastic Sleeve for Corrosion Resistance
- Hermetically Sealed and Metal-Enclosed

*Code	Size	*Code	Size
BA	17/64x35/64"	DC	25/64x55/64"
BB	17/64x47/64"	DD	25/64x63/64"
CB	21/64x47/64"	DF	25/64x119/64"
CC	21/64x55/64"	DH	25/64x135/64"
DB	25/64x47/64"		

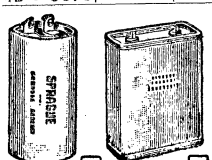
Ultra-small dependable 30D Series subminiature electrolytic capacitors provide high reliability for transistorized and printed circuit applications. Ideal for radios, hearing aids, wireless microphones and a variety of other electronic equipment. Hermetically-sealed and metal enclosed, with clear plastic outer insulating sleeves for corrosion resistance in hot, humid conditions. All-welded construction—no pressure joints to cause open or intermittent circuits. Will withstand temperatures of up to 85° C (185° F) without derating. Leakage current is extremely low, with long shelf life. All dimensions are given in sequence of diameter by length. Av. shpg. wt., 2 oz.

IMPORTANT ORDERING INFORMATION

If a capacitance you require is not listed in the voltage desired, go to the higher voltage where the capacitance is listed. For example: 1, 2, 3 and 4 μF capacitors are not stocked at less than 25 WVDC, because all voltages below this are the same size and approximately the same price as the 25 WVDC.

Stock No.	Mfr's Type	μF	WV DC	*	EACH 1-24	25-49	50-99	100-249	250-499	500-Up
43 D 1779	TE1200	1	25	BA	.48	.35	.28	.22	.18	.17
43 D 1784	TE1300	1	50	BA	.48	.35	.28	.22	.18	.17
43 D 1026	TE1400	1	100	BA	.51	.39	.30	.24	.20	.19
43 D 1797	TE1500	1	150	BA	.51	.39	.30	.24	.20	.19
43 D 1780	TE1201	2	25	BA	.48	.35	.28	.22	.18	.17
43 D 6642	TE1301	2	50	BA	.48	.35	.28	.22	.18	.17
43 D 1792	TE1401	2	100	BA	.54	.40	.31	.25	.21	.20
43 D 6640	TE1402	3	100	CB	.60	.44	.35	.28	.23	.22
43 D 1798	TE1501	2	150	BA	.54	.40	.31	.25	.21	.20
43 D 1021	TE1201.1	3	25	BA	.48	.35	.28	.22	.18	.17
43 D 1785	TE1302	3	50	BA	.48	.35	.28	.22	.18	.17
43 D 1029	TE1502	3	150	CB	.60	.44	.35	.28	.23	.22
43 D 1022	TE1201.2	4	25	BA	.48	.35	.28	.22	.18	.17
43 D 6643	TE1302.1	4	50	BA	.48	.35	.28	.22	.18	.17
43 D 1794	TE1403	4	100	CB	.60	.44	.35	.28	.23	.22
43 D 1799	TE1503	4	150	CC	.66	.50	.39	.31	.26	.25
43 D 1739	TE1052.2	5	3	BA	.48	.35	.28	.22	.18	.17
43 D 6034	TE1084	5	6	BA	.48	.35	.28	.22	.18	.17
43 D 6044	TE1127	5	12	BA	.48	.35	.28	.22	.18	.17
43 D 6624	TE1152	5	15	BA	.48	.35	.28	.22	.18	.17
43 D 6046	TE1202	5	25	BA	.48	.35	.28	.22	.18	.17
43 D 1786	TE1303	5	50	BB	.48	.35	.28	.22	.18	.17
43 D 6646	TE1404	5	100	CC	.66	.50	.39	.31	.26	.25
43 D 6651	TE1504	5	150	CC	.66	.50	.39	.31	.26	.25
43 D 1750	TE1085	6	6	BA	.48	.35	.28	.22	.18	.17
43 D 1777	TE1153	6	15	BA	.48	.35	.28	.22	.18	.17
43 D 6047	TE1203	6	25	BA	.48	.35	.28	.22	.18	.17
43 D 1025	TE1303.1	6	50	BB	.48	.35	.28	.22	.18	.17
43 D 1795	TE1405	6	100	CC	.66	.50	.39	.31	.26	.25
43 D 1800	TE1505	6	150	DC	.69	.52	.41	.33	.27	.26
43 D 6648	TE1505.5	7	150	DC	.69	.52	.41	.33	.27	.26
43 D 6035	TE1086	8	6	BA	.48	.35	.28	.22	.18	.17
43 D 1018	TE1154	8	15	BA	.48	.35	.28	.22	.18	.17
43 D 1023	TE1203.5	8	25	BA	.48	.35	.28	.22	.18	.17
43 D 1788	TE1303.3	8	50	BB	.48	.35	.28	.22	.18	.17
43 D 1027	TE1406	8	100	DC	.69	.52	.41	.33	.27	.26
43 D 1801	TE1506	8	150	DC	.69	.52	.41	.33	.27	.26
43 D 1742	TE1053	10	3	BA	.48	.35	.28	.22	.18	.17
43 D 6036	TE1087	10	6	BA	.48	.35	.28	.22	.18	.17
43 D 6045	TE1128	10	12	BA	.48	.35	.28	.22	.18	.17
43 D 6625	TE1155	10	15	BA	.48	.35	.28	.22	.18	.17
43 D 6048	TE1204	10	25	BB	.48	.35	.28	.22	.18	.17
43 D 1789	TE1304	10	50	CB	.54	.40	.31	.25	.21	.20
43 D 6647	TE1407	10	100	DC	.69	.52	.41	.33	.27	.26
43 D 6652	TE1507	10	150	DD	.72	.54	.42	.34	.28	.27
43 D 6037	TE1089	15	6	BA	.48	.35	.28	.22	.18	.17
43 D 1763	TE1129	15	12	BA	.48	.35	.28	.22	.18	.17
43 D 6626	TE1156	15	15	BB	.48	.35	.28	.22	.18	.17
43 D 6049	TE1205	15	25	BB	.48	.35	.28	.22	.18	.17
43 D 1790	TE1304.2	15	50	CB	.54	.40	.31	.25	.21	.20
43 D 1028	TE1408	15	100	DD	.72	.54	.42	.34	.28	.27
43 D 6650	TE1508.1	15	150	DF	.75	.57	.44	.35	.29	.28
43 D 1751	TE1090	20	6	BA	.48	.35	.28	.22	.18	.17
43 D 1013	TE1130	20	12	BB	.48	.35	.28	.22	.18	.17
43 D 1019	TE1157	20	15	BB	.48	.35	.28	.22	.18	.17
43 D 6644	TE1305	20	50	CC	.66	.50	.39	.31	.26	.25
43 D 6676	TE1509	20	150	DH	.78	.59	.46	.37	.30	.29
43 D 6649	TE1409	20	100	DF	.75	.57	.44	.35	.29	.28
43 D 6028	TE1055	25	3	BA	.48	.35	.28	.22	.18	.17
43 D 6038	TE1091	25	6	BB	.48	.35	.28	.22	.18	.17
43 D 1765	TE1131	25	12	BB	.48	.35	.28	.22	.18	.17
43 D 6628	TE1157.1	25	15	BB	.48	.35	.28	.22	.18	.17
43 D 6637	TE1207	25	25	CB	.54	.40	.31	.25	.21	.20
43 D 6677	TE1305.5	25	50	CC	.66	.50	.39	.31	.26	.25
43 D 6678	TE1410	25	100	DH	.78	.57	.46	.37	.30	.29
43 D 6629	TE1158	30	15	CB	.54	.40	.31	.25	.21	.20
43 D 6679	TE1207.5	30	25	CB	.54	.40	.31	.25	.21	.20
43 D 6680	TE1411	30	100	DH	.78	.59	.46	.37	.30	.29
43 D 1752	TE1093	35	6	BB	.48	.35	.28	.22	.18	.17
43 D 6630	TE1159	35	15	CB	.54	.40	.31	.25	.21	.20
43 D 6638	TE1208	35	25	CB	.54	.40	.31	.25	.21	.20
43 D 6662	TE1306	35	50	DC	.69	.52	.41	.33	.27	.26
43 D 1006	TE1095	40	6	BB	.48	.35	.28	.22	.18	.17
43 D 1747	TE1058	50	3	BB	.48	.35	.28	.22	.18	.17
43 D 1767	TE1133	50	12	BB	.54	.40	.31	.25	.21	.20
43 D 6631	TE1160	50	15	CB	.54	.40	.31	.25	.21	.20
43 D 6639	TE1209	50	25	CC	.66	.50	.39	.31	.26	.25
43 D 6645	TE1307	50	50	DD	.72	.54	.42	.34	.28	.27
43 D 6653	TE1101.5	75	6	CB	.54	.40	.31	.25	.21	.20
43 D 1768	TE1134	75	12	CC	.66	.50	.39	.31	.26	.25
43 D 1020	TE1161	75	15	CC	.66	.50	.39	.31	.26	.25
43 D 1024	TE1210	75	25	DC	.69	.52	.41	.33	.27	.26
43 D 6681	TE1308	75	50	DF	.75	.57	.44	.35	.29	.28
43 D 1749	TE1059.5	100	3	CB	.54	.40	.31	.25	.21	.20
43 D 1753	TE1102	100	6	CC	.66	.50	.39	.31	.26	.25
43 D 1769	TE1135	100	12	CC	.69	.52	.41	.33	.27	.26
43 D 6633	TE1162	100	15	DC	.69	.52	.41	.33	.27	.26
43 D 6641	TE1211	100	25	DD	.72	.54	.42	.34	.28	.27
43 D 6682	TE1309	100	50	DH	.78	.59	.46	.37	.30	.29
43 D 1003	TE1061	150	3	CC	.66	.50	.39	.31	.26	.25
43 D 1754	TE1103	150	6	DC	.69	.52	.41	.33	.27	.26
43 D 6655	TE1136	150	12	DD	.72	.54	.42	.34	.28	.27
43 D 6634	TE1163	150	15	DD	.72	.54	.42	.34	.28	.27
43 D 6684	TE1212	150	25	DF	.75	.57	.44	.35	.29	.28
43 D 6654	TE1064	200	3	CC	.66	.50	.39	.31	.26	.25
43 D 1007	TE1104	200	6	DC	.69	.52	.41	.33	.27	.26
43 D 1771	TE1137	200	12	DF	.75	.57	.44	.35	.29	.28
43 D 6635	TE1164	200	15	DF	.75	.57	.44	.35	.29	.28
43 D 6685	TE1213	200	25	DH	.78	.59	.46	.37	.30	.29
43 D 1004	TE1065	250	3	DC	.69	.52	.41	.33	.27	.26
43 D 1008	TE1105	250	6	DD	.72	.54	.42	.34	.28	.27
43 D 1772	TE1138	250	12	DF	.75	.57	.44	.35	.29	.28
43 D 6657	TE1165	260	15	DF	.75	.57	.44	.35	.29	.28
43 D 6664	TE1066.1	290	3	DC	.69	.52	.41	.33	.27	.26
43 D 6665	TE1139	290	12	DF	.75	.57	.44	.35	.29	.28
43 D 6661	TE1106	300	6	DF	.72	.54	.42	.34	.28	.27
43 D 6686	TE1166	350	15	DH	.78	.59	.46	.37	.30	.29
43 D 6687	TE1067.1	390	3	DD	.72	.54	.42	.34	.28	.27
43 D 6688	TE1140	390	12	DH	.78	.59	.46	.37	.30	.29
43 D 6689	TE1107	400	6	DF	.75	.57	.44	.35	.29	.28
43 D 6658	TE1068	500	3	DF	.75	.57	.44	.35	.29	.28
43 D 6690	TE1108	560	6	DH	.78	.59	.46	.37	.30	.29
43 D 6691	TE1069	590	3	DF	.75	.57	.44	.35	.29	.28
43 D 6693	TE1070	790	3	DH	.78	.59	.46	.37	.30	.29

ENERGY-STORAGE CAPACITORS FOR PHOTOFLASH AND LASER APPLICATIONS



A B

Designed expressly for photoflash and laser applications. Provide very low leakage for dry-battery or AC-operated power supplies. Miniature size capacitors are extremely lightweight and dependable in performance.

A Type FF-1 525-μF Capacitor. Highly stable film formation ensures long life. Weighs only 11 oz. Working voltage, 450 VDC. Nominal rating, 53 watt-seconds. Shpg. wt., ¾ lb.

43 D 5726 ..... 13.50

B Type PQ Capacitors. Hermetically sealed, oil-impregnated, and oil-filled. Have high insulation resistance. Combine smallest possible construction with maximum operational dependability.

Stock No.	Type PQ-	μF	DC Peak Volts	Watt/ Sec.	Size TxWxH"	Wt., Lbs.	EACH
43 D 5730	2510	10	2500	31	2¼x3¾x4½"	1¾	15.00
43 D 5731	2515	15	2500	47	3 3/16x3¾x4¾"	2½	19.86
43 D 5734	2525	25	2500	78	4 5/16x3¾x5 1/8"	4¼	28.50
43 D 5733	2535	35	2500	109	4 5/16x3¾x7"	6	34.80
43 D 5724	315	15	3000	67	3 3/16x3¾x4¾"	3	22.11
43 D 5728	425	25	4000	200	4 5/16x3¾x9 5/16"	7¼	44.01

Specify Stock No., Mfr's Type and Capacitance When Ordering

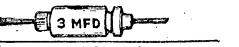
Miniature Aluminum Electrolytics

TYPE 500D MINIATURE METAL-CASE CAPACITORS

SPRAGUE
THE MARK OF RELIABILITY

- For All Types of Transistorized Equipment
- Dependable All-Welded Construction
- Plastic Sleeve for Corrosion Resistance
- Hermetically Sealed and Metal-Enclosed

Ultra-small dependable 500D Series miniature electrolytic capacitors provide high reliability for transistorized and printed circuit applications. Ideal for radios, hearing aids, wireless microphones and a variety of other electronic equipment. Hermetically-sealed and metal enclosed, with clear plastic outer insulating sleeves for corrosion resistance in hot, humid conditions. All-welded construction—no pressure joints to cause open or intermittent circuits. Will withstand temperatures of up to 85° C (185° F) without derating. Leakage current is extremely low, with long shelf life. All dimensions are given in sequence of diameter by length. Av. shpg. wt., 2 oz.



*Code	Size	*Code	Size
BA	17/64 x 33/64"	DD	25/64 x 61/64"
BB	17/64 x 45/64"	DF	25/64 x 117/64"
CB	21/64 x 45/64"	DH	25/64 x 133/64"
CC	21/64 x 53/64"	EF	29/64 x 117/64"
DB	25/64 x 45/64"	EH	29/64 x 133/64"
DC	25/64 x 53/64"		

Stock No.	Mfr's Type 500D-	µF	WV DC	*	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 2850	105G003BA7	1	3	BA	.39	.29	.23	.18	.15	.14
43 D 2851	105G006BA7	1	6	BA	.39	.29	.23	.18	.15	.14
43 D 2852	105G012BA7	1	12	BA	.39	.29	.23	.18	.15	.14
43 D 2853	105G016BA7	1	16	BA	.39	.29	.23	.18	.15	.14
43 D 2854	105G025BA7	1	25	BA	.39	.29	.23	.18	.15	.14
43 D 2855	105G050BA7	1	50	BA	.36	.27	.21	.17	.14	.13
43 D 2856	105F100BA7	1	100	BA	.45	.34	.27	.21	.18	.17
43 D 2857	105F150BA7	1	150	BA	.45	.33	.26	.21	.17	.16
43 D 2858	205G003BA7	2	3	BA	.39	.29	.23	.18	.15	.14
43 D 2859	205G006BA7	2	6	BA	.39	.29	.23	.18	.15	.14
43 D 2860	205G012BA7	2	12	BA	.39	.29	.23	.18	.15	.14
43 D 2861	205G016BA7	2	16	BA	.39	.29	.23	.18	.15	.14
43 D 2862	205G025BA7	2	25	BA	.36	.27	.21	.17	.14	.13
43 D 2863	205G050BA7	2	50	BA	.43	.30	.24	.19	.16	.15
43 D 2864	205F100BB7	2	100	BB	.48	.36	.28	.22	.18	.17
43 D 2865	205F150BB7	2	150	BB	.45	.34	.27	.21	.18	.17
43 D 2866	305G003BA7	3	3	BA	.39	.29	.23	.18	.15	.14
43 D 2867	305G006BA7	3	6	BA	.39	.29	.23	.18	.15	.14
43 D 2868	305G012BA7	3	12	BA	.39	.29	.23	.18	.15	.14
43 D 2869	305G016BA7	3	16	BA	.39	.29	.23	.18	.15	.14
43 D 2870	305G025BA7	3	25	BA	.42	.30	.24	.19	.16	.15
43 D 2871	305G050BA7	3	50	BA	.39	.29	.23	.18	.15	.14
43 D 2872	305F100CB7	3	100	CB	.51	.37	.29	.23	.19	.18
43 D 2873	305F150CB7	3	150	CB	.48	.36	.28	.22	.18	.17
43 D 2874	405G003BA7	4	3	BA	.39	.29	.23	.18	.15	.14
43 D 2875	405G006BA7	4	6	BA	.39	.29	.23	.18	.15	.14
43 D 2876	405G012BA7	4	12	BA	.39	.29	.23	.18	.15	.14
43 D 2877	405G016BA7	4	16	BA	.39	.29	.23	.18	.15	.14
43 D 2878	405G025BA7	4	25	BA	.42	.30	.24	.19	.16	.15
43 D 2879	405G050BA7	4	50	BA	.42	.32	.25	.20	.16	.15
43 D 2880	405F100CB7	4	100	CB	.54	.40	.31	.25	.21	.20
43 D 2881	405F150CC7	4	150	CC	.51	.38	.29	.24	.19	.18
43 D 2882	505G003BA7	5	3	BA	.39	.29	.23	.18	.15	.14
43 D 2883	505G006BA7	5	6	BA	.39	.29	.23	.18	.15	.14
43 D 2884	505G012BA7	5	12	BA	.39	.29	.23	.18	.15	.14
43 D 2885	505G016BA7	5	16	BA	.39	.29	.23	.18	.15	.14
43 D 2886	505G025BA7	5	25	BA	.42	.30	.24	.19	.16	.15
43 D 2887	505G050BA7	5	50	BA	.42	.32	.25	.20	.16	.15
43 D 2888	505F100CC7	5	100	CC	.54	.41	.32	.26	.21	.20
43 D 2890	505F150CC7	5	150	CC	.54	.40	.31	.25	.21	.20
43 D 2891	605G003BA7	6	3	BA	.39	.29	.23	.18	.15	.14
43 D 2892	605G006BA7	6	6	BA	.39	.29	.23	.18	.15	.14
43 D 2893	605G012BA7	6	12	BA	.36	.27	.21	.17	.14	.13
43 D 2894	605G016BA7	6	16	BA	.42	.30	.24	.19	.16	.15
43 D 2895	605G025BA7	6	25	BA	.39	.29	.23	.18	.15	.14
43 D 2896	605G050BB7	6	50	BB	.42	.30	.24	.19	.16	.15
43 D 2897	605F100CC7	6	100	CC	.57	.42	.33	.27	.22	.21
43 D 2898	605F150DC7	6	150	DC	.54	.41	.32	.26	.21	.20
43 D 2899	705F150DC7	7	150	DC	.57	.42	.33	.27	.22	.21
43 D 2900	805G003BA7	8	3	BA	.39	.29	.23	.18	.15	.14
43 D 2901	805G006BA7	8	6	BA	.36	.27	.21	.17	.14	.13
43 D 2902	805G012BA7	8	12	BA	.42	.30	.24	.19	.16	.15
43 D 2903	805G016BA7	8	16	BA	.42	.30	.24	.19	.16	.15
43 D 2904	805G025BA7	8	25	BA	.42	.32	.25	.20	.16	.15
43 D 2905	805G050BB7	8	50	BB	.42	.32	.25	.20	.16	.15
43 D 2906	805F100DC7	8	100	DC	.60	.44	.34	.27	.23	.22
43 D 2907	805F150DC7	8	150	DC	.57	.42	.33	.27	.22	.21
43 D 2908	106G003BA7	10	3	BA	.36	.27	.21	.17	.14	.13
43 D 2909	106G006BA7	10	6	BA	.42	.30	.24	.19	.16	.15
43 D 2910	106G012BA7	10	12	BA	.42	.30	.24	.19	.16	.15
43 D 2911	106G016BA7	10	16	BA	.39	.29	.23	.18	.15	.14
43 D 2912	106G025BB7	10	25	BB	.42	.30	.24	.19	.16	.15
43 D 2913	106G050CB7	10	50	CB	.45	.34	.27	.21	.18	.17
43 D 2914	106F100DC7	10	100	DC	.60	.45	.35	.28	.23	.22
43 D 2915	106F150DD7	10	150	DD	.60	.44	.37	.27	.23	.22
43 D 2916	156G003BA7	15	3	BA	.42	.30	.24	.19	.16	.15
43 D 2917	156G006BA7	15	6	BA	.42	.30	.24	.19	.16	.15
43 D 2918	156G012BA7	15	12	BA	.39	.29	.23	.18	.15	.14
43 D 2919	156G016BA7	15	16	BA	.42	.32	.25	.20	.16	.15
43 D 2920	156G025BB7	15	25	BB	.42	.32	.25	.20	.16	.15
43 D 2921	156G050CB7	15	50	CB	.45	.33	.26	.21	.17	.16
43 D 2922	156F100DD7	15	100	DD	.63	.46	.36	.29	.24	.23
43 D 2923	156F150DF7	15	150	DF	.60	.45	.35	.28	.23	.22
43 D 2924	206G003BA7	20	3	BA	.42	.30	.24	.19	.16	.15
43 D 2925	206G006BA7	20	6	BA	.39	.29	.23	.18	.15	.14
43 D 2926	206G012BB7	20	12	BB	.42	.32	.25	.20	.16	.15
43 D 2927	206G016BB7	20	16	BB	.42	.30	.24	.19	.16	.15
43 D 2928	206G050CC7	20	50	CC	.45	.34	.27	.21	.18	.17
43 D 2929	206F100DF7	20	100	DF	.63	.48	.37	.30	.25	.24
43 D 2930	206F150DH7	20	150	DH	.63	.46	.36	.29	.24	.23
43 D 2931	256G003BA7	25	3	BA	.42	.30	.24	.19	.16	.15
43 D 2932	256G006BB7	25	6	BB	.42	.32	.25	.20	.16	.15
43 D 2933	256G012BB7	25	12	BB	.42	.30	.24	.19	.16	.15
43 D 2934	256G016BB7	25	16	BB	.45	.33	.26	.21	.17	.16
43 D 2935	256G025CB7	25	25	CB	.45	.33	.26	.21	.17	.16
43 D 2936	256G050CC7	25	50	CC	.51	.37	.29	.23	.19	.18
43 D 2937	256F100DH7	25	100	DH	.75	.57	.44	.35	.29	.28
43 D 2938	306G003BA7	30	3	BA	.39	.29	.23	.18	.15	.14
43 D 2939	306G012BB7	30	12	BB	.45	.33	.26	.21	.17	.16
43 D 2940	306G016CB7	30	16	CB	.42	.32	.25	.20	.16	.16
43 D 2941	306G025CB7	30	25	CB	.48	.36	.28	.22	.18	.17
43 D 2942	306F100DH7	30	100	DH	.75	.57	.44	.35	.29	.28
43 D 2943	356G006BB7	35	6	BB	.42	.30	.24	.19	.16	.15
43 D 2944	356G016CB7	35	16	CB	.45	.34	.27	.21	.18	.17
43 D 2945	356G025CB7	35	25	CB	.48	.36	.28	.22	.18	.17
43 D 2946	356G050DC7	35	50	DC	.48	.36	.28	.22	.18	.17
43 D 2947	506G003BB7	50	3	BB	.42	.31	.24	.19	.16	.15
43 D 2948	506G006BB7	50	6	BB	.54	.41	.32	.26	.21	.20
43 D 2949	506G012CB7	50	12	CB	.54	.41	.32	.26	.21	.20
43 D 2950	506G016CB7	50	16	CB	.54	.40	.31	.25	.21	.20
43 D 2951	506G025CC7	50	25	CC	.39	.29	.23	.18	.15	.14
43 D 2952	506G050DD7	50	50	DD	.39	.29	.23	.18	.15	.14
43 D 2953	606G012CB7	60	12	CB	.45	.33	.26	.21	.17	.16
43 D 2954	656G003BB7	65	3	BB	.45	.33	.26	.21	.17	.16
43 D 2955	756G003CB7	75	3	CB	.42	.32	.25	.20	.16	.15
43 D 2956	756G006CB7	75	6	CB	.45	.34	.27	.21	.18	.17
43 D 2957	756G012CC7	75	12	CC	.48	.36	.28	.22	.18	.17
43 D 2958	756G016CC7	75	16	CC	.45	.34	.27	.21	.18	.17
43 D 2959	756G025DC7	75	25	DC	.54	.40	.31	.25	.21	.20
43 D 2960	756G050DF7	75	50	DF	.54	.41	.32	.26	.21	.20
43 D 2961	856G016DB7	85	16	DB	.51	.37	.29	.23	.19	.18
43 D 2962	906G006CB7	90	6	CB	.45	.33	.26	.21	.17	.16
43 D 2963	906G012DB7	90	12	DB	.48	.36	.28	.22	.18	.17
43 D 2964	906G016CC7	90	16	CC	.51	.37	.29	.23	.19	.18
43 D 2965	107G003CB7	100	3	CB	.45	.34	.27	.21	.18	.17
43 D 2966	107G006CC7	100	6	CC	.48	.36	.28	.22	.18	.17
43 D 2967	107G012CC7	100	12	CC	.45	.34	.27	.21	.18	.17
43 D 2968	107G016DC7	100	16	DC	.48	.36	.28	.22	.18	.17
43 D 2969	107G025DD7	100	25	DD	.51	.38	.30	.24	.20	.19
43 D 2970	107G050DH7	100	50	DH	.60	.45	.35	.28	.23	.22
43 D 2971	137G003CB7	130	3	CB	.45	.34	.27	.21	.18	.17
43 D 2972	137G016DC7	130	16	DC	.51	.37	.29	.23	.19	.18
43 D 2973	147G006CC7	140	6	CC	.51	.37	.29	.23	.19	.18
43 D 2974	147G012DC7	140	12	DC	.51	.37	.29	.23	.19	.18
43 D 2975	157G003CC7	150	3	CC	.48	.36	.28	.22	.18	.17
43 D 2987	157G006DC7	150	6	DC	.51	.37	.29	.23	.19	.18
43 D 2988	157G012DD7	150	12	DD	.48	.36	.28	.22	.18	.17
43 D 2989	157G016DD7	150	16	DD	.51	.37	.29	.23	.19	.18
43 D 2990	157G025DF7	150	25	DF	.54	.41	.32	.26	.21	.20
43 D 2991	187G016DD7	180	16	DD	.57	.42	.33	.27	.22	.21
43 D 2992	197G012DD7	190	12	DD	.51	.38	.30	.24	.20	.19
43 D 2993	207G003CC7	200	3	CC	.45	.34	.27	.21	.18	.17
43 D 2994	207G006DC7	200	6	DC	.48	.36	.28	.22	.18	.17
43 D 2995	207G012DF7	200	12	DF	.51	.37	.29	.23	.19	.18
43 D 2996	207G016DF7	200	16	DF	.54	.41	.32	.26	.21	.20
43 D 2997	207G025DH7	200	25	DH	.60	.45	.35	.28	.23	.22
43 D 3002	257G003DC7	250	3	DC	.51	.37	.29	.23	.19	.18
43 D 3003	257G006DD7	250	6	DD	.51	.37	.29	.23	.19	.18
43 D 3004	257G012DF7	250	12	DF	.57	.42	.33	.27	.22	.21
43 D 3005	257G016DF7	250	16	DF	.63	.46	.36	.29	.24	.23
43 D 3006	297G012DF7	290	12	DF	.54	.41	.32	.26	.21	.20
43 D 3007	307G003DC7	300	3	DC	.48	.36	.28	.32	.18	.18
43 D 3008	307G006DD7	300	6	DD	.57	.42	.33	.27	.22	.21
43 D 3009	307G016DH7	300	16	DH	.60	.45	.35	.28	.23	.22
43 D 3010	357G016DH7	350	16	DH	.75	.57	.44	.35	.29	.28
43 D 3011	397G012DH7	390	12	DH	.60	.45	.35	.28	.23	.22
43 D 3012	407G003DD7	400	3	DD	.42	.31	.24	.19	.16	.15
43 D 3013	407G006DF7	400	6	DF	.54	.41	.32	.26	.21	.20
43 D 3014	507G003DF7	500	3	DF	.39	.29	.23	.18	.15	.14
43 D 3015	507G006DH7	500	6	DH	.60	.45	.35	.28	.23	.22
43 D 3016	607G003DF7	600	3	DF	.54	.41	.32	.26	.21	.20
43 D 3025	607G006DH7	600	6	DH	.75	.57	.44	.35	.29	.28
43 D 3035	807G003DH7	800	3	DH	.60	.45	.35	.28	.23	.22

Specify Stock No., Mfr's Type and Capacitance When Ordering

Quality Capacitors

SPRAGUE
THE MARK OF RELIABILITY

96P "VITAMIN Q" SUBMINIATURES

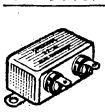
Hermetically-sealed glass-to-metal terminals. Style S-2—insulated section, plain metal case. Inserted tabs. "Vitamin Q" impregnated for high insulation resistance. Tolerance, ±10%. Exceed MIL-C-25. For ambient temperatures —55° to +125° C. Av. shpg. wt., 3 oz.

SIZE LOCATOR

*	Size	*	Size	*	Size	*	Size
A	3/16x3/4"	D	13/32x7/8"	G	13/32x13/8"	K	21/32x17/8"
B	7/32x3/4"	E	13/32x11/8"	H	9/16x13/8"	L	1x17/8"
C	5/16x7/8"	F	9/16x11/8"	J	9/16x17/8"	M	3/4x21/8"

Stock No.	Type 96P-	µF	WV DC	*	EACH 1-9	10-24	25-49	50-99	100-499	500-999
43 D 5911	10391	.01	100	A	2.12	1.59	1.19	.80	.64	.59
43 D 6763	22391	.022	100	A	2.29	1.72	1.29	.86	.69	.63
43 D 6765	47391	.047	100	C	2.16	1.62	1.22	.81	.65	.60
43 D 5926	10491	.1	100	C	2.24	1.68	1.26	.84	.67	.62
43 D 6767	22491	.22	100	E	2.34	1.75	1.32	.88	.71	.65
43 D 5925	47491	.47	100	F	2.92	2.19	1.65	1.10	.88	.81
43 D 5044	10591	1.0	100	J	3.39	2.55	1.91	1.27	1.02	.94
43 D 6771	10292	.001	200	B	2.10	1.58	1.18	.79	.63	.58
43 D 6775	47292	.0047	200	B	2.10	1.58	1.19	.79	.63	.58
43 D 5912	10392	.01	200	B	2.11	1.58	1.19	.79	.64	.58
43 D 5913	22392	.022	200	B	2.11	1.58	1.19	.79	.64	.58
43 D 5924	10492	.1	200	D	2.22	1.66	1.25	.83	.67	.61
43 D 5915	22492	.22	200	G	2.34	1.76	1.32	.88	.71	.65
43 D 5923	47492	.47	200	H	2.82	2.12	1.59	1.06	.85	.78
43 D 5916	10592	1.0	200	K	3.35	2.51	1.89	1.26	1.01	.92
43 D 5917	10394	.01	400	B	2.11	1.58	1.19	.79	.64	.58
43 D 5918	22394	.022	400	C	2.15	1.62	1.21	.81	.65	.60
43 D 5919	47394	.047	400	D	2.20	1.65	1.24	.83	.66	.61
43 D 5922	10494	.1	400	G	2.29	1.72	1.29	.86	.69	.63
43 D 5920	22494	.22	400	H	2.85	2.14	1.61	1.07	.86	.79
43 D 5049	10594	1.0	400	L	4.32	3.24	2.43	1.62	1.30	1.19
43 D 5904	10396	.01	600	G	2.16	1.62	1.22	.81	.65	.60
43 D 5906	47396	.047	600	E	2.25	1.69	1.27	.85	.68	.62
43 D 5908	10496	.1	600	F	2.64	1.98	1.49	.99	.80	.73
43 D 5910	47496	.47	600	M	3.61	2.71	2.03	1.36	1.09	1.00

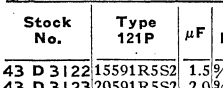
MIL TYPE CP 53 CAPACITORS



Non-inductive oil-filled bathtub capacitors; hermetically sealed, silicone rubber compression terminals. Have mtg. flanges. Exceed MIL-C-25A. Suffix K has tolerance of ±10%; V, +20%, —10%. For use up to 85°C. 600 WVDC, except *1000. Shpg. wt., 4 oz.

Stock No.	MIL No. CP53	µF	Size	EACH 1-9	10-24	25-49	50-99	100-499
43 D 5737	B1EF254K	.25	113/16x1x3/4"	3.83	2.87	2.16	1.44	1.15
43 D 5738	B1EF504K	.5	113/16x1x1"	4.12	3.09	2.32	1.55	1.24
43 D 5739	B1EF105K	1.0	2x13/4x1"	4.80	3.60	2.70	2.80	1.44
43 D 5740	B1EF205K	2.0	2x2x11/8"	6.44	4.83	3.63	2.42	1.94
43 D 5741	B4EF104V	.1-.1	113/16x1x3/4"	5.00	3.75	2.82	1.88	1.50
43 D 5742	B4EF254V	.25-.25	113/16x1x1"	5.16	3.87	2.91	1.94	1.55
43 D 5743	B4EF504V	.5-.5	2x13/4x1"	5.88	4.41	3.31	2.21	1.77
43 D 5745	B1EG154K*	.25	113/16x1x7/8"	4.04	3.03	2.28	1.52	1.22
43 D 5735	B1EG104K*	.1	113/16x1x3/4"	3.92	2.94	2.20	1.47	1.18
43 D 5746	B4EG254V*	.25-.25	2x13/4x7/8"	5.68	4.26	3.20	2.13	1.71
43 D 5747	B1EG504K*	.5	2x13/4x7/8"	4.32	3.24	2.43	1.62	1.30
43 D 5748	B1EG105K*	1.0	2x2x11/8"	5.80	4.35	3.27	2.18	1.74

TYPE 121P METALLIZED PAPER CAPACITORS



Operate at 125°C without derating. Have ungrounded cases. Hermetically sealed, glass-to-metal solder-seal terminals. Tol., ±10%. 150 WVDC. 3 oz.

Stock No.	Type 121P	µF	Size, Inches	EACH 1-9	10-24	25-49	50-99	100-499	500-999
43 D 3122	15591R5S2	1.5	9/16x1 1/8	4.15	3.11	2.34	1.56	1.25	1.15
43 D 3123	20591R5S2	2.0	9/16x13/8	4.34	3.26	2.44	1.63	1.31	1.20
43 D 3124	25591R5S2	2.5	9/16x15/8	4.44	3.33	2.50	1.67	1.34	1.23
43 D 3125	30591R5S2	3.0	43/64x13/8	5.00	3.75	2.82	1.88	1.50	1.38
43 D 3127	40591R5S2	4.0	43/64x15/8	5.40	4.05	3.04	2.03	1.62	1.49
43 D 3128	50591R5S2	5.0	43/64x17/8	16.72	12.54	9.41	6.27	5.02	4.60
43 D 3129	60591R5S2	6.0	3/4x17/8	6.44	4.83	3.63	2.42	1.94	1.78
43 D 3130	80591R5S2	8.0	3/4x23/8	7.52	5.64	4.23	2.82	2.26	2.07
43 D 3131	10691R5S2	10.0	3/4x25/8	8.68	6.51	4.89	3.26	2.61	2.39
43 D 3132	12691R5S2	12.0	1x17/8	9.84	7.38	5.54	3.69	2.96	2.71
43 D 3133	14691R5S2	14.0	1x21/8	11.00	8.25	6.19	4.13	3.30	3.03
43 D 3134	16691R5S2	16.0	1x23/8	11.68	8.76	6.57	4.38	3.51	3.22
43 D 3135	18691R5S2	18.0	1x25/8	13.32	9.99	7.50	5.00	4.00	3.67

TYPE 39D MINIATURE ELECTROLYTICS

Insulated computer-grade electrolytics. Greatest possible capacitance in small case. Welded terminals; welded construction. 2½" axial leads. Low ESR and leakage current. With plastic sleeve. —20°C to +85°C. Tol: 3-50 WV. —10, +75%; 150-450 WV. —10, +50%. Av. shpg. wt., 4 oz.

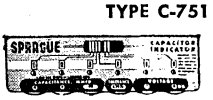
Stock No.	Type 39D	µF	WV DC	Size (Dia. x L.)	EACH 1-24	25-49	50-99
43 D 6484	138G003EL4	1300	3	9/16x21/4"	1.67	.98	.75
43 D 6485	218G003HE4	2100	3	15/16x11/4"	1.74	1.02	.79
43 D 6486	308G003JE4	3000	3	11/16x11/4"	1.89	1.11	.85
43 D 6489	189G003JT4	18000	3	11/16x33/4"	3.15	1.84	1.42
43 D 6490	607G006EJ4	600	6	9/16x13/4"	1.62	.95	.73
43 D 6491	108G006GE4	1000	6	13/16xq1/4"	1.68	.99	.76
43 D 6492	208G006GJ4	2000	6	13/16x11/4"	1.79	1.05	.81
43 D 6493	408G006GP4	4000	6	13/16x23/4"	2.01	1.18	.81
43 D 6494	608G006HP4	6000	6	15/16x23/4"	2.07	1.21	.94
43 D 6495	109G006JS4	10000	6	11/16x31/4"	2.01	1.70	1.31
43 D 6496	507G010EJ4	500	10	9/16x13/4"	1.62	.95	.73
43 D 6497	108G010FJ4	1000	10	11/16x13/4"	1.71	1.00	.77
43 D 6498	168G010FL4	1600	10	11/16x21/4"	1.77	1.04	.80
43 D 6499	258G010GL4	2500	10	13/16x21/4"	1.95	2.14	.88
43 D 6500	508G010HP4	5000	10	13/16x23/4"	2.07	1.21	.94
43 D 6503	109G010JT4	10000	10	11/16x33/4"	3.15	1.84	1.42
43 D 6504	607G015EL4	600	15	9/16x21/4"	1.67	.98	.75
43 D 6505	128G015FL4	1200	15	11/16x21/4"	1.77	1.04	.80
43 D 6507	285G015GP4	2500	15	13/16x23/4"	2.01	1.18	.91
43 D 6509	408G015JL4	4000	15	11/16x21/4"	2.43	1.42	1.10
43 D 6510	808G015JT4	8000	15	11/16x33/4"	3.15	1.84	1.42
43 D 6511	207G025EJ4	200	25	9/16x13/4"	1.62	.95	.73
43 D 6512	507G025HE4	500	25	15/16x11/4"	1.74	1.02	.79
43 D 6513	108G025GL4	1000	25	13/16x21/4"	1.95	1.14	.88
43 D 6514	228G025HP4	2200	25	15/16x23/4"	2.07	1.21	.94
43 D 6515	408G025JT4	4000	25	11/16x31/4"	3.15	1.84	1.42
43 D 6516	756G030EE4	75	30	9/16x11/4"	1.59	.93	.72
43 D 6517	157G030EJ4	150	30	9/16x13/4"	1.62	.95	.73
43 D 6518	257G030EL4	250	30	9/16x21/4"	1.67	.89	.75
43 D 6519	507G030FL4	500	30	11/16x21/4"	1.77	1.04	.80
43 D 6523	118G030GP4	1100	30	13/16x23/4"	2.01	1.18	.91
43 D 6524	218G030HS4	2100	30	15/16x31/4"	2.52	1.48	1.14
43 D 6525	308G030JS4	3000	30	11/16x31/4"	2.91	1.70	1.31
43 D 6526	506G050EE4	50	50	9/16x11/4"	1.59	.93	.72
43 D 6528	107G050EJ4	100	50	9/16x13/4"	1.62	.95	73
53 D 6529	157G050EL4	150	50	9/16x21/4"	1.67	.98	.75
43 D 6531	257G050HE4	250	50	15/16x11/4"	1.74	1.02	.79
43 D 6533	507G050GL4	500	50	13/16x21/4"	1.95	1.14	.88
43 D 6534	118G050HP4	1100	50	15/16x23/4"	2.07	1.21	.94
43 D 6537	238G050JT4	2300	50	11/16x33/4"	3.15	1.84	1.42
43 D 6538	256F150EJ4	25	150	9/16x13/4"	1.62	.95	.73
43 D 6539	506F150FJ4	50	150	11/16x13/4"	1.71	1.00	.77
43 D 6540	107F150FP4	100	150	11/16x23/4"	1.92	1.13	.87
43 D 6541	257F150HP4	250	150	15/16x23/4"	2.07	1.21	.94
43 D 6542	537F150JT4	530	150	11/16x33/4"	3.15	1.84	1.42
43 D 6543	206F250EL4	20	250	9/16x21/4"	1.67	.98	.75
43 D 6544	506F250JE4	50	250	11/16x11/4"	1.89	1.11	.85
43 D 6545	107F250HL4	100	250	15/16x21/4"	2.06	1.20	.93
43 D 6547	207F250JP4	200	250	11/16x23/4"	2.58	1.51	1.16
43 D 6548	307F250JT4	300	250	11/16x33/4"	3.15	1.84	1.42
43 D 6549	206F350FL4	20	350	11/16x21/4"	1.77	1.04	.80
43 D 6550	306F350FP4	30	350	11/16x23/4"	1.92	1.13	.87
43 D 6551	406F350GL4	40	350	13/16x21/4"	1.95	1.14	.88
43 D 6553	506F350GP4	50	350	13/16x23/4"	2.01	1.18	.91
43 D 6554	107F350HS4	100	350	15/16x31/4"	2.52	1.48	1.14
43 D 6555	167F350JT4	160	350	11/16x33/4"	3.15	1.84	1.42
43 D 6556	505F450EL4	5	450	9/16x21/4"	1.67	.98	.75
43 D 6558	106F450FL4	10	450	11/16x21/4"	1.77	1.04	.80
43 D 6561	206F450GL4	20	450	13/16x21/4"	1.95	1.14	.88
43 D 6563	506F450JP4	50	450	11/16x23/4"	2.58	1.51	1.16
43 D 6565	756F450JT4	75	450	11/16x33/4"	3.15	1.84	1.42

PLASTIC DOORKNOB CAPACITORS

High voltage, 500 pF capacitors for TV replacement use. Type 20DK-T5 includes 7 terminals as shown; 30DK-T5 includes 2 of the type indicated by * only. Av. shpg. wt., 3 oz.

Stock No.	Type	kV Rating	Dia. x Lgth.	PRICE
43 D 5599	20DK-T5	20	1x31/32"	3.60 per pair
43 D 5597	30DK-T5	30	15/16x11/4"	3.78 each

TYPE C-751 CAPACITOR INDICATOR



Handy thumbwheel indicator reads color codes directly in capacitance, tolerance and volts. Shpg. wt., 2 oz.

43 D 9910.....25

Contact Your Nearest Allied Office for Sprague Capacitors Not Listed

Polyester Film and Paper Capacitors

SPRAGUE — THE MARK OF RELIABILITY

160P "BLACK BEAUTY" POLYESTER FILM AND PAPER TUBULAR CAPACITORS

High-quality molded tubular capacitors built for long life under high heat and humidity operating conditions. Dual polyester-paper dielectric combines the best qualities of both polyester film and paper capacitors. Solid impregnated construction, will not leak or drip. 200 to 1600-volt types operate to 105° C without derating; 6000-volt up to 85° C. 6000-volt types oil impregnated. Capacitance tolerance ±10% from .001 μF. Av. shpg. wt., 2 oz.

TYPE 160P TUBULAR

Stock No.	Mfr's Type	μF	WV DC	Size Dia. x L.	EACH 1-24	25-49	50-99	100-249
43 D 5119	2TM-S10	.01	200	5/16x1"	.21	.14	.11	.09
43 D 5120	2TM-S20	.02	200	3/8x1 1/4"	.24	.17	.13	.10
43 D 5149	2TM-S47	.047	200	3/8x1 1/4"	.24	.17	.13	.10
43 D 5121	2TM-S50	.05	200	3/8x1 1/4"	.24	.17	.13	.10
43 D 5122	2TM-P10	.1	200	7/16x1 1/4"	.24	.18	.14	.12
43 D 5145	2TM-P15	.15	200	1/2x1 1/2"	.30	.22	.18	.14
43 D 5146	2TM-P22	.22	200	5/8x1 7/8"	.48	.36	.28	.23
43 D 5147	2TM-P25	.25	200	5/8x1 7/8"	.48	.36	.28	.23
43 D 5148	2TM-P47	.47	200	5/8x1 7/8"	.48	.36	.28	.23
43 D 5123	2TM-P50	.5	200	5/8x1 7/8"	.48	.36	.28	.23
43 D 5124	2TM-M1	1.0	200	3/4x2 1/4"	.84	.62	.48	.39
43 D 5118	4TM-D10	.001	400	5/16x1"	.21	.15	.12	.09
43 D 5117	4TM-D50	.005	400	5/16x1"	.21	.14	.11	.09
43 D 5125	4TM-S10	.01	400	5/16x1"	.21	.14	.11	.09
43 D 5001	4TM-S15	.015	400	3/8x1 1/4"	.24	.17	.13	.10
43 D 5126	4TM-S20	.02	400	3/8x1 1/4"	.24	.17	.13	.10
43 D 5002	4TM-S25	.025	400	3/8x1 1/4"	.24	.17	.13	.10
43 D 5014	4TM-S47	.047	400	7/16x1 1/4"	.24	.18	.14	.12
43 D 5127	4TM-S50	.05	400	7/16x1 1/4"	.30	.22	.18	.14
43 D 5128	4TM-P10	.1	400	1/2x1 1/2"	.30	.22	.18	.14
43 D 5011	4TM-P15	.15	400	5/8x1 7/8"	.48	.36	.28	.23
43 D 5521	4TM-P20	.2	400	5/8x1 7/8"	.48	.36	.28	.23
43 D 5012	4TM-P22	.22	400	5/8x1 7/8"	.48	.36	.28	.23
43 D 5129	4TM-P25	.25	400	3/4x2 1/4"	.84	.62	.48	.39
43 D 5005	4TM-P47	.47	400	3/4x2 1/4"	.84	.62	.48	.39
43 D 5010	4TM-P50	.5	400	3/4x2 1/4"	.84	.62	.48	.39
43 D 5009	4TM-M1	1.0	400	1x2 1/2"	1.08	.81	.63	.50
43 D 6250	6TM-T10	.0001	600	5/16x1"	.27	.21	.16	.13
43 D 6251	6TM-T25	.00025	600	5/16x1"	.27	.21	.16	.13
43 D 6253	6TM-T50	.0005	600	5/16x1"	.27	.21	.16	.13
43 D 5070	6TM-D10	.001	600	5/16x1"	.21	.15	.12	.09
43 D 5084	6TM-D15	.0015	600	5/16x1"	.21	.15	.12	.09
43 D 5071	6TM-D20	.002	600	5/16x1"	.21	.15	.12	.09
43 D 5095	6TM-D25	.0025	600	5/16x1"	.21	.15	.12	.09
43 D 5072	6TM-D30	.003	600	5/16x1"	.21	.15	.12	.09
43 D 5073	6TM-D40	.004	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 5093	6TM-D47	.0047	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 5074	6TM-D50	.005	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 6254	6TM-D68	.0068	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 5076	6TM-S10	.01	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 5094	6TM-S15	.015	600	3/8x1 1/4"	.24	.17	.13	.10
43 D 5077	6TM-S20	.02	600	7/16x1 1/4"	.24	.18	.14	.12
43 D 6255	6TM-S22	.022	600	7/16x1 1/4"	.24	.18	.14	.12
43 D 5096	6TM-S25	.025	600	7/16x1 1/4"	.24	.18	.14	.12
43 D 5078	6TM-S30	.03	600	7/16x1 1/4"	.24	.18	.14	.12
43 D 5079	6TM-S40	.04	600	1/2x1 1/2"	.30	.22	.18	.14
43 D 5098	6TM-S47	.047	600	1/2x1 1/2"	.30	.22	.18	.14
43 D 5080	6TM-S50	.05	600	1/2x1 1/2"	.30	.22	.18	.14
43 D 5081	6TM-S60	.06	600	1/2x1 1/2"	.30	.22	.18	.14
43 D 5007	6TM-S68	.068	600	1/2x1 1/2"	.30	.22	.18	.14
43 D 5082	6TM-P10	.1	600	5/8x1 7/8"	.48	.36	.28	.23
43 D 5524	6TM-P15	.15	600	5/8x1 7/8"	.48	.36	.28	.23
43 D 5525	6TM-P20	.2	600	3/4x2 1/4"	.84	.62	.48	.39
43 D 5008	6TM-P22	.22	600	3/4x2 1/4"	.84	.62	.48	.39
43 D 5083	6TM-P25	.25	600	3/4x2 1/4"	.84	.62	.48	.39
43 D 6260	6TM-P50	.5	600	1x2 1/2"	1.08	.81	.63	.50
43 D 6261	6TM-M1	1.0	600	1x2 1/2"	1.56	1.17	.91	.73
43 D 5928	10TM-T50	.0005	1000	5/16x1"	.27	.21	.16	.13
43 D 5929	10TM-D10	.001	1000	5/16x1"	.21	.15	.12	.09
43 D 5936	10TM-D50	.005	1000	3/8x1 1/4"	.24	.17	.13	.10
43 D 5938	10TM-S10	.01	1000	7/16x1 1/4"	.24	.18	.14	.12
43 D 5945	10TM-S50	.05	1000	5/8x1 7/8"	.48	.36	.28	.23
43 D 5947	10TM-P10	.1	1000	3/4x2 1/4"	.84	.62	.48	.39
43 D 5019	MB-D1	.001	1600	3/8x1 1/4"	.27	.18	.14	.12
43 D 5161	MB-D5	.005	1600	1/2x1 1/2"	.33	.25	.19	.15
43 D 5166	MB-S1	.01	1600	5/8x1 7/8"	.54	.39	.30	.24
43 D 5168	MB-S2	.02	1600	5/8x1 7/8"	.54	.39	.30	.24
43 D 6277	MB-S3	.03	1600	3/4x2 1/4"	.90	.66	.51	.41
43 D 6278	MB-S4	.04	1600	3/4x2 1/4"	.90	.66	.51	.41
43 D 6280	MB-S5	.05	1600	3/4x2 1/8"	1.14	.86	.67	.54

Contact the Allied facility nearest you for information on any Sprague capacitor types not listed in this catalog.

220P AND 225P "ORANGE DROP" PRINTED CIRCUIT CAPACITORS

Compact dual dielectric "Orange Drops" combine best features of polyester film and special capacitor tissue. Rock-hard case has radial leads crimped for printed circuit board spacing. Double dipped in orange epoxy resin for extra protection against heat and moisture. Outside foil leads have black striping. Temperature range, —40° C to +85° C; can be operated to 125° C with proper voltage derating. Capacitance tolerance, ±10%. Av. shpg. wt., 2 oz.

TYPE 225P RECTANGULAR

Size, height by thickness. 45/64" long, except *3/4", †13/16".

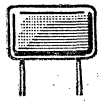
Stock No.	Mfr's Type	μF	WV DC	Size	EACH 1-24	25-49	50-99	100-249	250-Up
43 D 3570	1549R75	.15*	75	5/8x25/64"	.24	.16	.13	.10	.09
43 D 3571	2249R75	.22*	75	43/64x27/64"	.30	.22	.17	.14	.12
43 D 3572	3349R75	.33*	75	27/32x31/64"	.46	.40	.31	.23	.21
43 D 3573	4749R75	.47*	75	27/32x19/32"	.63	.47	.37	.29	.24
43 D 3574	6849R75	.68†	75	29/32x13/32"	.69	.51	.40	.32	.27
43 D 3575	1059R75	1.0†	75	63/64x47/64"	.69	.51	.40	.32	.27
43 D 3576	10291	.001	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3577	15291	.0015	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3578	22291	.0022	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3579	33291	.0033	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3580	47291	.0047	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3581	68291	.0068	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3582	10391	.01	100	5/16x13/64"	.15	.11	.08	.07	.06
43 D 3630	15391	.015	100	5/16x13/64"	.15	.11	.09	.07	.06
43 D 3631	18391	.018	100	5/16x13/64"	.15	.11	.09	.07	.06
43 D 3600	22391	.022	100	5/16x13/64"	.15	.11	.09	.07	.06
43 D 3632	27391	.027	100	21/64x15/64"	.15	.11	.09	.07	.06
43 D 3601	33391	.033	100	21/64x15/64"	.15	.11	.09	.07	.06
43 D 3603	39391	.039	100	11/32x1/4"	.18	.12	.09	.07	.06
43 D 3605	47391	.047	100	11/32x1/4"	.18	.12	.10	.08	.06
43 D 3608	56391	.056	100	3/8x9/32"	.18	.13	.10	.08	.07
43 D 3609	68391	.068	100	3/8x9/32"	.18	.13	.10	.08	.07
43 D 3611	82391	.082	100	17/32x21/64"	.18	.13	.11	.09	.07
43 D 3618	10491	.1	100	17/32x21/64"	.18	.14	.11	.09	.07

TYPE 220P TUBULAR

43 D 3017	2PS-S20	.02	200	3/8x7/8"	.18	.12	.09	.08	.06
43 D 3018	2PS-S47	.047	200	29/64x7/8"	.18	.13	.10	.08	.07
43 D 3019	2PS-S50	.05	200	15/32x7/8"	.18	.14	.11	.09	.07
43 D 3020	2PS-P10	.1	200	31/64x13/16"	.21	.15	.12	.10	.08
43 D 3138	2PS-P20	.2	200	19/32x15/16"	.30	.21	.16	.13	.11
43 D 3021	2PS-P25	.25	200	5/8x15/16"	.30	.22	.17	.14	.11
43 D 7917	2PS-P33	.33	200	5/8x1 7/8"	.39	.29	.22	.18	.15
43 D 7912	2PS-P47	.47	200	45/64x15/8"	.45	.34	.26	.21	.17
43 D 3022	2PS-P50	.5	200	23/32x15/8"	.48	.34	.27	.22	.18
43 D 3023	4PS-S10	.01	400	13/32x1 1/16"	.15	.11	.08	.07	.06
43 D 3024	4PS-S20	.02	400	13/32x7/8"	.18	.12	.10	.08	.06
43 D 3026	4PS-S47	.047	400	29/64x13/16"	.21	.15	.12	.10	.08
43 D 3027	4PS-S50	.05	400	29/64x13/16"	.21	.15	.12	.10	.08
43 D 7911	4PS-S68	.068	400	33/64x13/16"	.21	.16	.12	.10	.08
43 D 3028	4PS-P10	.1	400	37/64x13/16"	.24	.18	.14	.11	.09
43 D 3029	4PS-P20	.2	400	19/32x15/8"	.36	.26	.21	.17	.14
43 D 3030	4PS-P22	.22	400	39/64x15/8"	.36	.26	.21	.17	.14
43 D 3031	4PS-P25	.25	400	41/64x15/8"	.36	.27	.21	.17	.14
43 D 3032	6PS-D10	.001	600	21/64x1 1/16"	.15	.11	.08	.07	.06
43 D 3033	6PS-D15	.0015	600	21/64x1 1/16"	.15	.11	.08	.07	.06
43 D 3034	6PS-D20	.002	600	21/64x1 1/16"	.15	.11	.09	.07	.06
43 D 7926	6PS-D25	.0025	600	21/64x1 1/16"	.15	.11	.09	.07	.06
43 D 7914	6PS-D33	.0033	600	23/64x1 1/16"	.15	.11	.09	.07	.06
43 D 7928	6PS-D39	.0039	600	3/8x1 1/16"	.15	.11	.09	.07	.06
43 D 3043	6PS-D47	.0047	600	25/64x1 1/16"	.15	.11	.09	.07	.06
43 D 3049	6PS-D50	.005	600	25/64x1 1/16"	.15	.11	.09	.07	.06
43 D 7929	6PS-D56	.0056	600	25/64x1 1/16"	.15	.11	.09	.07	.06
43 D 3051	6PS-D68	.0068	600	13/32x1 1/16"	.15	.11	.09	.07	.06
43 D 7930	6PS-D82	.0082	600	3/8x7/8"	.15	.11	.09	.07	.06
43 D 3052	6PS-S10	.01	600	25/64x7/8"	.15	.12	.09	.07	.06
43 D 3053	6PS-S15	.015	600	27/64x7/8"	.18	.12	.09	.07	.06
43 D 3054	6PS-S20	.02	600	31/64x7/8"	.18	.13	.10	.08	.07
43 D 3055	6PS-S22	.022	600	31/64x7/8"	.18	.13	.10	.08	.07
43 D 7901	6PS-S25	.025	600	17/32x7/8"	.18	.14	.11	.09	.07
43 D 7935	6PS-S33	.033	600	15/32x1 1/16"	.18	.14	.11	.09	.07
43 D 7936	6PS-S39	.039	600	31/64x13/16"	.21	.15	.11	.09	.08
43 D 3058	6PS-S47	.047	600	17/32x13/16"	.21	.15	.12	.10	.08
43 D 3059	6PS-S50	.05	600	17/32x13/16"	.21	.16	.12	.10	.08
43 D 7904	6PS-S56	.056	600	35/64x13/16"	.21	.16	.13	.10	.08
43 D 7905	6PS-S68	.068	600	37/64x1 1/16"	.27	.19	.15	.12	.10
43 D 3143	6PS-S82	.082	600	37/64x15/16"	.27	.19	.15	.12	.10
43 D 3060	6PS-P10	.1	600	5/8x15/16"	.27	.20	.16	.13	.10
43 D 7913	6PS-P15	.15	600	43/64x15/8"	.36	.27	.21	.17	.14
43 D 3061	6PS-P20	.2	600	3/4x15/8"	.45	.34	.26	.21	.17
43 D 7908	6PS-P22	.22	600	25/32x15/8"	.45	.34	.26	.21	.17
43 D 3062	6PS-P25	.25	600	13/16x15/8"	.48	.34	.27	.22	.18
43 D 3063	10PS-D10	.001	1000	21/64x1 1/16"	.15	.11	.08	.07	.06
43 D 3067	10PS-D50	.005	1000	13/32x7/8"	.15	.11	.09	.07	.06

Ceramic Capacitors

HIGH-K MONOLYTHICS



Series C-23. Radial-lead ceramics for VHF and UHF equipment, low RF and audio frequency use. Temperature range of —55° C to +85° C. Tolerance, ±20%. No anti-resonance points to 1000 MHz. Withstand test potential of 100 VDC for at least 1 second at 25° C. All are 25 WVDC, except those with *50 WVDC. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	µF	L x W x Thickness (inches)	EACH 1-49	50-99	100-249	250-499	500-999
43 D 3370	3C023103X0250A3	.01	.39x.21x.13	1.32	.99	.75	.66	.50
43 D 3371	3C023153X0250A3	.015	.39x.21x.13	1.36	1.02	.77	.68	.51
43 D 3372	3C023223X0250A3	.022	.39x.21x.13	1.36	1.02	.77	.68	.51
43 D 3373	3C023333X0250A3	.033	.39x.21x.13	1.36	1.02	.77	.68	.51
43 D 3374	3C023473X0250A3	.047	.39x.21x.13	1.36	1.02	.77	.68	.51
43 D 3375	3C023683X0250A3	.068	.39x.21x.13	1.40	1.05	.79	.70	.53
43 D 3376	3C023104X0250A3	.1	.39x.21x.13	1.44	1.08	.81	.72	.54
43 D 3378	4C023225X0250A3	.22	.52x.30x.13	2.24	1.68	1.26	1.12	.84
43 D 3379	4C023334X0250A3	.33	.52x.30x.13	2.74	2.06	1.55	1.37	1.03
43 D 3380	4C023474X2050A3	.47	.52x.30x.13	3.42	2.57	1.93	1.71	1.29
43 D 3381	4C023684X0250A3	.68	.52x.30x.16	4.44	3.33	2.50	2.22	1.67
43 D 3385	4C023105X0250A3	1.0	.52x.30x.24	5.36	4.02	3.02	2.68	2.01
43 D 6589	5C023104X0250B3	.1	.50x.50x.13	.96	.72	.54	.48	.36
43 D 3382	5C023154X0250B3	.15	.50x.50x.13	1.08	.81	.61	.54	.41
43 D 6698	5C023224X0250B3	.22	.50x.50x.13	1.14	.86	.65	.57	.43
43 D 6699	5C023334X0250B3	.33	.50x.50x.13	1.42	1.07	.80	.71	.59
43 D 6825	5C023474X0250B3	.47	.50x.50x.13	1.60	1.20	.90	.80	.60
43 D 6823	5C023684X0250B3	.68	.50x.50x.13	1.76	1.32	.99	.88	.66
43 D 6824	5C023105X0250B3	1.0	.50x.50x.16	2.00	1.50	1.13	1.00	.75
43 D 6697	5C023155X0250B3	1.5	.50x.50x.16	2.80	2.10	1.58	1.40	1.05
43 D 6695	5C023225X0250B3	2.2	.50x.50x.24	3.80	2.85	2.14	1.90	1.43
43 D 6660	5C023104X0500B3*	.1	.50x.50x.13	1.06	.80	.60	.53	.40
43 D 6663	5C023154X0500B3*	.15	.50x.50x.13	1.20	.90	.68	.60	.45
43 D 6667	5C023224X0500B3*	.23	.50x.50x.16	1.38	1.04	.78	.69	.52
43 D 6668	5C023334X0500B3*	.33	.50x.50x.16	2.00	1.50	1.13	1.00	.75
43 D 6669	5C023474X0500B3*	.47	.50x.50x.24	2.52	1.89	1.42	1.26	.95
43 D 3386	5C023105X0500B3*	1.0	.50x.50x.24	3.70	2.78	2.09	1.85	1.39

CERAMIC DISC CAPACITORS

SERIES 30GA—3000 WVDC

Tolerance: 1.5 pF, ±.25 pF; 4.7 pF, ±.5 pF; 10 through 50 pF, ±10%; 100 through 500 pF, ±20%. †in table indicates µF. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	pF	EACH 1-99	EA., Multiples of 100 Only 100-400	500-1000
43 D 6387	30GA-V15	1.5	.15	.10	.09
43 D 6370	30GA-V47	4.7	.15	.10	.09
43 D 6371	30GA-Q10	10	.15	.10	.09
43 D 6373	30GA-Q25	25	.15	.10	.09
43 D 6374	30GA-Q30	30	.15	.10	.09
43 D 6375	30GA-Q50	50	.15	.10	.09
43 D 6377	30GA-T10	100	.15	.10	.09
43 D 6379	30GA-T15	150	.15	.11	.10
43 D 6380	30GA-T18	180	.15	.11	.10
43 D 6382	30GA-T22	220	.15	.11	.10
43 D 6383	30GA-T25	250	.15	.11	.10
43 D 6385	30GA-T30	300	.18	.13	.11
43 D 6386	30GA-T50	500	.21	.15	.13
43 D 6501	30GA-D10	†.001	.21	.15	.13
43 D 6502	30GA-D20	†.002	.21	.15	.13
43 D 6506	30GA-D50	†.005	.24	.17	.15
43 D 6508	30GA-S10	†.01	.39	.29	.25

SERIES TG—100 WVDC ±20%.

Stock No.	Mfr's Type	µF	EACH 1-99	EA., Multiples of 100 Only 100-400	500-900	1000-4900
43 D 5995	TG-D50	.005	.15	.06	.04	.03
43 D 5996	TG-S10	.01	.15	.08	.05	.04
43 D 6520	TG-S20	.02	.15	.09	.06	.04
43 D 5997	TG-S25	.025	.15	.10	.07	.05
43 D 6521	TG-S30	.03	.15	.10	.07	.05
43 D 5998	TG-S50	.05	.39	.22	.15	.10
43 D 5999	TG-P10	.1	.39	.29	.19	.13

ATTENTION BUYERS

Allied maintains complete stocks of Sprague capacitors. For complete information on any types not listed in this catalog, simply contact the Allied facility nearest you. Depend on Allied for prompt service, fast shipment and OEM prices on all your electronic needs.

CERAMIC DISC CAPACITORS

Extremely dependable, ultra-compact ceramic disc capacitors in standard EIA and other popular values. Low self-inductance of silvered flat-plate design ensures high by-pass efficiency in critical circuits. Moisture-proof coating. Av. shpg. wt., 1 oz.

PRICES FOR SERIES 5GA

*Code	EACH 1-99	EACH, Multiples of 100 Only 100-400	500-900	1000-9900
A	.15	.06	.04	.03
B	.15	.07	.05	.03
C	.15	.08	.05	.04
D	.15	.12	.08	.05

SERIES 5GA—1000 WVDC ±20%. †µF.

Stock No.	Mfr's Type	pF	*	Stock No.	Mfr's Type	pF	*
43 D 6300	5GA-V50	5	A	43 D 6332	5GA-T30	300	A
43 D 6302	5GA-V75	7.5	A	43 D 6333	5GA-T33	330	A
43 D 6304	5GA-Q10	10	A	43 D 6335	5GA-T36	360	A
43 D 6305	5GA-Q12	12	A	43 D 6336	5GA-T39	390	A
43 D 6306	5GA-Q15	15	A	43 D 6338	5GA-T47	470	A
43 D 6308	5GA-Q20	20	A	43 D 6339	5GA-T50	500	A
43 D 6309	5GA-Q22	22	A	43 D 6340	5GA-T56	560	A
43 D 6310	5GA-Q25	25	A	43 D 6342	5GA-T68	680	A
43 D 6311	5GA-Q27	27	A	43 D 6343	5GA-T75	750	A
43 D 6312	5GA-Q30	30	A	43 D 6345	5GA-T82	820	A
43 D 6313	5GA-Q33	33	A	43 D 5670	5GA-D10	†.001	A
43 D 6314	5GA-Q39	39	A	43 D 6347	5GA-D12	†.0012	A
43 D 6315	5GA-Q47	47	A	43 D 5671	5GA-D15	†.0015	A
43 D 6316	5GA-Q50	50	A	43 D 6351	5GA-D18	†.0018	A
43 D 6317	5GA-Q56	56	A	43 D 6352	5GA-D20	†.0020	A
43 D 6318	5GA-Q68	68	A	43 D 6353	5GA-D22	†.0022	A
43 D 6319	5GA-Q75	75	A	43 D 6354	5GA-D25	†.0025	A
43 D 6320	5GA-Q82	82	A	43 D 6355	5GA-D27	†.0027	A
43 D 6322	5GA-T10	100	A	43 D 6356	5GA-D30	†.0030	A
43 D 6323	5GA-T12	120	A	43 D 6357	5GA-D33	†.0033	A
43 D 6325	5GA-T15	150	A	43 D 6358	5GA-D39	†.0039	A
43 D 6326	5GA-T18	180	A	43 D 6361	5GA-D47	†.0047	B
43 D 6327	5GA-T20	200	A	43 D 6362	5GA-D50	†.005	B
43 D 6328	5GA-T22	220	A	43 D 6363	5GA-S10	†.01	C
43 D 6330	5GA-T25	250	A	43 D 6364	5GA-S20	†.02	D
43 D 6331	5GA-T27	270	A				

SERIES 5HK—1000 WVDC —20%, +80%. ‡500 WVDC.

Stock No.	Mfr's Type	µF	EACH 1-99	EA., Multiples of 100 Only 100-400	500-900	1000-9900
43 D 8650	5HK-D10	.001	.15	.06	.04	.03
43 D 8651	5HK-D15	.0015	.15	.06	.04	.03
43 D 5672	5HK-D20	.002	.15	.06	.04	.03
43 D 8654	5HK-D22	.0022	.15	.06	.04	.03
43 D 8661	5HK-D33	.0033	.15	.06	.04	.03
43 D 8665	5HK-D47	.0047	.15	.06	.04	.03
43 D 5673	5HK-D50	.005	.15	.06	.04	.03
43 D 8666	5HK-D68	.0068	.15	.07	.05	.03
43 D 5674	5HK-S10	.010	.15	.07	.05	.03
43 D 8667	‡5HK-S15	.015	.15	.07	.05	.03
43 D 9950	‡5HK-S20	.020	.15	.08	.06	.04
43 D 8669	‡5HK-S25	.025	.15	.09	.06	.04
43 D 9952	‡5HK-S40	.040	.27	.20	.13	.09
43 D 9953	‡5HK-S50	.050	.27	.21	.14	.09
43 D 9954	‡5HK-P10	.1	.54	.40	.27	.18

SERIES HY *3 WVDC, §10 WVDC, (—20, +80%)

Stock No.	Mfr's Type	µF	EACH 1-99	EA., Multiples of 100 Only 100-400	500-900	1000-9900
43 D 6671	*HY-120	.10	.39	.29	.19	.13
43 D 6672	*HY-125	.22	.21	.15	.10	.07
43 D 6673	*HY-130	.47	.21	.15	.10	.07
43 D 6674	*HY-135	1.00	.24	.18	.12	.08
43 D 6675	*HY-150	2.2	.36	.27	.18	.12
43 D 6394	§HY-310	.047	.15	.11	.07	.05
43 D 6395	§HY-320	.1	.15	.11	.08	.05
43 D 6396	§HY-325	.22	.24	.17	.12	.08
43 D 6397	§HY-330	.47	.33	.25	.17	.11

SERIES BL BUFFER CERAMICS—2000 WVDC ±20%

Stock No.	Mfr's Type	µF	EACH 1-99	EA., Multiples of 100 Only 100-400	500-1000
43 D 6290	BL-D10	.001	.21	.15	.13
43 D 6294	BL-D50	.005	.21	.15	.13
43 D 6299	BL-S10	.01	.27	.20	.17

Be Sure to Specify Stock No., Mfr's Type No. and Capacitance When Ordering

Ceramic and MIL Capacitors

SPRAGUE
THE MARK OF RELIABILITY

NPO AND N750 CERAMICS

Series 10TCC NPO Ceramics. Zero temperature-coefficient. 1000 WVDC. Tol.: ±5%, 6.8 pF and above; ±.25 pF, 4.7 pF and below. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	pF	EACH 1-99	EA., Mult. of 100 only 100-400	500-900	1000-9900
43 D 9955	10TCC-V10	1.0	.15	.06	.04	.03
43 D 9956	10TCC-V15	1.5	.15	.06	.04	.03
43 D 9957	10TCC-V22	2.2	.15	.06	.04	.03
43 D 9958	10TCC-V33	3.3	.15	.06	.04	.03
43 D 9959	10TCC-V47	4.7	.15	.06	.04	.03
43 D 9960	10TCC-V68	6.8	.15	.06	.04	.03
43 D 9961	10TCC-Q10	10.0	.15	.06	.04	.03
43 D 9962	10TCC-Q15	15.0	.15	.06	.04	.03
43 D 9963	10TCC-Q20	20.0	.15	.06	.04	.03
43 D 9964	10TCC-Q22	22.0	.15	.06	.04	.03
43 D 9965	10TCC-Q25	25.0	.15	.06	.04	.03
43 D 9966	10TCC-Q33	33.0	.15	.06	.04	.03
43 D 9967	10TCC-Q39	39.0	.15	.06	.04	.03
43 D 9968	10TCC-Q47	47.0	.15	.07	.05	.04
43 D 9969	10TCC-Q50	50.0	.15	.07	.05	.04
43 D 9970	10TCC-Q68	68.0	.15	.07	.05	.04
43 D 9971	10TCC-Q75	75.0	.15	.07	.05	.04
43 D 9972	10TCC-T10	100.0	.15	.09	.06	.04
43 D 9973	10TCC-T12	120.0	.15	.09	.06	.04
43 D 9974	10TCC-T15	150.0	.15	.11	.08	.05
43 D 9976	10TCC-T22	220.0	.24	.21	.14	.10
43 D 9977	10TCC-T27	270.0	.27	.24	.16	.11

Series 10TCU N750 Ceramics. Negative temperature coefficient capacitors with a negative change of 750 parts per million per degree Centigrade. All are rated 1000 WVDC Tolerance, ±5%. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	pF	EACH 1-99	EA., Mult. of 100 only 100-400	500-900	1000-9900
43 D 9978	10TCU-V50	5	.15	.06	.04	.03
43 D 9979	10TCU-Q10	10	.15	.06	.04	.03
43 D 9980	10TCU-Q15	15	.15	.06	.04	.03
43 D 9981	10TCU-Q20	20	.15	.06	.04	.03
43 D 9982	10TCU-Q22	22	.15	.06	.04	.03
43 D 9983	10TCU-Q25	25	.15	.06	.04	.03
43 D 9984	10TCU-Q33	33	.15	.06	.04	.03
43 D 9985	10TCU-Q47	47	.15	.06	.04	.03
43 D 9986	10TCU-Q68	68	.15	.06	.04	.03
43 D 9987	10TCU-Q75	75	.15	.06	.04	.03
43 D 9988	10TCU-T10	100	.15	.07	.05	.04
43 D 9989	10TCU-T15	150	.15	.07	.05	.04
43 D 9990	10TCU-T20	200	.15	.09	.06	.04
43 D 9991	10TCU-T22	220	.15	.09	.06	.04
43 D 9992	10TCU-T33	330	.15	.11	.08	.05
43 D 9993	10TCU-T47	470	.21	.15	.10	.07
43 D 9994	10TCU-T68	680	.33	.24	.16	.11

118P HERMETICALLY SEALED "DIFILM" CAPACITORS

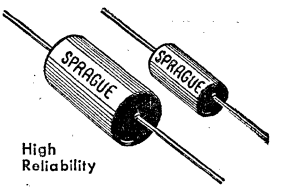
SPRAGUE

Dual-Dielectric—Solder Sealed

Metallized paper and polyester film dielectric. Hermetically sealed. Meet MIL-C-25 specs. Ambient temperature to 125°C without derating. High insulation resistance. Self-healing properties. Tolerance, ±10%. Ungrounded case without insulating sleeve. Shpg. wt., 3 oz.

Stock No.	Type 118P	µF	WV DC	Size	EACH 1-9	10-24	25-49	50-99	100-499	500-999
43 D 3068	10392S2	.01	200	15/64x3/4"	2.76	2.07	1.56	1.04	.83	.76
43 D 3080	10492S2	.1	200	5/16x7/8"	2.87	2.16	1.62	1.08	.86	.79
43 D 3083	22492S2	.22	200	13/32x7/8"	2.92	2.19	1.65	1.10	.88	.81
43 D 3087	47492S2	.47	200	1/2x1 1/8"	3.28	2.46	1.85	1.23	.99	.91
43 D 3088	56492S2	.56	200	1/2x1 1/8"	3.34	2.51	1.88	1.26	1.01	.92
43 D 3091	10592S2	1.0	200	5/8x1 1/8"	3.60	2.70	2.03	1.35	1.08	.99
43 D 3093	20592S2	2.0	200	43/64x1 1/8"	6.04	4.53	3.40	2.27	1.81	1.67
43 D 3094	30592S2	3.0	200	47/64x1 1/8"	6.32	4.74	3.56	2.37	1.90	1.74
43 D 3095	40592S2	4.0	200	3/4x1 1/8"	6.76	5.07	3.81	2.54	2.03	1.86
43 D 3096	50592S2	5.0	200	1x1 1/8"	7.36	5.52	4.14	2.76	2.21	2.03
43 D 3097	60592S2	5.0	200	1x1 3/8"	8.44	6.33	4.75	3.17	2.54	2.33
43 D 3098	80592S2	8.0	200	1x1 3/8"	8.64	6.48	4.86	3.24	2.60	2.38
43 D 3099	10692S2	10.0	200	1x2 1/8"	9.20	6.90	5.18	3.45	2.76	2.53
43 D 3103	10594S2	1.0	400	3/4x1 1/8"	4.76	3.57	2.68	1.79	1.43	1.31
43 D 3104	20594S2	2.0	400	1x1 3/8"	6.96	5.22	3.92	2.61	2.09	1.92
43 D 3105	30594S2	3.0	400	1x2 1/8"	8.20	6.15	4.62	3.08	2.46	2.26
43 D 3106	10396S2	.01	600	5/16x7/8"	2.84	2.13	1.60	1.07	.86	.79
43 D 3112	10496S2	.1	600	1/2x1 1/8"	3.30	2.48	1.86	1.24	.99	.91
43 D 3114	22496S2	.22	600	3/8x1 3/8"	3.62	2.71	2.04	1.36	1.09	1.00
43 D 3116	47496S2	.47	600	43/64x1 5/8"	4.33	2.25	2.44	1.63	1.30	1.19
43 D 3118	10596S2	1.0	600	1x1 7/8"	6.12	4.59	3.45	2.30	1.84	1.69
43 D 3120	20596S2	2.0	600	1x2 1/2"	7.80	5.85	4.39	2.93	2.24	2.15

TYPE 431P METFILM "E"



High Reliability

A small sized, lightweight capacitor protected against moisture and well-suited for potting or encapsulating. Provides space advantage over metal-cased, molded, or wax-coated cardboard-case tubular capacitors of comparable rating. Controlled metallizing process for greater dependability and performance. Axial leads, 1¾" long. Tolerance: ±10%. Temperature Range: —55° C to +85° C. Minimum Insulation Resistance: 1000 megohm-microfarads. Life Test: withstands test potential of 1.25 times the rated voltage between terminals for a period of 250 hours at 85° C. Power Factor: 1% at 25° C. Meet 2000 Hz vibration test to method 204, MIL-STD-202, Condition B. Av. shpg. wt., 1 oz.

Stock No.	Type 431P	µF	WV DC	Size TxWxL	EACH 1-24	25-49	50-99	100-249
43 D 5300	1049R5	.1	50	9/64x7/32x5/8"	1.08	.80	.62	.50
43 D 5301	1549R5	.15	50	11/64x1/4x5/8"	1.14	.84	.66	.53
43 D 5302	2249R5	.22	50	5/32x9/32x3/4"	1.20	.90	.70	.56
43 D 5303	1059R5	1.0	50	15/16x13/32x1"	1.74	1.29	1.00	.81
43 D 5304	1559R5	1.5	50	9/32x31/64x1"	1.98	1.49	1.16	.93
43 D 5310	2059R5	2.0	50	23/64x9/32x1"	2.16	1.61	1.26	1.01
43 D 5311	2559R5	2.5	50	21/64x17/32x1 1/4"	2.31	1.74	1.35	1.08
43 D 5314	1069R5	10.0	50	9/16x49/64x1 3/4"	6.33	4.73	3.68	2.95
43 D 5315	1269R5	12.0	50	1/2x51/64x2 1/4"	7.26	5.45	4.24	3.39
43 D 5316	15392	.015	200	3/32x11/64x5/8"	.51	.34	.27	.21
43 D 5318	22392	.022	200	7/64x3/32x5/8"	.51	.34	.27	.21
43 D 5319	33392	.033	200	1/8x13/64x5/8"	.51	.34	.27	.21
43 D 5321	47392	.047	200	5/32x15/64x5/8"	.51	.34	.27	.21
43 D 5322	68392	.068	200	9/64x17/64x3/4"	.51	.34	.27	.21
43 D 5323	10492	.1	200	11/64x19/64x3/4"	.51	.34	.27	.21
43 D 5324	15492	.15	200	13/64x21/64x3/4"	.54	.36	.28	.23
43 D 5325	22492	.22	200	15/64x13/32x3/4"	.60	.41	.32	.26
43 D 5326	33492	.33	200	7/32x25/64x1"	.66	.45	.35	.28
43 D 5328	47492	.47	200	7/32x25/64x1 1/4"	.75	.50	.39	.31
43 D 5329	68492	.68	200	21/64x33/64x1"	.87	.59	.46	.37
43 D 5330	10592	1.0	200	5/16x33/64x1 1/4"	.99	.68	.53	.42
43 D 5331	15592	1.5	200	11/32x35/64x1 1/2"	1.26	.86	.67	.54
43 D 5332	20592	2.0	200	23/64x9/16x1 3/4"	1.44	.97	.76	.61
43 D 5334	25592	2.5	200	29/64x21/32x1 1/2"	1.56	1.06	.83	.66
43 D 5335	30592	3.0	200	29/64x21/32x1 3/4"	1.68	1.15	.90	.72
43 D 5336	40592	4.0	200	17/32x47/64x1 3/4"	1.92	1.31	1.02	.82
43 D 5337	50592	5.0	200	29/64x3/4x2 1/4"	2.16	1.47	1.14	.91
43 D 5338	60592	6.0	200	15/32x49/64x2 1/2"	2.64	1.80	1.40	1.12
43 D 5339	70592	7.0	200	47/64x15/16x1 3/4"	3.21	2.19	1.70	1.36
43 D 5340	10692	10.0	200	45/64x1x2 1/4"	3.87	2.64	2.05	1.64
43 D 5341	12692	12.0	200	23/32x1 1/64x2 1/2"	4.29	2.93	2.28	1.82
43 D 5343	15296	.0015	600	3/32x1 1/64x5/8"	.75	.50	.39	.31
43 D 5344	22296	.0022	600	7/64x3/16x5/8"	.75	.50	.39	.31
43 D 5346	33296	.0033	600	9/64x7/32x5/8"	.75	.50	.39	.31
43 D 5347	47296	.0047	600	1/8x1/4x1/8"	.75	.50	.39	.31
43 D 5348	68296	.0068	600	9/64x17/64x3/4"	.78	.52	.41	.33
43 D 5349	10396	.01	600	11/64x19/64x3/4"	.78	.52	.41	.33
43 D 5350	15396	.015	600	3/16x23/64x3/4"	.84	.57	.44	.35
43 D 5351	22396	.022	600	15/64x13/32x3/4"	.84	.57	.44	.35
43 D 5352	33396	.033	600	13/64x3/8x1"	.84	.57	.44	.35
43 D 5353	47396	.047	600	13/64x3/8x1 1/4"	.87	.59	.46	.37
43 D 5354	68396	.068	600	19/64x1/2x1"	.87	.59	.46	.37
43 D 5355	10496	.1	600	3/8x37/64x1"	.90	.61	.48	.38
43 D 5357	15496	.15	600	3/8x37/64x1 1/4"	.96	.66	.51	.41
43 D 5358	22496	.22	600	11/32x35/64x13/4"	1.11	.75	.58	.47
43 D 5359	33496	.33	600	7/16x41/64x1 3/4"	1.17	.79	.62	.49
43 D 5360	47496	.47	600	35/64x3/4x1 3/4"	1.32	.90	.70	.56
43 D 5361	68496	.68	600	15/32x49/64x2 1/2"	1.80	1.22	.95	.75
43 D 5362	10596	1.0	600	3/4x11/64x2"	2.22	1.51	1.18	.94
43 D 5363	15596	1.5	600	3/4x13/64x2 1/2"	2.94	2.01	1.56	1.25

J-135 "CERAMICENTER" CERAMIC ASSORTMENT KIT

Saves Time and Effort—Eliminates Searching Through Scattered Boxes

Contains 710 capacitors of 57 different values, packaged in handy reusable "Kleer-Pak" plastic boxes and conveniently arranged in a two-drawer, metal sliding-tray cabinet. Kit includes: 290 Type 5GA, 1000 WVDC ceramic disc capacitors in 31 different capacitance values from 5 pF to 20,000 pF; 145 Type 5HK "High K" bypass and coupling capacitors in 7 different values from .001 µF to .01 µF @ 1000 WVDC, and .02 µF to .1 µF @ 500 WVDC; 100 Type 10TS, 1000 WVDC temperature stable capacitors in 12 different values from 100 pF to 20,000 pF; and 175 Type TG, 50 WVDC miniaturized disc capacitors in 7 different values from .005 to .1 µF. Cabinet, 30¾x5½x11¾". Shpg. wt., 29 lbs.

43 D 1182 U 172.50

SERIES TL TRANSI-LYTIC (31D) MINIATURE CAPACITORS

Miniature units designed for transistorized circuits. Plastic cases with thermo-setting resin end seals. Operating temperature range —20°C to +65°C. Tolerance, —10% to +100% of rated capacitance, measured at 120 Hz and 25°C. **Important Note:** Values listed in table below combine the highest voltage with the smallest case size for added protection at no extra cost. Example: 1 μF is only listed at 25 V, as all lower voltages are the same size and price. Wt., 2 oz.

SIZE CHART

Code	Size	Code	Size	Code	Size	Code	Size
A	.180x.57	D	.250x .82	G	.625x1.70	K	1.00x2.32
B	.218x.57	E	.375x1.07	H	.750x2.10	.....	.....
C	.210x.70	F	.312x .82	J	.875x2.32	.....	.....

Stock No.	Mfr's Type	μF	WV DC	Size Code	EACH 1-24	25-49	50-99	100-249	250-up
43 D 4117	TL1200	1	25	A	.51	.39	.30	.24	.20
43 D 4118	TL1201	2	25	A	.54	.41	.32	.26	.21
43 D 4095	TL1127	5	12	A	.54	.41	.32	.26	.21
43 D 4104	TL1152	5	16	B	.57	.43	.34	.27	.22
43 D 4119	TL1202	5	25	D	.63	.48	.37	.30	.25
43 D 3959	TL1303	5	50	D	.66	.50	.39	.31	.26
43 D 4113	TL1176	8	20	C	.66	.50	.39	.31	.26
43 D 4120	TL1203.5	8	25	D	.69	.52	.41	.33	.27
43 D 3998	TL1303.3	8	50	D	.72	.54	.42	.34	.28
43 D 4097	TL1128	10	12	C	.63	.48	.37	.30	.25
43 D 4121	TL1204	10	25	D	.72	.54	.42	.34	.28
43 D 4107	TL1157.1	25	16	D	.75	.57	.44	.36	.29
43 D 3999	TL1304	10	50	D	.75	.57	.44	.36	.29
43 D 4122	TL1207	25	25	E	.81	.61	.48	.38	.32
43 D 4006	TL1305.1	25	50	E	.84	.63	.49	.40	.33
43 D 4078	TL1058	50	3	D	.72	.54	.42	.34	.28
43 D 4099	TL1133	50	12	F	.78	.59	.46	.37	.30
43 D 4123	TL1209	50	25	E	.90	.68	.53	.42	.35
43 D 4079	TL1059.5	100	3	D	1.80	1.35	1.05	.84	.69
43 D 4109	TL1162	100	16	E	1.92	1.44	1.12	.90	.74
43 D 4092	TL1103.5	175	6	E	2.04	1.53	1.19	.96	.79
43 D 4007	TL1214	250	25	G	2.04	1.53	1.19	.96	.79
43 D 4071	TL1217	500	25	G	.78	.59	.46	.37	.30
43 D 4124	TL1218	1000	25	H	.90	.68	.53	.42	.35
43 D 4147	TL1219	1500	25	J	.90	.68	.53	.42	.35
43 D 4148	TL1220	2000	25	K	1.32	.99	.77	.62	.51
43 D 4149	TL1194	2500	20	K	1.68	1.26	.98	.79	.65

AB PLASTIC-ENCASED MOTOR-STARTING CAPACITORS

Electrolytic capacitors for intermittent duty with 110/125 V capacitor-start AC motors. Dual blade universal terminals take quick-connect connectors, notches and eyes for soldered leads. Includes two clip-on adapters with screws. In questions of proper size, use next larger capacitance. *Minimum-maximum capacitance values replaceable. Type AB-1109 for ⅛ hp motors; AB-1110, 1/6 hp; AB-1113 and AB-1116, ¼ hp; AB-1125, ⅓ hp; AB-1130 and AB-1131, ½ hp; AB-1146 and AB-1149, 1 hp. Standard sizes to fit conventional type motor mounts. Av. shpg. wt., 10 oz.

Stock No.	Mfr's Type	* μF	Size (Dia. x L)	EACH 1-24	25-Up
43 D 5529	AB-1104	38-46	1 1/16x2 3/4"	.92	.83
43 D 5530	AB-1105	43-53	1 1/16x2 3/4"	.95	.86
43 D 5531	AB-1107	53-64	1 1/16x2 3/4"	.96	.87
43 D 5532	AB-1108	64-77	1 1/16x2 3/4"	.98	.89
43 D 5533	AB-1109	72-88	1 1/16x2 3/4"	1.00	.90
43 D 5534	AB-1110	88-108	1 1/16x2 3/4"	1.03	.93
43 D 5535	AB-1113	108-130	1 1/16x2 3/4"	1.04	.94
43 D 5536	AB-1116	124-149	1 1/16x2 3/4"	1.07	.97
43 D 5537	AB-1119	130-156	1 1/16x2 3/4"	1.13	1.02
43 D 5538	AB-1122	145-175	1 1/16x2 3/4"	1.16	1.05
43 D 5539	AB-1125	161-193	1 1/16x3 3/8"	1.18	1.07
43 D 5540	AB-1128	189-227	1 1/16x3 3/8"	1.36	1.23
43 D 5541	AB-1130	200-240	1 1/16x3 3/8"	1.41	1.27
43 D 5542	AB-1131	216-259	1 13/16x3 3/8"	1.47	1.33
43 D 5543	AB-1134	233-280	1 13/16x3 3/8"	1.70	1.53
43 D 5544	AB-1137	243-292	1 13/16x3 3/8"	1.70	1.53
43 D 5545	AB-1140	270-324	1 13/16x3 3/8"	1.72	1.55
43 D 5546	AB-1142	324-388	1 13/16x3 3/8"	1.95	1.76
43 D 5547	AB-1143	340-408	1 13/16x3 3/8"	2.01	1.81
43 D 5548	AB-1146	378-440	1 13/16x3 3/8"	2.16	1.95
43 D 5549	AB-1149	400-480	1 13/16x3 3/8"	2.19	1.98
43 D 5550	AB-1152	430-516	2 1/16x4 3/8"	2.51	2.26
43 D 5552	AB-1158	540-648	2 1/16x4 3/8"	3.52	3.17
43 D 5553	AB-1161	590-708	2 1/16x4 3/8"	3.76	3.39

192P "PACER" MINIATURE CAPACITORS

Type 192P "Pacer" miniature capacitors are nearly three times smaller than conventional paper-film tubular capacitors. They fit tight spots in small electronic assemblies that require high temperature operation and good humidity performance. Miniature capacitor sizes are approximately the same as composition resistors and may be used together with resistors and diodes in modular circuits. Non-inductor capacitors are manufactured with metal end caps over foil sections for better shielding. All have durable epoxy coating for high insulation resistance. Ambient temperature range, —55° to +85°C. Derate 50% at 105° centigrade temperature. Overall tolerance, ±10%. Av. shpg. wt., 2 oz.

SIZE CHART

Code	Size	Code	Size	Code	Size	Code	Size
A	3/64x5/16"	D	1 1/64x1/2"	G	15/64x9/16"	K	2 1/64x5/8"
B	1 1/64x5/16"	E	7/32x7/16"	H	1 9/64x1/2"	L	2 1/64x7/8"
C	1 1/64x7/16"	F	7/32x9/16"	J	1 9/64x5/8"	M	2 1/64x1 3/16"

200 WVDC

Stock No.	Type 192P-	μF	Size Code	EACH 1-24	25-49	50-99	100-249	250-499
43 D 0334	47192	.00047	A	.33	.23	.18	.15	.12
43 D 0360	56192	.00056	A	.30	.22	.17	.14	.11
43 D 0361	68192	.00068	A	.30	.22	.17	.14	.11
43 D 0362	82192	.00082	A	.30	.22	.17	.14	.11
43 D 0335	10292	.001	A	.27	.19	.15	.12	.10
43 D 0336	12292	.0012	A	.27	.19	.15	.12	.10
43 D 0337	15292	.0015	A	.27	.19	.15	.12	.10
43 D 0338	18292	.0018	B	.27	.19	.15	.12	.10
43 D 0339	22292	.0022	B	.27	.19	.15	.12	.10
43 D 0341	33292	.0033	B	.27	.19	.15	.12	.10
43 D 0342	39292	.0039	C	.27	.19	.15	.12	.10
43 D 0343	47292	.0047	C	.27	.20	.15	.12	.10
43 D 0344	56292	.0056	C	.27	.20	.15	.12	.10
43 D 0345	68292	.0068	C	.27	.20	.16	.13	.10
43 D 0346	82292	.0082	D	.30	.21	.16	.13	.11
43 D 0347	10392	.01	D	.30	.21	.17	.13	.11
43 D 0348	12392	.012	E	.30	.22	.17	.14	.11
43 D 0349	15392	.015	E	.30	.22	.17	.14	.11
43 D 0350	18392	.018	F	.30	.22	.17	.14	.12
43 D 0352	22392	.022	F	.30	.23	.18	.14	.12
43 D 0353	33392	.033	G	.33	.25	.20	.16	.13
43 D 0354	39392	.039	H	.36	.26	.21	.17	.14
43 D 0355	47392	.047	H	.39	.28	.22	.17	.14
43 D 0356	56392	.056	J	.39	.29	.23	.18	.15
43 D 0357	68392	.068	J	.42	.31	.24	.19	.16
43 D 0358	82392	.082	K	.45	.32	.25	.20	.17
43 D 0359	10492	.1	K	.45	.34	.26	.21	.17
43 D 0366	12492	.12	L	.48	.35	.27	.22	.18
43 D 0367	15492	.15	L	.48	.35	.27	.22	.18
43 D 0368	22492	.22	M	.51	.37	.29	.23	.19

80 WVDC

Stock No.	Type 192P-	μF	Size Code	EACH 1-24	25-49	50-99	100-249	250-499
43 D 0276	2229R8	.0022	A	.36	.27	.21	.17	.14
43 D 0278	2729R8	.0027	A	.36	.27	.21	.17	.14
43 D 0282	3329R8	.0033	A	.36	.27	.21	.17	.14
43 D 0286	3929R8	.0039	A	.36	.27	.21	.17	.14
43 D 0287	4729R8	.0047	A	.36	.27	.21	.17	.14
43 D 0289	5629R8	.0056	B	.36	.27	.21	.17	.14
43 D 0290	6829R8	.0068	B	.36	.27	.21	.17	.14
43 D 0293	8229R	.0082	B	.36	.27	.21	.17	.14
43 D 0294	1039R8	.01	B	.36	.26	.20	.16	.13
43 D 0295	1239R8	.012	C	.36	.27	.21	.17	.14
43 D 0296	1539R8	.015	C	.39	.29	.23	.18	.15
43 D 0300	1839R8	.018	D	.39	.30	.23	.19	.15
43 D 0301	2239R8	.022	D	.42	.30	.24	.19	.16
43 D 0302	2739R8	.027	E	.42	.31	.24	.19	.16
43 D 0303	3339R8	.033	E	.42	.31	.24	.20	.16
43 D 0309	3939R8	.039	F	.42	.32	.25	.20	.16
43 D 0310	4739R8	.047	F	.45	.33	.25	.20	.17
43 D 0311	5639R8	.056	G	.45	.34	.26	.21	.18
43 D 0313	6839R8	.068	G	.48	.35	.27	.22	.18
43 D 0314	8239R8	.082	H	.48	.36	.28	.23	.19
43 D 0320	1049R8	.1	H	.51	.38	.29	.24	.19
43 D 0322	1249R8	.12	J	.60	.44	.35	.28	.26
43 D 0323	1549R8	.15	J	.63	.47	.37	.30	.25
43 D 0324	1849R8	.18	K	.69	.52	.41	.33	.27
43 D 0325	2249R8	.22	K	.78	.57	.45	.36	.30
43 D 0327	2749R8	.27	L	.81	.61	.48	.38	.32
43 D 0328	3349R8	.33	L	.87	.65	.51	.40	.33
43 D 0332	3949R8	.39	M	.93	.69	.53	.43	.35
43 D 0333	4749R8	.47	M	.96	.72	.56	.45	.36

Specify Stock No., Mfr's Type No. and Capacitance on Capacitor Orders

Electrolytic, Tubular Capacitors; Suppression Filters

SPRAGUE ELECTROLYTIC AND TUBULAR CAPACITOR ASSORTMENTS

TK28 Assortment. Total of 80. Dipped tubular polyester capacitors. Leakproof, and heat humidity resistant. All 600 WVDC. At following μF values. Five each: .001, .002, .0022, .0033, .0047, .005, .015, .02, .022, .033, .047, .05, .1. Ten each: .01. 6-drawer cabinet.
43 D 9998. Shpg. wt., 2½ lbs. **13.95**

TK29 Assortment. Total of 105. Same construction as TK28. All units at 600 WVDC. With the following μF values. Two each: .0015; three each: .003, .068, .22, .25; five each: .001, .002, .0022, .0033, .0047, .005, .0068, .015, .02, .022, .03, .033, .1; eight each: .047, .05; ten each: .01. Complete with 9-drawer capacitor cabinet.
43 D 9999. Shpg. wt., 3 lbs. **19.89**

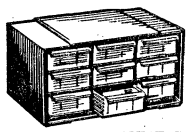
TK31 Assortment. Total of 95. Same construction as TK28. All units rated at 100 WVDC. Contains following μF values. Two each: .0033, .0068. Three each: .0015, .015, .068. Five each: .0022. Ten each: .001, .0047, .022, .033, .047. Twelve each: .1. Fifteen each: .1. Complete with 6-drawer capacitor cabinet for efficient storage.
43 D 9275. Shpg. wt., 2½ lbs. **14.79**

TK32 Assortment. Total of 136. Same construction as TK28. At 75 WVDC with μF values. Two each: .68. Five each: .33, 1.0. Ten each: .15, .22, .47. At 100 WVDC with μF values. Two each: .0033, .0068. Five each: .0015, .0022, .015, .033, .068. Ten each: .001, .0047, .01, .022, .047. Fifteen each: .1. With 9-drawer cabinet.
43 D 9276. Shpg. wt., 4 lbs. **24.93**

EK15 Assortment. Total of 37. Electrolytic. Thermo-setting resin end-seals fight humidity. At 12 WVDC with μF values. Two each: 5, 20. Five each: 10. At 16 WVDC. One each: 5, 10, 25. Three each: 100. At 25 WVDC. One each: 5, 500. Two each: 2, 10, 25, 50. Five each: 1. At 50 WVDC. One each: 100, 250, 500, 1000. 6-drawer cabinet.
43 D 9277. Shpg. wt., 2½ lbs. **19.80**

EK16 Assortment. Total of 89. Electrolytic. Thermo-setting resin end-seals. Resistant to high humidity. At 3 WVDC with μF values. One each: 100. At 12 WVDC. One each: 36. Three each: 5. Five each: 10, 20. At 16 WVDC. Two each: 5, 10, 25, 50. Seven each: 100. At 25 WVDC. One each: 1000. Two each: 20, 35, 500, 1000. Three each: 5. Five each: 2, 25, 50. Ten each: 1, 10. 50 WVDC. One each: 1000. Two each: 25, 200, 250, 500. Three each: 100. 9-drawers.
43 D 9278. Shpg. wt., 4 lbs. **49.86**

EK17 Assortment. Total of 25. Electrolytic. Ultra-small all-welded construction. Low leakage current, long shelf life. At 12 WVDC with μF values. One each: 100, 250. At 15 WVDC. One each: 10, 20, 100, 200. At 25 WVDC. One each: 5, 15. Two each: 10, 25, 50. Three each: 100. At 50 WVDC. One each: 1, 2, 5, 10. Two each: 20, 50. Complete with 6-drawer capacitor cabinet.
43 D 9279. Shpg. wt., 2½ lbs. **18.96**



EK18 Assortment. Total of 61. Same construction as EK17. At 1 WVDC with μF values. Two each: 200, 500. At 12 WVDC. One each: 12. Two each: 100, 200. At 15 WVDC. One each: 150. Two each: 10, 20, 100, 200. At 25 WVDC. Two each: 5, 15, 35. Three each: 25, 50. Five each: 10, 100. At 50 WVDC. One each: 2, 35. Two each: 1, 5. Three each: 10, 20. At 100 WVDC. One each: 20. At 150 WVDC. One each: 10. Two each: 5. With 9-drawer capacitor cabinet.
43 D 9281. Shpg. wt., 4 lbs. **47.52**

TK33 Assortment. Total of 61. Case is humidity-resistant, mica-filled, non-flammable phenolic. Dual dielectric of polyester film and capacitor tissue. Solid impregnant. All units are rated at 600 WVDC. Operate at up to 105° C without voltage derating. Contains the following μF values. Five each: .001, .002, .003, .005, .02, .03, .25; eight each: .05, .1; ten each: .01. 6-drawer capacitor cabinet.
43 D 9996. Shpg. wt., 3 lbs. **19.59**

TK34 Assortment. Total of 90. Same construction as TK33. All 600 WVDC. In μF values. Two each: .5; three each: .15, .22, .25; five each: .001, .0015, .003, .004, .005, .0068, .015, .020, .03; eight each: .002, .05, .1; ten each: .01. 9 drawer cabinet.
43 D 9997. Shpg. wt., 4 lbs. **29.31**

TK35 Assortment. Total of 45. Wound with polyester film dielectric and thin gage foil. —55° C to +85° C. All units 200 WVDC. Contains the following μF values. One each: .00047, .00068. Two each: .0015, .0022, .0033, .0068, .015, .068, .15, .22. Three each: .0047 .022, .033, .047. Five each: .001, .01, .1. 6-drawer cabinet.
43 D 9295. Shpg. wt., 2½ lbs. **14.64**

TK36 Assortment. Total of 73. Same construction as TK35. In 80 WVDC. Two each, μF: .0022, .0033, .0047, 0068,. 01,. 015, .022, .047, .068, .22, .47. Three each: .1. At 200 WVDC. Two each: .0015, .0068, .068. Three each: .0022, .0033, .0047, .015, .022, .033, .047,, .15, .22. Five each: .01, .1. 9-drawer cabinet.
43 D 9299. Shpg. wt., 4 lbs. **27.99**

EK9 Assortment. Total of 18. Electrolytic capacitors in metal case. In μF values. At 25 WVDC: 25, 100. At 50 WVDC: 5, 10, 25, 50, 100. At 150 WVDC: 20, 40, 150. At 450 WVDC: 8, 10, 20, 30, 40, 80. At 150-150 WVDC: 50-30, 50-50. Packaged in 9-drawer cabinet.
43 D 9280. Shpg. wt., 4 lbs. **18.69**

EK19 Assortment. Total of 18. Same construction as EK9. One each, μF values. At 25 WVDC: 25, 500. At 50 WVDC: 25, 50, 100, 250, 500. At 150 WVDC: 20, 50, 150. At 250 WVDC: 20. At 450 WVDC: 4, 10, 20, 40, 80, 100. At 150-150 WVDC: 50-30. 6-drawer cabinet.
43 D 9283. Shpg. wt., 2½ lbs. **18.69**

COMPONENTS CORPORATION LOW-PASS EMI SUPPRESSION FILTERS

[A] 100 WVDC FILTERS FOR 10 kHz TO 10 GHz OPERATION

Stock No.	Mfr's Type	Erie Equivalent	Filter Section	DC A	Max. DC Ohms	L., Inches	EACH 1-9	10-49	50-99	100-249
60 D 8437	M100-LQ	9000-000-0000	L	.25	1.5	1.028	23.42	21.08	19.91	18.74
60 D 8439	M100-L1	9000-000-0003	L	1.0	.35	1.028	22.61	20.35	19.22	18.09
60 D 8446	M100-L5	9000-000-0007	L	5.0	.04	1.028	21.16	19.04	17.99	16.93
60 D 8447	M100-PQ	9001-000-1000	Pi	.25	1.5	1.028	26.25	23.63	22.31	21.00
60 D 8448	M100-P1	9001-000-1003	Pi	1.0	.35	1.028	26.16	23.54	22.24	20.93
60 D 8449	M100-P3	9001-000-1005	Pi	3.0	.06	1.028	26.08	23.47	22.17	20.86
60 D 8450	M100-P5	9001-000-1008	Pi	5.0	.04	1.028	25.84	23.26	21.96	20.67
60 D 8451	M100-T2	9004-000-2000	T	2.0	.2	1.464	36.34	32.71	30.89	29.07
60 D 8458	M100-T5	9005-000-2000	T	5.0	.05	1.630	35.69	32.12	30.34	28.55

[A] 150 WVDC FILTERS FOR 10 kHz TO 10 GHz OPERATION

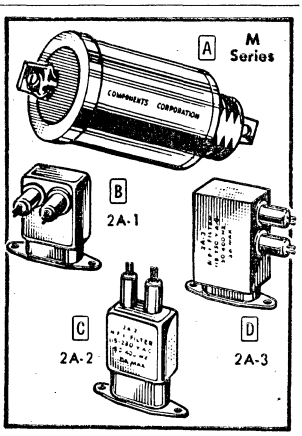
60 D 8459	M150-LQ	9000-000-0012	L	.25	1.2	1.028	29.88	26.89	25.40	23.90
60 D 8460	M150-L1	9000-000-0015	L	1.0	.25	1.028	29.07	26.16	24.21	23.26
60 D 8461	M150-L5	9000-000-0019	L	5.0	.015	1.028	27.62	24.86	23.48	22.10
60 D 8462	M150-PQ	9001-000-1010	Pi	.25	1.2	1.028	31.98	28.78	27.18	25.58
60 D 8463	M150-P1	9001-000-1013	Pi	1.0	.25	1.028	31.82	28.64	27.05	25.46
60 D 8469	M150-P3	9001-000-1015	Pi	3.0	.05	1.028	31.65	28.48	26.90	25.32
60 D 8472	M150-P5	9001-000-1017	Pi	5.0	.015	1.028	31.49	28.34	26.77	25.19
60 D 8474	M150-T2	9004-000-2001	T	2.0	.1	1.464	36.34	32.71	30.89	29.07
60 D 8477	M150-T5	9005-000-2001	T	5.0	.05	1.630	35.69	32.12	30.34	28.55

[A] 115 VAC FILTERS FOR 10 kHz TO 10 GHz OPERATION

60 D 8492	M115-L1	9000-000-0026	L	1.0	.25	1.028	22.61	20.35	19.22	18.09
60 D 8493	M115-L3	9000-000-0028	L	3.0	.05	1.028	21.96	19.76	18.67	17.57
60 D 8494	M115-L5	9000-000-0030	L	5.0	.015	1.028	21.16	19.04	17.99	16.93
60 D 8495	M115-T2	9004-000-2002	T	2.0	.1	1.464	36.34	32.71	30.89	29.07
60 D 8497	M115-T5	9005-000-2002	T	5.0	.05	1.630	35.69	32.12	30.34	28.55
60 D 8498	M115-PQ	9000-000-1018	Pi	.25	1.2	1.028	29.88	26.89	25.40	23.90
60 D 8499	M115-P1	9000-000-1021	Pi	1.0	.25	1.028	29.07	26.16	24.71	23.26
60 D 8500	M115-P3	9000-000-1023	Pi	3.0	.05	1.028	28.26	25.43	24.02	22.61
60 D 8501	M115-P5	9000-000-1025	Pi	5.0	.015	1.028	27.62	24.86	23.48	22.10

2A SERIES RFI EQUIPMENT FILTERS

Stock No.	Mfr's Type	Fig.	Filter Type	Max. Line Current	EACH 1-9	10-49	50-99	100-249
60 D 8502	2A-1	B	Dual L Section	2A	11.68	10.51	9.93	9.35
60 D 8503	2A-2	C	Dual L Section	2A	11.68	10.51	9.93	9.35
60 D 8504	2A-3	D	Dual L Section	2A	11.68	10.51	9.93	9.35

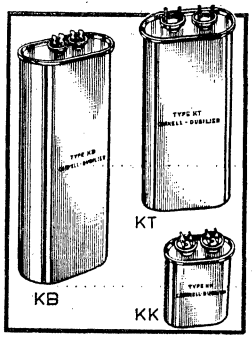


M Series. Miniature lowpass EMI suppression filters. Cover 10 kHz to 10 GHz. Highest rejection in size available. —55° C to +125° C. Hermetically sealed. ⅜" dia. ¼-28 mtg. stud. Wt., 1 oz.

2A Series. Convenient small size and light weight RFI filters for TV receivers, other electronic equipment. Operate from 115 or 230 VAC, 50-400 Hz. RFI rejection 30 dB at 1 MHz, 50 dB at 10 MHz and above 5000 pF capacitance between line and ground. High pot test, 2000 VDC. Input for standard three-conductor cord. 1½" mounting centers. 2A-1 fits in 1½x1½x1¼" space; 2A-2 fits in 2½x⅝x1¼"; 2A-3 fits in 2x1⅞x⅝". Average shpg. wt., 2 oz.

Cornell-Dubilier Capacitors

HERMETICALLY SEALED AC DYKANOL® CAPACITORS



- One-Piece Drawn Seamless Case
- Minimum Leakage
- Vinyl Paint Finish
- Welded Terminals

Motor-run capacitors designed for continuous AC duty with air conditioner motors, refrigerators, fans, blowers, business machines. Excellent for general purpose filtering, blocking power factor correction and similar applications. All types meet National Electrical Manufacturers' Association Standards set for AC capacitors.

Exclusive "Dykanol" impregnant

Maintains constant rated capacitance over entire operating temperature. One-piece drawn case is seamless and leakproof, hermetically sealed to prevent moisture or other contaminants affecting impregnant or capacitor performance.

Rugged welded terminal assembly

Provide vibration and leakage-proof connections; has phenolic cups and quick-connect terminals on cover, hermetically sealed to case. Quick-connect terminals accept standard female connectors; also have 3/32" hole for soldering wire leads directly to terminal. Leakage currents are reduced up to 80% through improved design and construction.

Cases are vinyl-painted

Painted to fight corrosion and are recognized under Component Program of Underwriter's Laboratories, Inc. Voltage ratings listed in table are measured at 60 Hz AC. Operating temperature: —30°C to +55°C (maximum case temperature, +70°C). Capacitance tolerance ±10%. All types listed have oval cases except *rectangular. Av. shpg. wt., 2 lbs.

236 VOLTS AC RATING

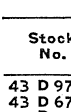
Stock No.	Mfr's Type	Cap. μF	Size LxWxH	EACH 1-24	25-99	100-Up
43 D 4321	KTL23P206Q	20	$2^{29}/_{32}$x$1^{29}/_{32}$x$4^{1}/_{4}$"	7.74	3.32	2.98
43 D 4324	KTL23P256Q	25	$2^{29}/_{32}$x$1^{29}/_{32}$x$5^{1}/_{4}$"	8.96	3.84	3.46
43 D 4325	KTL23P306Q	30	$2^{29}/_{32}$x$1^{29}/_{32}$x$6^{1}/_{4}$"	11.38	4.88	4.39
43 D 4326	KBL23P356Q	35	$3^{21}/_{32}$x$1^{31}/_{32}$x$5^{3}/_{4}$"	12.08	5.18	4.66
43 D 4327	KBL23P406Q	40	$3^{21}/_{32}$x$1^{31}/_{32}$x$6^{1}/_{4}$"	13.23	5.67	5.10
43 D 4328	KBL23P506Q	50	$3^{21}/_{32}$x$1^{31}/_{32}$x8"	17.50	7.50	6.75

370 VOLTS AC RATING

Stock No.	Mfr's Type	Cap. μF	Size LxWxH	EACH 1-24	25-99	100-Up
43 D 4300	KKL37P205Q	2	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{1}/_{16}$"	2.24	.96	.86
43 D 4301	KKL37P305Q	3	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{1}/_{16}$"	2.24	.96	.86
43 D 4302	KKL37P405Q	4	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{5}/_{16}$"	2.28	.98	.88
43 D 4303	KKL37P505Q	5	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{3}/_{4}$"	2.77	1.19	1.07
43 D 4350	KKL37P755Q	7.5	$2^{3}/_{16}$x$1^{5}/_{16}$x$3^{3}/_{4}$"	3.78	1.62	1.46
43 D 4351	KTL37P106Q	10	$2^{29}/_{32}$x$1^{29}/_{32}$x$3^{1}/_{2}$"	5.67	2.43	2.19
43 D 4352	KTL37P156Q	15	$2^{29}/_{32}$x$1^{29}/_{32}$x$4^{3}/_{4}$"	6.44	2.76	2.48
43 D 4353	KTL37P1755Q	17.5	$2^{29}/_{32}$x$1^{29}/_{32}$x$5^{1}/_{4}$"	7.42	3.18	2.86
43 D 4354	KTL37P206Q	20	$2^{29}/_{32}$x$1^{29}/_{32}$x$5^{3}/_{4}$"	8.30	3.56	3.20
43 D 4355	KTL37P256Q	25	$2^{29}/_{32}$x$1^{29}/_{32}$x$7^{3}/_{4}$"	10.12	4.34	3.90
43 D 4356	KBL37P306Q	30	$3^{21}/_{32}$x$1^{31}/_{32}$x$6^{3}/_{4}$"	12.53	5.37	4.83
43 D 4357	KBL37P356Q	35	$3^{21}/_{32}$x$1^{31}/_{32}$x8"	14.46	6.20	5.58
43 D 4358	KNL37P406Q	40	$4^{9}/_{16}$x$2^{7}/_{8}$x$5^{3}/_{16}$"	15.16	6.50	5.85
43 D 4359	KNL37P456Q	45	$4^{9}/_{16}$x$2^{7}/_{8}$x$5^{3}/_{4}$"	19.92	8.54	7.68
43 D 4360	KNL37P506Q	50	$4^{9}/_{16}$x$2^{7}/_{8}$x$6^{1}/_{4}$"	20.97	8.99	8.09

440 VOLTS AC RATING

Stock No.	Mfr's Type	Cap. μF	Size LxWxH	EACH 1-24	25-99	100-Up
43 D 4361	KKL44P205Q	2	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{1}/_{16}$"	3.15	1.35	1.22
43 D 4362	KKL44P305Q	3	$2^{3}/_{16}$x$1^{5}/_{16}$x$2^{3}/_{4}$"	3.22	1.38	1.24
43 D 4363	KKL44P405Q	4	$2^{3}/_{16}$x$1^{5}/_{16}$x$3^{1}/_{8}$"	3.33	1.43	1.28
43 D 4364	KKL44P505Q	5	$2^{3}/_{16}$x$1^{5}/_{16}$x$3^{3}/_{4}$"	3.68	1.58	1.42
43 D 4365	KTL44P755Q	7.5	$2^{29}/_{32}$x$1^{29}/_{32}$x$4^{1}/_{4}$"	5.39	2.31	2.08
43 D 4366	KTL44P106Q	10	$2^{29}/_{32}$x$1^{29}/_{32}$x$4^{1}/_{4}$"	6.41	2.75	2.47
43 D 4367	KTL44P156Q	15	$2^{29}/_{32}$x$1^{29}/_{32}$x$6^{3}/_{4}$"	8.68	3.72	3.35
43 D 4368	KBL44P206Q	20	$3^{21}/_{32}$x$1^{31}/_{32}$x$6^{1}/_{4}$"	10.12	4.34	3.90
43 D 4369	KNL44P306Q	30	$4^{9}/_{16}$x$2^{7}/_{8}$x$5^{3}/_{16}$"	15.75	6.75	6.08
43 D 4370	KNL44P506Q	50	$4^{9}/_{16}$x$2^{7}/_{8}$x$8^{3}/_{4}$"	23.73	10.17	9.15

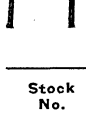


DPMS PAPER-"MYLAR" DIELECTRIC CAPACITORS

Dual-dielectric for high reliability operation. "Fix-fil" impregnant. Crimped leads permit uniform parallel mounting. Temp. range, —55°C to 125°C. Tolerance ±10%. Av. shpg. wt., 2 oz.

200 WVDC

Stock No.	Mfr's Type DPMS	μF	Size, Inches	EACH 1-24	25-49	50-99	100-499	500-999
43 D 9725	2S22	.022	.350x .855	.18	.15	.11	.10	.08
43 D 6786	2S47	.047	.450x .855	.21	.16	.12	.11	.09
43 D 6787	2P1	.1	.470x1.180	.24	.19	.15	.13	.11
43 D 9726	2P22	.22	.590x1.300	.36	.27	.21	.18	.15
43 D 9724	2P47	.47	.730x1.600	.45	.35	.27	.23	.20
400 WVDC								
43 D 6789	4S1	.01	.390x .690	.18	.14	.11	.09	.08
43 D 6790	4S22	.022	.390x .855	.18	.14	.11	.09	.08
43 D 6608	4S33	.033	.440x .855	.18	.14	.11	.09	.08
43 D 9728	4S47	.047	.415x1.150	.21	.16	.13	.11	.09
43 D 6610	4S5	.05	.415x1.150	.21	.17	.13	.11	.10
43 D 6791	4P1	.1	.520x1.180	.27	.20	.16	.14	.12
43 D 9730	4P22	.22	.620x1.560	.36	.27	.21	.18	.15
43 D 6611	4P25	.25	.650x1.560	.42	.32	.25	.22	.18
600 WVDC								
43 D 6794	6D1	.001	.340x .690	.18	.15	.11	.10	.08
43 D 6792	6D15	.0015	.340x.660	.18	.15	.11	.10	.08
43 D 6798	6D22	.0022	.340x .660	.18	.15	.11	.10	.08
43 D 6612	6D33	.0033	.370x .660	.18	.15	.11	.10	.08
43 D 6855	6D47	.0047	.400x .690	.18	.15	.11	.10	.08
43 D 6620	6D5	.005	.400x .690	.18	.15	.11	.10	.08
43 D 6793	6D68	.0068	.430x .690	.18	.15	.11	.10	.08
1600 WVDC								
43 D 6859	6S1	.01	.390x .870	.18	.15	.11	.10	.08
43 D 6795	6S15	.015	.415x .870	.18	.15	.11	.10	.08
43 D 6861	6S22	.022	.470x .870	.18	.15	.11	.10	.09
43 D 6627	6S33	.033	.430x1.150	.24	.18	.14	.12	.10
43 D 6863	6S47	.047	.490x1.150	.27	.20	.16	.14	.12
43 D 6796	6S5	.050	.490x1.150	.27	.20	.16	.14	.12
43 D 6797	6S68	.068	.540x1.300	.30	.23	.18	.15	.13
43 D 6866	6P1	.1	.640x1.300	.36	.26	.20	.18	.15
43 D 6799	6P15	.15	.650x1.560	.42	.31	.24	.21	.17
43 D 9733	6P22	.22	.750x1.560	.51	.39	.30	.26	.22
43 D 6632	6P25	.25	.830x1.560	.57	.42	.33	.28	.24



DMF DIPPED POLYESTER FILM CAPACITORS

Flat, space saving capacitors. Moisture resistant casing, phenolic dipped and epoxy impregnated. "Fix-fil" impregnated; no leakage even at maximum operating temperature. 1½" copperweld leads. Operating temp., —55° C to 85° C. Derate voltage, 10% at 100° C, 50% at 125° C. Tol., ±10%. Av. shpg. wt., 2 oz.

100 WVDC

Stock No.	Type DMF	μF	Size, Inches LxWxT	EACH 1-24	25-49	50-99	100-499	500-999
43 D 5270	1S22-10	.022	$^{3}/_{4}$x$^{5}/_{16}$x$^{3}/_{16}$	.21	.16	.13	.11	.09
43 D 5271	1S47-10	.047	$^{3}/_{4}$x$^{1}/_{32}$x$^{7}/_{32}$	.24	.17	.14	.12	.10
43 D 5272	1P1-10	.1	$^{3}/_{4}$x$^{7}/_{16}$x$^{5}/_{16}$	.27	.21	.16	.14	.12
43 D 5273	1P22-10	.22	$^{3}/_{4}$x$^{3}/_{4}$x$^{5}/_{8}$	.39	.29	.23	.20	.17
43 D 5268	1P33-10	.33	$^{3}/_{4}$x$^{27}/_{32}$x$^{7}/_{16}$	.45	.33	.26	.22	.18
43 D 5274	1P47-10	.47	$1^{1}/_{8}$x$^{3}/_{4}$x$^{3}/_{8}$	.51	.38	.30	.26	.21
43 D 5275	1W1-10	1.0	$1^{1}/_{8}$x$1^{5}/_{16}$x$^{9}/_{16}$	.75	.57	.44	.38	.32
200 WVDC								
43 D 5276	2S1-10	.01	$^{3}/_{4}$x$^{5}/_{16}$x$^{3}/_{16}$	.21	.16	.13	.11	.09
43 D 5277	2S22-10	.022	$^{3}/_{4}$x$^{3}/_{8}$x$^{1}/_{4}$	.21	.16	.13	.11	.09
43 D 5279	2S47-10	.047	$^{3}/_{4}$x$^{3}/_{8}$x$^{1}/_{4}$	.24	.17	.14	.12	.10
43 D 5269	2S68-10	.068	$^{3}/_{4}$x$^{13}/_{32}$x$^{9}/_{32}$	.24	.18	.14	.12	.10
43 D 5280	2P1-10	.1	$^{3}/_{4}$x$^{23}/_{32}$x$^{5}/_{16}$	.27	.20	.16	.14	.12
43 D 5282	2P33-10	.33	$^{3}/_{4}$x$^{31}/_{32}$x$^{9}/_{16}$	.45	.33	.26	.22	.18
43 D 5283	2P47-10	.47	$1^{1}/_{8}$x$^{7}/_{8}$x$^{1}/_{2}$	.51	.38	.30	.26	.21
400 WVDC								
43 D 5288	4S47-10	.047	$^{3}/_{4}$x$^{23}/_{32}$x$^{11}/_{32}$	.24	.18	.14	.12	.10
43 D 5289	4P1-10	.1	$^{3}/_{4}$x$^{29}/_{32}$x$^{1}/_{2}$	.30	.23	.18	.15	.13
43 D 5290	4P22-10	.22	$1^{1}/_{8}$x$^{7}/_{8}$x$1^{5}/_{32}$	.39	.29	.23	.20	.17
600 WVDC								
43 D 5291	6D1-10	.001	$^{3}/_{4}$x$^{5}/_{16}$x$^{3}/_{16}$	.24	.16	.13	.11	.09
43 D 5292	6D22-10	.0022	$^{3}/_{4}$x$^{5}/_{16}$x$^{3}/_{16}$	.24	.16	.13	.11	.09
43 D 5293	6D33-10	.0033	$^{3}/_{4}$x$^{5}/_{16}$x$^{3}/_{16}$	.24	.16	.13	.11	.09
43 D 5294	6D47-10	.0047	$^{3}/_{4}$x$1^{1}/_{32}$x$^{7}/_{32}$	.24	.16	.13	.11	.09
43 D 5295	6S1-10	.01	$^{3}/_{4}$x$^{13}/_{32}$x$^{9}/_{32}$	.24	.16	.13	.11	.09
43 D 5298	6S47-10	.047	$^{3}/_{4}$x$^{7}/_{8}$x$1^{5}/_{32}$	.30	.23	.18	.15	.13
43 D 5299	6P1-10	.1	$1^{1}/_{8}$x$1^{3}/_{16}$x$^{7}/_{16}$	.39	.29	.23	.19	.16

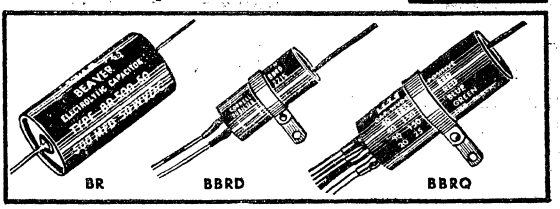
When Ordering, Specify Stock No., Mfr's Type No. and Capacitance

Cornell-Dubilier "Blue Beaver" Capacitors

CDE

Tubular electrolytics for economy circuits. Sealed in aluminum cans, cardboard sleeves. Types BR and BBR have negative terminal grounded to can. Type BBR is miniature version of BR. Anodes and cathodes of BR and BBR units up to and including 150-V. types, are etched for use with junction rectifiers. BBRD, BBRT, BBRQ have 7" flexible vinyl-covered leads with color-coded positive, common neg. Rated 85° C, except 500-V. types, 65°C. Sizes are can-size only; add 1/16" to dia. and 3/16" to length for sleeve. Tolerance through 50 V is —10% to +150%; 51 V through 350 V, —10% to +100%; 351V to 700 V, —10% to +50%.

Equivalent Types Available—See Page 171



TYPES BR/*BBR SINGLE SECTION Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	μF	WV DC	Size Inches	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 9203	25-6*	25	6	3/8x1 1/16	.51	.37	.29	.23	.20	.18
43 D 9204	50-6*	50	6	3/8x1 1/16	.57	.41	.32	.26	.22	.20
43 D 9205	100-6	100	6	1/2x1 1/16	.69	.50	.39	.31	.26	.24
43 D 9206	250-6	250	6	1/2x1 1/16	.81	.64	.50	.40	.34	.31
43 D 9285	500-6	500	6	1/2x1 1/16	.93	.73	.57	.45	.38	.35
43 D 9286	1000-6	1000	6	5/8x1 11/16	1.14	.89	.69	.55	.47	.43
43 D 9287	2000-6	2000	6	3/4x2	1.38	1.04	.83	.67	.57	.52
43 D 9207	100-15	100	15	1/2x1 1/16	.75	.52	.41	.32	.28	.25
43 D 9272	250-15	250	15	1/2x1 1/16	.93	.73	.57	.46	.40	.36
43 D 9273	500-15	500	15	1/2x1 1/16	1.05	.82	.64	.51	.43	.40
43 D 9274	1000-15	1000	15	5/8x1 11/16	1.41	1.07	.83	.67	.58	.53
43 D 9284	2000-15	2000	15	3/4x2	1.68	1.26	.97	.78	.67	.62
43 D 9409	3000-15	3000	15	7/8x2 3/16	2.37	1.82	1.42	1.14	.97	.89
43 D 9410	4000-15	4000	15	7/8x2 3/4	3.00	2.25	1.75	1.40	1.20	1.10
43 D 9411	5000-15	5000	15	1x3	3.27	2.45	1.91	1.53	1.30	1.20
43 D 9216	10-25*	10	25	3/8x1 1/16	.60	.42	.33	.26	.23	.21
43 D 9217	20-25*	20	25	3/8x1 1/16	.60	.43	.34	.27	.23	.21
43 D 9218	25-25*	25	25	3/8x1 1/16	.60	.44	.35	.28	.24	.22
43 D 9219	50-25	50	25	1/2x1 1/16	.66	.47	.37	.30	.25	.23
43 D 9208	100-25	100	25	1/2x1 1/16	.78	.57	.45	.36	.30	.28
43 D 9270	250-25	250	25	1/2x1 7/16	1.02	.79	.62	.49	.42	.39
43 D 9271	500-25	500	25	5/8x1 11/16	1.38	1.04	.83	.67	.57	.52
43 D 9261	1000-25	1000	25	3/4x2	2.37	1.78	1.39	1.11	.95	.87
43 D 9412	2000-25	2000	25	7/8x2 1/2	2.91	2.19	1.70	1.36	1.17	1.07
43 D 9222	5-50*	5	50	3/8x1 1/16	.60	.42	.32	.26	.22	.20
43 D 9223	10-50*	10	50	3/8x1 1/16	.60	.42	.33	.27	.23	.21
43 D 9224	25-50	25	50	1/2x1 1/16	.63	.44	.35	.28	.24	.22
43 D 9213	50-50	50	50	1/2x1 1/16	.72	.51	.40	.32	.28	.25
43 D 9147	100-50	100	50	1/2x1 1/16	.81	.59	.46	.37	.31	.29
43 D 9148	150-50	150	50	5/8x1 1/16	.90	.66	.51	.41	.35	.32
43 D 9149	250-50	250	50	3/4x1 7/16	1.05	.83	.64	.51	.44	.41
43 D 9269	500-50	500	50	7/8x1 11/16	1.44	1.11	.86	.69	.59	.54
43 D 9413	1000-50	1000	50	1x2 11/16	2.49	1.84	1.44	1.15	.98	.90
43 D 9414	2000-50	2000	50	1 3/8x2 3/4	3.48	2.60	2.02	1.61	1.38	1.27
43 D 9214	4-150*	4	150	3/8x1 1/16	.60	.43	.33	.27	.23	.21
43 D 9249	8-150	8	150	1/2x1 1/16	.63	.45	.34	.28	.24	.22
43 D 9226	10-150	10	150	1/2x1 1/16	.63	.46	.35	.29	.25	.23
43 D 9247	12-150	12	150	1/2x1 1/16	.66	.47	.37	.29	.25	.23
43 D 9248	16-150	16	150	1/2x1 7/16	.69	.49	.38	.31	.26	.24
43 D 9225	20-150	20	150	1/2x1 7/16	.69	.50	.39	.31	.27	.24
43 D 9145	25-150	25	150	3/4x1 7/16	.75	.53	.41	.33	.28	.25
43 D 9045	30-150	30	150	3/4x1 7/16	.75	.55	.43	.34	.29	.26
43 D 4046	40-150	40	150	3/4x1 11/16	.81	.58	.45	.36	.31	.29
43 D 4047	50-150	50	150	3/4x1 11/16	.84	.59	.46	.37	.32	.30
43 D 9146	60-150	60	150	7/8x1 1/16	.87	.63	.49	.39	.34	.31
43 D 4039	80-150	80	150	7/8x1 11/16	.93	.68	.54	.43	.36	.33

Stock No.	Mfr's Type	μF	WV DC	Size Inches	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 4056	100-150	100	150	7/8x2	1.05	.74	.58	.46	.40	.36
43 D 4057	150-150	150	150	1x2 3/16	1.11	.82	.63	.51	.44	.40
43 D 4542	200-150	200	150	1x3	1.32	.98	.77	.62	.53	.48
43 D 4543	300-150	300	150	1x3 13/16	1.77	1.35	1.04	.84	.72	.66
43 D 9227	4-250	4	250	1/2x1 1/16	.63	.47	.37	.30	.25	.23
43 D 9228	8-250	8	250	1/2x1 7/16	.69	.53	.41	.33	.28	.26
43 D 9229	12-250	12	250	1/2x1 7/16	.75	.57	.44	.35	.30	.28
43 D 4033	16-250	16	250	3/4x1 7/16	.78	.60	.47	.38	.32	.30
43 D 4034	20-250	20	250	3/4x1 7/16	.81	.64	.49	.40	.34	.31
43 D 9142	30-250	30	250	3/4x1 11/16	.87	.68	.53	.42	.36	.33
43 D 4035	40-250	40	250	3/4x2	.93	.73	.57	.46	.40	.36
43 D 9143	50-250	50	250	7/8x1 1/16	1.05	.80	.62	.50	.43	.40
43 D 9144	60-250	60	250	1x1 11/16	1.08	.84	.65	.52	.44	.41
43 D 4024	100-250	100	250	1x2 3/16	1.32	.96	.75	.60	.52	.47
43 D 4020	4-350	4	350	5/8x1 1/16	.63	.49	.38	.30	.26	.24
43 D 4021	8-350	8	350	5/8x1 7/16	.72	.55	.43	.34	.29	.26
43 D 4022	12-350	12	350	3/4x1 7/16	.78	.60	.47	.38	.32	.30
43 D 4023	16-350	16	350	3/4x1 7/16	.84	.66	.51	.41	.35	.32
43 D 4018	20-350	20	350	3/4x1 7/16	.87	.68	.52	.42	.36	.33
43 D 4019	30-350	30	350	3/4x2	.99	.77	.60	.48	.41	.38
43 D 4026	40-350	40	350	7/8x2	1.05	.81	.62	.51	.43	.40
43 D 4544	60-350	60	350	1x2	1.17	.91	.71	.57	.48	.44
43 D 4545	80-350	80	350	1x3	1.35	1.01	.78	.63	.54	.50
43 D 4546	100-350	100	350	1x3	1.50	1.11	.86	.69	.59	.54
43 D 4008	1-450	1	450	5/8x1 1/16	.66	.51	.39	.32	.27	.24
43 D 4009	2-450	2	450	5/8x1 1/16	.66	.52	.40	.32	.28	.25
43 D 4010	4-450	4	450	5/8x1 1/16	.69	.53	.42	.34	.29	.25
43 D 4011	8-450	8	450	3/4x1 7/16	.75	.59	.46	.37	.31	.29
43 D 4012	10-450	10	450	3/4x1 7/16	.78	.62	.47	.38	.33	.30
43 D 4013	12-450	12	450	3/4x1 7/16	.81	.64	.50	.40	.34	.31
43 D 4014	16-450	16	450	3/4x1 11/16	.84	.65	.53	.42	.36	.33
43 D 4015	20-450	20	450	7/8x1 11/16	.93	.73	.56	.45	.38	.35
43 D 4016	30-450	30	450	1x2	1.02	.80	.62	.50	.42	.39
43 D 4017	40-450	40	450	1x2 3/16	1.08	.83	.64	.52	.44	.41
43 D 4004	60-450	60	450	1x3	1.41	1.08	.83	.67	.57	.53
43 D 4005	80-450	80	450	1x3 9/16	1.68	1.26	.98	.79	.67	.62
43 D 4547	100-450	100	450	1x3 13/16	1.92	1.48	1.15	.92	.80	.73
43 D 9215	4-500	4	500	5/8x1 7/16	.72	.56	.43	.35	.30	.28
43 D 4000	8-500	8	500	3/4x1 7/16	.78	.61	.47	.38	.33	.30
43 D 4001	16-500	16	500	7/8x1 11/16	.90	.70	.54	.43	.37	.34
43 D 4002	20-500	20	500	7/8x2	.96	.74	.58	.47	.40	.36
43 D 4003	30-500	30	500	1x2	1.05	.82	.66	.52	.44	.41
43 D 4538	8-700	8	700	15/16x3 3/16	1.74	1.31	1.02	.81	.70	.64
43 D 4539	10-700	10	700	1 1/16x3 3/16	1.86	1.40	1.09	.87	.74	.68
43 D 4541	16-700	16	700	1 1/16x4 5/16	2.25	1.69	1.31	1.05	.90	.83

TYPE BBRD DUAL SECTION Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	μF	WV DC	Size Inches	EACH 1-24	25-49	50-99	100-499	500-999
43 D 9250	115	10-10	50	3/4x1 1/16	.84	.72	.55	.44	.43
43 D 9252	2215	20-20	150	3/4x1 11/16	.93	.77	.58	.47	.46
43 D 9254	3315	30-30	150	7/8x1 11/16	1.08	.84	.64	.51	.49
43 D 9257	4415	40-40	150	7/8x2	1.11	.87	.66	.53	.51
43 D 9258	5315	50-30	150	7/8x2	1.17	.87	.67	.53	.51
43 D 9259	5515	50-50	150	1x2	1.26	.87	.73	.59	.57
43 D 9260	8415	80-40	150	1x2 3/16	1.35	.97	.77	.61	.59
43 D 8609	0183.7	100-50	150	1x3	1.80	1.10	.83	.67	.65

Stock No.	Mfr's Type	μF	WV DC	Size Inches	EACH 1-24	25-49	50-99	100-499	500-999
43 D 9288	101015	100-100	150	1x3	1.92	1.20	.91	.73	.71
43 D 9263	2225	20-20	250	1x1 11/16	1.11	.92	.70	.56	.54
43 D 9296	3325	30-30	250	1x2 3/16	1.35	1.02	.78	.62	.60
43 D 8614	0286	150-100	300	1 3/8x4 3/16	3.15	2.40	1.84	1.47	1.42
43 D 9265	8D45	8-8	450	7/8x1 11/16	1.02	.91	.69	.55	.53
43 D 9267	16D45	16-16	450	1x2 1/2	1.35	1.12	.85	.68	.66
43 D 9268	2245	20-20	450	1x3	1.50	1.23	.94	.75	.72
43 D 9221	4445	40-40	450	1x4 1/16	2.04	1.74	1.32	1.06	1.02

TYPE BBRT TRIPLE SECTION Av. shpg. wt., 6 oz.

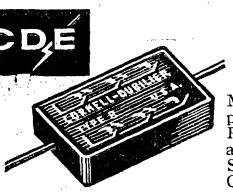
43 D 9232	33315	30-30-30	150	1x2	1.41	1.30	.99	.79	.76
43 D 9233	42215	40-20-20	150	1x1 11/16	1.35	1.33	1.02	.81	.78
43 D 9234	43215	40-30-20	150	1x2	1.41	1.30	.99	.79	.76
43 D 9236	44415	40-40-40	150	1x2 3/16	1.47	1.36	1.04	.83	.80
43 D 9435	53215	50-30-20	150	1x3	1.47	1.31	1.00	.80	.77

43 D 9298	84215	80-40-20	150	1x3	1.65	1.40	1.08	.86	.83
43 D 9239	4215C	40-20, 20	150,25	1x1 11/16	1.29	1.24	.96	.76	.73
43 D 9243	5315C	50-30, 20	150,25	1x1 11/16	1.41	1.35	1.16	.93	.90
43 D 8621	0185	40-40-40	300	1 1/8x3	2.76	1.71	1.30	1.04	1.00

Allied offers fast, same-day shipment of industrial quantities at OEM price discounts. To assure the fastest and most accurate service, please specify manufacturer's type number, capacitance and stock number on each order. Depend on Allied for prompt off-the-shelf delivery in industrial quantities for all your electronic needs. Contact the nearest Allied Electronics facility for information on prices and delivery on quantities larger than shown. See page 3 for complete list of Allied offices, from coast-to-coast.

Standard CDE Products Available in Quantity at OEM Prices

Cornell-Dubilier Capacitors



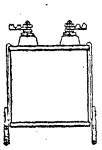
SILVERED, MOLDED DIPPED MICA CAPACITORS

Meet MIL-C-5 and EIA RS-143 specifications. Sturdy phenolic cases resist extreme humidity, moisture. Rated at 500 WVDC except *300 WVDC. Temperature range, −55° C to +85° C. Tolerance, ±5%. Size: CM-15, 33/64x19/64x3/16"; CM-20, 47/64x7/16x3/16"; CM-30, 51/64x51/64x1/4"; CM-35, 51/64x51/64x5/16". Letter C in Manufacturer's Type No. indicates. ±200 parts per million per °C and ±5% drift; letter E in Mfr's Type No., −20 to +100 parts per million per °C, ±0.1 pF drift; letter F in Mfr's Type No., 0 to +70 parts per million per °C, ±0.05% and 0.1 pF drift. Average shpg. wt., 2 oz.

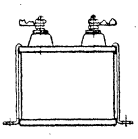
Stock No.	Type CM-	Cap. pF	EACH 1-24	25-99	100-499	500-999	1000-Up
43 D 4982	15CD100JN3	10	.24	.15	.11	.10	.08
43 D 4983	15CD150JN3	15	.21	.14	.11	.09	.07
43 D 4984	15CD200JN3	20	.21	.13	.10	.08	.07
43 D 4161	15CD240JN3	24	.21	.13	.10	.08	.07
43 D 4169	15ED270JN3	27	.21	.13	.10	.08	.07
43 D 4985	15ED330JN3	33	.21	.13	.10	.08	.07
43 D 4170	15ED360JN3	36	.21	.13	.10	.08	.07
43 D 4178	15ED430JN3	43	.21	.13	.10	.08	.07
43 D 4986	15ED470JN3	47	.21	.13	.10	.08	.07
43 D 4179	15ED510JN3	51	.21	.13	.10	.08	.07
43 D 4180	15FD560JN3	56	.21	.13	.10	.08	.07
43 D 4181	15FD620JN3	62	.21	.13	.10	.08	.07
43 D 4987	15FD680JN3	68	.21	.13	.10	.08	.07
43 D 4182	15FD750JN3	75	.21	.13	.10	.08	.07
43 D 4988	15FD820JN3	82	.21	.13	.10	.08	.07
43 D 4989	15FD101JN3	100	.21	.13	.10	.08	.07
43 D 4183	15FD111JN3	110	.21	.14	.10	.09	.07
43 D 4990	15FD121JN3	120	.21	.14	.11	.09	.07
43 D 4991	15FD151JN3	150	.24	.15	.11	.09	.08
43 D 4184	15FD181JN3	180	.24	.16	.12	.10	.08
43 D 4992	15FD201JN3	200	.24	.16	.12	.10	.08
43 D 4993	15FD221JN3	220	.24	.16	.12	.10	.08
43 D 4994	15FD241JN3	240	.24	.16	.12	.10	.09
43 D 4995	15FD271JN3	270	.27	.18	.14	.11	.09
43 D 4996	15FD301JN3	300	.30	.18	.14	.12	.10

Stock No.	Type CM-	Cap. pF	EACH 1-24	25-99	100-499	500-999	1000-Up
43 D 4997	15FD331JN3	330	.30	.20	.15	.12	.10
43 D 4190	15FD361JN3	360	.33	.21	.16	.13	.10
43 D 4998	15FD391JN3	390	.33	.21	.15	.13	.11
43 D 4999	15FD471JN3	470	.36	.24	.18	.15	.12
43 D 4921	15FD511JN3	510	.39	.25	.19	.16	.13
43 D 4191	20FD621JN3	620	.30	.21	.15	.13	.11
43 D 4978	20FD681JN3	680	.30	.21	.15	.13	.11
43 D 4979	20FD821JN3	820	.33	.23	.17	.14	.12
43 D 4980	20FD102JN3	1000	.39	.26	.19	.16	.13
43 D 4192	30FD122JN3	1200	.45	.30	.22	.18	.15
43 D 4946	30FD152JN3	1500	.51	.33	.25	.21	.17
43 D 4193	30FD182JN3	1800	.54	.37	.28	.23	.19
43 D 4947	30FD202JN3	2000	.60	.39	.29	.24	.20
43 D 4194	30FD222JN3	2200	.63	.42	.31	.26	.21
43 D 4948	30FD242JN3	2400	.63	.42	.31	.26	.21
43 D 4195	30FD272JN3	2700	.66	.45	.33	.28	.23
43 D 4196	30FD332JN3	3300	.84	.56	.42	.35	.28
43 D 4928	35FD362JN3	3600	.87	.58	.44	.36	.29
43 D 4198	35FD392JN3	3900	.90	.61	.46	.38	.31
43 D 4929	35FD472JN3	4700	1.11	.74	.56	.46	.38
43 D 4930	35FD512JN3	5100	1.14	.77	.58	.48	.39
43 D 4931	35FD562JN3	5600	1.26	.84	.63	.53	.43
43 D 4932	35FD682JN3	6800	1.41	.93	.70	.58	.47
43 D 4922	35FC103JN3	10,000*	1.95	1.30	.97	.81	.65

With TJU Bracket



With CP07S (TJH) Bracket



With CP07F (TJL) Bracket

TYPE CP70 CAPACITORS AND BRACKETS

Oil-filled paper capacitors designed for power supply, filter applications. Meet MIL-C-25C specifications as shown. Tolerance, ±10%. Terminals have ceramic pillar insulators. The hermetically sealed metal cases have soldered seams. Operating temp range, −55° C to +85° C. Dual marked with MIL No. and industrial CDE Type No. Brackets must be ordered with capacitors to obtain prices shown in table. Order the MIL CP07F Footed Bracket (sold in pairs) to get equivalent of CDE's capacitor Type TJH; Type TJU (sold singly) is universal bracket. All listings are Characteristic F, commercial type T-; except *Characteristic E, TCO-. Contact Allied for prices on quantities of 500-999 or on brackets alone. Shpg. wt., 4 oz.

600 WVDC Shpg. wts., 5 oz. to 1½ lbs.

Stock No.	MIL No. CP70E1-	Type T-	µF	Size (In.)	EACH 1-9	10-24	25-49	50-99	100-499
43 D 8948	EF105K1	6010X*	1.0	1 13/16x1 1/16x2 1/4	4.44	2.22	2.00	1.85	1.70
43 D 8949	FF205K1	6020	2.0	1 13/16x1 1/16x2 7/8	4.98	2.49	2.24	2.08	1.91
43 D 8950	FF405K1	6040	4.0	2 1/2x1 3/16x3 1/2	5.70	2.85	2.57	2.38	2.19
43 D 8951	FF605K1	6060	6.0	2 1/2x1 3/16x4 3/4	6.36	3.18	2.86	2.65	2.44
43 D 8952	FF805K1	6080	8.0	3 3/4x1 1/4x3 7/8	7.38	3.69	3.32	3.08	2.83
43 D 8953	FF106K1	6100	10.0	3 3/4x1 1/4x4 3/4	7.98	3.99	3.59	3.33	3.06

1000 WVDC Shpg. wts., 5 oz. to 2 lbs.

Stock No.	MIL No. CP70E1-	Type T-	µF	Size (In.)	EACH 1-9	10-24	25-49	50-99	100-499
43 D 8973	EG504K1	10005X*	.5	1 13/16x1 1/16x2 1/4	4.50	2.25	2.03	1.88	1.73
43 D 8974	FG105K1	10010	1.0	1 13/16x1 1/16x2 1/4	4.89	2.45	2.20	2.04	1.88
43 D 8975	FG205K1	10020	2.0	1 13/16x1 1/16x3 7/8	5.26	2.64	2.38	2.20	2.02
43 D 8977	FG405K1	10040	4.0	2 1/2x1 3/16x4 3/4	6.12	3.06	2.75	2.55	2.35
43 D 8978	FG805K1	10080X	8.0	3 3/4x1 3/4x3 7/8	8.07	4.04	3.63	3.36	3.09
43 D 8979	FG106K1	10100	10.0	3 3/4x1 3/4x4 3/4	9.15	4.58	4.12	3.81	3.51
43 D 8980	FG126K1	10120X	12.0	3 3/4x2 1/4x4 1/2	10.68	5.34	4.81	4.45	4.09
43 D 8981	FG156K1	10150	15.0	3 3/4x2 1/2x4 3/4	12.90	6.45	5.81	5.38	4.95

2000 WVDC (†2500 WVDC) Shpg. wts., 8 oz. to 6 lbs.

Stock No.	MIL No. CP70E1-	Type T-	µF	Size (In.)	EACH 1-9	10-24	25-49	50-99	100-499
43 D 8982	EK104K1†	25001X*	.1	2 1/2x1 3/16x2 1/2	6.39	3.20	2.88	2.66	2.45
43 D 8983	EJ504K1	20005X*	.5	2 1/2x1 3/16x2 7/8	6.96	3.48	3.13	2.90	2.67
43 D 8984	FJ105K1	20010X	1.0	2 1/2x1 3/16x3 1/2	6.78	3.39	3.05	2.83	2.60
43 D 8985	FJ205K1	20020X	2.0	3 3/4x1 1/4x4 1/4	8.31	4.16	3.74	3.46	3.19
43 D 8986	FJ405K1	20040	4.0	3 3/4x2 1/4x3 7/8	10.50	5.25	4.73	4.38	4.03
43 D 8987	FJ805K1	20080X	8.0	3 3/4x3 3/16x5 1/8	16.20	8.10	7.29	6.75	6.21
43 D 8988	FJ106K1	20100	10.0	4 9/16x3 3/4x4 3/4	18.84	9.42	8.48	7.85	7.22
43 D 8989	FJ126K1	20120	12.0	4 9/16x3 3/4x5 1/2	21.93	10.97	9.87	9.14	8.41

3000 WVDC Shpg. wts., 8 oz. to 5 lbs.

Stock No.	MIL No. CP70E1-	Type T-	µF	Size (In.)	EACH 1-9	10-24	25-49	50-99	100-499
43 D 8990	FL104K1	30001X	.1	2 1/2x1 3/16x2 1/2	8.40	4.20	3.78	3.50	3.22
43 D 8991	EL254K1	300025X	.25	2 1/2x1 3/16x2 7/8	9.36	4.68	4.21	3.90	3.59
43 D 8992	FL504K1	30005X	.5	2 1/2x1 3/16x4 1/4	10.05	5.03	4.52	4.19	3.85
43 D 8993	FL105K1	30010	1.0	3 3/4x2 1/4x3 7/8	11.97	5.99	5.39	4.99	4.59
43 D 8994	FL205K1	30020X	2.0	3 3/4x3 3/16x4 1/2	15.48	7.74	6.97	6.45	5.93
43 D 8995	FL405K1	30040	4.0	4 9/16x3 3/4x4 3/4	21.67	10.79	9.71	8.99	8.27

4000 WVDC Shpg. wts., 4 lbs. to 8½ lbs.

Stock No.	MIL No. CP70E1-	Type T-	µF	Size (In.)	EACH 1-9	10-24	25-49	50-99	100-499
43 D 8996	FM105K1	40010	1.0	3 3/4x2 1/4x5 1/8	15.06	7.53	6.78	6.28	5.77
43 D 8997	FM205K1	40020	2.0	4 9/16x3 3/4x5 1/8	20.04	10.02	9.02	8.35	7.68
43 D 8998	FM405K1	40040X	4.0	4 9/16x3 3/4x8 1/2	39.06	19.53	17.58	16.28	14.97

MOUNTING BRACKETS (With Capacitors Only)

Pr. of TJL Brackets Stock No.	MIL CP07F	Pr. of TJH Brackets Stock No.	MIL CP07S	(One) Universal Bracket Stock No.	Type TJU	PER SET
43 D 8450	A2	43 D 8475	A2	43 D 8967	18402	.16
43 D 8451	A3	43 D 8476	A3	43 D 8967	18402	.16
43 D 8954	B3	43 D 8966	B3	43 D 8971	18403	.16
43 D 8455	B6	43 D 8480	B6	43 D 8971	18403	.16
43 D 8456	C2	43 D 8481	C2	43 D 8972	18404	.16
43 D 8458	C4	43 D 8483	C4	43 D 8972	18404	.16

CAPACITOR MOUNTING BRACKETS

43 D 8450	A2	43 D 8475	A2	43 D 8967	18402	.16
43 D 8450	A2	43 D 8475	A2	43 D 8967	18402	.16
43 D 9051	A5	43 D 9054	A5	43 D 8967	18402	.16
43 D 8455	B6	43 D 8480	B6	43 D 8971	18403	.16
43 D 8459	D2	43 D 8484	D2	43 D 9057	18405	.27
43 D 8440	D5	43 D 8487	D5	43 D 9057	18405	.27
43 D 8462	E4	43 D 8488	E4	43 D 9058	18406	.27
43 D 9053	F1	43 D 9056	F1	43 D 9059	18407	.58

CAPACITOR MOUNTING BRACKETS

43 D 9847	B1	43 D 9856	B1	43 D 8971	18403	.16
43 D 9843	B2	43 D 9851	B2	43 D 8971	18403	.16
43 D 8954	B3	43 D 8966	B3	43 D 8971	18403	.16
43 D 8457	C3	43 D 8482	C3	43 D 8972	18404	.16
43 D 9844	E3	43 D 9852	E3	43 D 9058	18406	.27
43 D 9845	G3	43 D 9854	G3	43 D 9060	18408	.58
43 D 8469	J3	43 D 8495	J3	43 D 9061	18409	.58
43 D 9846	J5	43 D 9855	J5	43 D 9061	18409	.58

CAPACITOR MOUNTING BRACKETS

43 D 9847	B1	43 D 9856	B1	43 D 8971	18403	.16
43 D 9843	B2	43 D 9858	B2	43 D 8971	18403	.16
43 D 9848	B5	43 D 9859	B5	43 D 8971	18403	.16
43 D 9844	E3	43 D 9852	E3	43 D 9058	18406	.27
43 D 9849	G1	43 D 9860	G1	43 D 9060	18408	.58
43 D 8469	J3	43 D 8495	J3	43 D 9061	18409	.58

CAPACITOR MOUNTING BRACKETS

43 D 8464	E6	43 D 8490	E6	43 D 9058	18406	.27
43 D 8470	J4	43 D 8496	J4	43 D 9061	18409	.58
43 D 9850	J10	43 D 9861	J10	43 D 9061	18409	.58

Order from Your Nearest Allied Facility for Fastest Service

Dipped Silvered Mica Capacitors

Oper. temperature range: —55 to +125°C without derating. Tolerance, ±5% or 0.5 pF, whichever is greater, except miniature types CD6 (minimum tolerance ±1 pF) and CD7 (minimum tolerance ±0.5 pF) which have ±2% tolerance. 500 WVDC, except *300 WVDC, †100 WVDC. Have 1¼" tinned brass wire leads, except CD10 which has copperweld leads. All units meet 10-2000 cycle vibration tests. Av. shpg. wt., 2 oz.

Military Types CM04, CM05, CM06, CM07 and CM08, corresponding to CD10, CD15, CD19, CD30 and CD42, respectively, available on Special Order.

SIZE CHART

Mfr's Type	Size (HxWxD)
CD6	.265x.135x.095"
CD7	.265x.260x.110" to .330x.310x.175"
CD10/CM04	.360x.330x.190" to .390x.380x.220"
CD15/CM05	.450x.360x.170" to .470x.400x.220"
CD19/CM06	.640x.510x.200" to .700x.580x.350"
CD30/CM07	.780x.860x.280" to .830x.920x.450"
CD42/CM08	1.420x.880x.310" to 1.470x.910x.450"

INDUSTRIAL TYPES CD6, CD7, CD10

Stock No.	Mfr's Type	pF	EACH 1-24	25-99	100-499	500-999	1000-Up
43 D 8200	CD6CD030C03	3	.36	.23	.15	.11	.09
43 D 8201	CD6CD050C03	5	.36	.23	.15	.11	.09
43 D 8202	CD6CD100K03	10	.36	.23	.15	.11	.09
43 D 8203	CD6CD120C03	12	.42	.25	.16	.13	.11
43 D 8204	CD6CD180C03	18	.42	.25	.16	.13	.11
43 D 8205	CD6CD200J03	20	.42	.25	.16	.13	.11
43 D 8206	CD6CD220J03	22	.42	.25	.16	.13	.11
43 D 8207	CD6ED240J03	24	.45	.27	.17	.14	.11
43 D 8215	CD6ED270G03	27	.75	.47	.30	.23	.19
43 D 8216	CD6ED300G03	30	.75	.47	.30	.23	.19
43 D 8217	CD6ED330G03	33	.75	.47	.30	.23	.19
43 D 8218	CD6ED360G03	36	.75	.47	.30	.23	.19
43 D 8229	CD6ED390G03	39	.75	.47	.30	.23	.19
43 D 8231	CD6ED430G03	43	.75	.47	.30	.23	.19
43 D 8232	CD6ED470G03	47	.72	.47	.30	.23	.19
43 D 8233	CD6ED510G03	51	.72	.47	.30	.23	.19
43 D 8234	CD6ED560G03	56	.72	.47	.30	.23	.19
43 D 8235	CD6ED620G03	62	.72	.47	.30	.23	.19
43 D 8236	CD6ED680G03	68	.78	.48	.30	.24	.19
43 D 8237	CD6ED750G03	75	.84	.52	.33	.26	.21
43 D 8238	CD6EC820G03*	82	.81	.51	.33	.26	.21
43 D 8239	CD6EC910G03*	91	.84	.53	.34	.27	.22
43 D 8240	CD6FC101G03*	100	.84	.53	.34	.27	.22
43 D 8241	CD6FC111G03*	110	.87	.55	.35	.27	.22
43 D 8242	CD6FC121G03*	120	.87	.55	.35	.27	.22
43 D 8243	CD7CD131G03	130	.90	.56	.36	.28	.23
43 D 8244	CD7CD151G03	150	.90	.56	.36	.28	.23
43 D 8245	CD7CD161G03	160	.93	.57	.36	.29	.23
43 D 8246	CD7CD181G03	180	.93	.58	.37	.29	.23
43 D 8247	CD7FC201G03*	200	.93	.58	.37	.29	.24
43 D 8248	CD7FC221G03*	220	.96	.59	.38	.30	.24
43 D 8249	CD7FC241G03*	240	.99	.63	.40	.31	.25
43 D 8250	CD7FC271G03*	270	1.11	.69	.44	.35	.28
43 D 8251	CD7FC301G03*	300	1.17	.73	.47	.37	.30
43 D 8252	CD7FA331G03†	330	1.23	.78	.50	.39	.41
43 D 8253	CD7FA361G03†	360	1.29	.80	.51	.40	.32
43 D 8254	CD7FA391G03†	390	1.32	.83	.53	.41	.33
43 D 8255	CD7FA431G03†	430	1.36	.85	.54	.43	.34
43 D 8256	CD7FA471G03†	470	1.40	.88	.56	.47	.35
43 D 8257	CD7FA511G03†	510	1.44	.90	.58	.45	.36
43 D 8258	CD7FA561G03†	560	1.47	.93	.59	.45	.37
43 D 8259	CD7FA621G03†	620	1.53	.95	.61	.48	.38
43 D 8260	CD7FA681G03†	680	1.92	1.20	.77	.60	.48
43 D 8261	CD7FA751G03†	750	2.07	1.30	.83	.65	.52
43 D 8262	CD7FA821G03†	820	2.16	1.35	.86	.68	.54
43 D 8263	CD7FA911G03†	910	2.25	1.40	.90	.70	.56
43 D 8264	CD7FA102G03†	1000	2.52	1.58	1.01	.79	.63
43 D 8265	CD7FA112G03†	1100	2.61	1.63	1.04	.71	.65
43 D 8266	CD7FA122G03†	1200	2.67	1.68	1.07	.84	.67
43 D 8267	CD7FA132G03†	1300	3.04	1.90	1.22	.95	.76
43 D 8268	CD7FA152G03†	1500	3.32	1.87	1.33	1.04	.83
43 D 2729	CD10CD050D03	5	.27	.19	.14	.12	.10
43 D 2730	CD10CD100J03	10	.27	.19	.14	.12	.10
43 D 2731	CD10CD120J03	12	.27	.19	.14	.12	.10
43 D 2732	CD10CD150J03	15	.27	.19	.14	.12	.10
43 D 2733	CD10CD180J03	18	.27	.19	.14	.12	.10
43 D 2734	CD10ED220J03	22	.24	.16	.12	.10	.08
43 D 2735	CD10ED240J03	24	.24	.16	.12	.10	.08
43 D 2736	CD10ED270J03	27	.24	.16	.12	.10	.08
43 D 2737	CD10ED300J03	30	.24	.16	.12	.10	.08
43 D 2738	CD10ED330J03	33	.24	.16	.12	.10	.08
43 D 2739	CD10ED390J03	39	.24	.16	.12	.10	.08
43 D 2740	CD10ED470J03	47	.27	.17	.13	.10	.09
43 D 2741	CD10ED510J03	51	.27	.17	.13	.10	.09
43 D 2742	CD10ED560J03	56	.27	.17	.13	.11	.09
43 D 2743	CD10ED620J03	62	.27	.17	.13	.11	.09
43 D 2744	CD10ED680J03	68	.27	.17	.13	.11	.09
43 D 2745	CD10ED820J03	82	.27	.18	.13	.11	.09
43 D 2746	CD10ED101J03	100	.27	.18	.13	.11	.09
43 D 2747	CD10ED121J03	120	.27	.18	.14	.11	.09
43 D 2748	CD10ED151J03	150	.30	.20	.15	.13	.10
43 D 2749	CD10ED181J03	180	.36	.23	.17	.15	.12
43 D 2758	CD10ED201J03	200	.36	.24	.18	.15	.12
43 D 2759	CD10ED221J03	220	.39	.25	.19	.16	.13
43 D 2760	CD10ED241J03	240	.39	.26	.20	.17	.14
43 D 2764	CD10ED251J03	250	.42	.27	.21	.17	.14

INDUSTRIAL TYPES CD15, CD19, CD30, CD42

Stock No.	Mfr's Type	pF	EACH 1-24	25-99	100-499	500-999	1000-Up
43 D 4651	CD15CD050K03	5	.24	.15	.11	.10	.08
43 D 4652	CD15CD100K03	10	.18	.12	.09	.08	.06
43 D 4653	CD15CD120K03	12	.18	.12	.09	.08	.06
43 D 4654	CD15CD180K03	18	.18	.12	.09	.08	.06
43 D 4655	CD15CD220J03	22	.21	.33	.10	.08	.07
43 D 4656	CD15ED240J03	24	.21	.13	.10	.08	.07
43 D 4657	CD15ED270J03	27	.21	.13	.10	.08	.07
43 D 4658	CD15ED300J03	30	.21	.13	.10	.08	.07
43 D 4659	CD15ED330J03	33	.21	.13	.10	.08	.07
43 D 4660	CD15ED360J03	36	.21	.13	.10	.08	.07
43 D 4661	CD15ED390J03	39	.21	.13	.10	.08	.07
43 D 4662	CD15ED470J03	47	.21	.13	.10	.08	.07
43 D 4612	CD15ED500J03	50	.21	.13	.10	.08	.07
43 D 4663	CD15ED510J03	51	.21	.13	.10	.08	.07
43 D 4664	CD15ED560J03	56	.21	.13	.10	.08	.07
43 D 4665	CD15ED620J03	62	.21	.13	.10	.08	.07
43 D 4666	CD15ED680J03	68	.21	.13	.10	.08	.07
43 D 4667	CD15ED750J03	75	.21	.13	.10	.08	.07
43 D 4668	CD15ED820J03	82	.21	.13	.10	.08	.07
43 D 4669	CD15FD101J03	100	.21	.13	.10	.08	.07
43 D 4670	CD15FD121J03	120	.21	.14	.11	.09	.07
43 D 4671	CD15FD151J03	150	.24	.15	.11	.09	.08
43 D 4673	CD15FD201J03	200	.24	.16	.12	.10	.08
43 D 4674	CD15FD221J03	220	.24	.16	.12	.10	.08
43 D 4675	CD15FD241J03	240	.24	.16	.12	.10	.09
43 D 4676	CD15FD271J03	270	.27	.18	.14	.11	.09
43 D 4677	CD15FD301J03	300	.30	.18	.14	.12	.10
43 D 4678	CD15FD331J03	330	.30	.20	.15	.12	.10
43 D 4608	CD15FD361J03	360	.33	.21	.16	.13	.11
43 D 4679	CD15FD391J03	390	.33	.21	.15	.13	.11
43 D 4643	CD15FD501J03	500	.39	.25	.19	.16	.13
43 D 4680	CD19FD431J03	430	.27	.18	.14	.11	.09
43 D 4681	CD19FD471J03	470	.30	.20	.15	.13	.10
43 D 4682	CD19FD511J03	510	.30	.20	.15	.13	.10
43 D 4683	CD19FD561J03	560	.30	.20	.15	.13	.10
43 D 4684	CD19FD621J03	620	.33	.22	.17	.14	.11
43 D 4685	CD19FD681J03	680	.33	.22	.17	.14	.11
43 D 4610	CD19FD751J03	750	.33	.22	.17	.14	.11
43 D 4686	CD19FD821J03	820	.33	.22	.17	.14	.11
43 D 4609	CD19FD911J03	910	.39	.26	.20	.16	.13
43 D 4687	CD19FD102J03	1000	.42	.28	.21	.18	.14
43 D 4611	CD19FD112J03	1100	.45	.30	.23	.19	.15
43 D 4688	CD19FD122J03	1200	.45	.30	.23	.19	.15
43 D 4689	CD19FD152J03	1500	.54	.36	.27	.23	.18
43 D 4690	CD19FD182J03	1800	.60	.40	.30	.25	.20
43 D 4691	CD19FD202J03	2000	.63	.42	.32	.26	.21
43 D 4692	CD19FD222J03	2200	.66	.44	.33	.28	.22
43 D 4693	CD19FD242J03	2400	.75	.50	.38	.31	.25
43 D 4694	CD19FD272J03	2700	.84	.56	.42	.35	.28
43 D 4695	CD19FD302J03	3000	.90	.60	.45	.38	.30
43 D 4696	CD19FD332J03	3300	.96	.64	.48	.40	.32
43 D 4697	CD19FD392J03	3900	1.08	.72	.54	.45	.36
43 D 4698	CD19FD432J03	4300	1.14	.76	.57	.48	.38
43 D 2771	CD19FD472J03	4700	1.23	.82	.62	.51	.41
43 D 8269	CD30FD512J03	5100	.93	.62	.47	.39	.31
43 D 8270	CD30FD562J03	5600	1.02	.68	.51	.42	.34
43 D 8271	CD30FD622J03	6200	1.11	.74	.56	.46	.37
43 D 8272	CD30FD682J03	6800	1.23	.82	.62	.51	.41
43 D 8273	CD30FD752J03	7500	1.32	.88	.65	.55	.40
43 D 8274	CD30FD822J03	8200	1.44	.96	.72	.60	.48
43 D 8275	CD30FD912J03	9100	1.56	1.04	.78	.65	.52
43 D 8276	CD30FD103J03	10,000	1.71	1.14	.86	.72	.57
43 D 8278	CD30FD123J03	12,000	2.01	1.34	1.01	.84	.67
43 D 8279	CD30FD133J03	13,000	2.19	1.46	1.10	.91	.73
43 D 8280	CD30FD153J03	15,000	2.46	1.64	1.23	1.03	.82
43 D 8281	CD30FD163J03	16,000	2.64	1.76	1.32	1.10	.88
43 D 8282	CD30FD183J03	18,000	2.94	1.96	1.47	1.23	.98
43 D 8283	CD30FD203J03	20,000	3.27	2.18	1.64	1.36	1.09
43 D 8284	CD42FD223J03	22,000	5.55	3.70	2.78	2.32	1.85
43 D 8293	CD42FD273J03	27,000	6.48	4.32	3.24	2.70	2.16
43 D 8294	CD42FD303J03	30,000	7.08	4.72	3.54	2.95	2.36
43 D 8295	CD42FD333J03	33,000	7.68	5.12	3.84	3.20	2.56
43 D 8296	CD42FD363J03	36,000	8.82	5.88	4.41	3.67	2.94
43 D 8297	CD42FD393J03	39,000	9.12	6.08	4.56	3.80	3.04
43 D 8299	CD42FD473J03	47,000	10.80	7.20	5.40	4.50	3.60

Cornell-Dubilier Capacitors

NLW "ELECTOMITE" SUBMINIATURE ELECTROLYTIC CAPACITORS

Aluminum foil, hermetically sealed in aluminum cans with transparent plastic sleeve. Connections are securely welded. For transistorized and printed circuits. Sure voltages exceed working voltages by 20%. Temperature range, —40°C to +85°C. Tolerance, —10% to +75%. Grounded negative lead. *Size code. Average shpg. wt., 2 oz.

SIZE CODE INDEX

Code*	Size	Code*	Size	Code*	Size	Code*	Size
A	¼x⅝"	D	3/16x⅞"	H	7/16x¾"	L	7/16x1⅛"
B	5/16x⅝"	F	⅜x¾"	J	7/16x⅞"	M	7/16x1⅜"
C	5/16x¾"	G	⅜x⅞"	K	7/16x1"	N	7/16x1⅝"

3 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 8640	25	B	.48	.35	.27	.22	.18	.17
43 D 0374	75	G	.54	.39	.31	.25	.21	.20
43 D 9775	100	H	.54	.39	.31	.25	.21	.20
43 D 8641	200	K	.66	.50	.39	.31	.26	.25
43 D 9776	250	L	.69	.52	.40	.33	.27	.26
43 D 0376	300	L	.69	.52	.40	.33	.27	.26
43 D 0377	350	L	.72	.54	.42	.34	.28	.27
43 D 9777	450	N	.75	.56	.44	.35	.29	.28

6 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 8645	10	A	.48	.35	.27	.22	.18	.17
43 D 0379	20	B	.48	.35	.27	.22	.18	.17
43 D 9774	30	C	.48	.35	.27	.22	.18	.17
43 D 9597	125	J	.66	.50	.39	.31	.26	.25
43 D 0381	150	K	.69	.52	.40	.33	.27	.26
43 D 0382	250	M	.72	.54	.42	.34	.28	.27
43 D 0383	300	N	.72	.54	.42	.34	.28	.27

10 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 0384	8	A	.48	.35	.27	.22	.18	.17
43 D 8652	25	C	.48	.35	.27	.22	.18	.17
43 D 8653	50	G	.54	.39	.31	.25	.21	.20
43 D 0385	75	H	.66	.50	.39	.31	.26	.25
43 D 9773	125	K	.69	.52	.40	.33	.27	.26
43 D 0386	150	L	.72	.54	.42	.34	.28	.27
43 D 0387	225	M	.75	.56	.44	.35	.29	.28

12 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 0388	15	B	.48	.35	.27	.22	.18	.17
43 D 0389	35	F	.48	.35	.27	.22	.18	.17
43 D 0390	100	J	.69	.52	.40	.33	.27	.26
43 D 0391	200	M	.75	.56	.44	.35	.29	.28
43 D 0905	250	N	.75	.56	.44	.35	.29	.28

15 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 0907	4	A	.48	.35	.27	.22	.18	.17
43 D 8655	5	A	.48	.35	.27	.22	.18	.17
43 D 8656	10	B	.48	.35	.27	.22	.18	.17
43 D 8657	20	C	.48	.35	.27	.22	.18	.17
43 D 0913	25	F	.48	.35	.27	.22	.18	.17
43 D 8658	30	F	.54	.39	.31	.25	.21	.19
43 D 9765	40	H	.45	.39	.31	.25	.21	.19
43 D 9766	50	H	.54	.39	.31	.25	.21	.19
43 D 9768	100	K	.69	.52	.40	.33	.27	.26
43 D 9769	125	L	.69	.52	.40	.33	.27	.26
43 D 9770	150	M	.72	.54	.42	.34	.28	.27
43 D 9771	175	M	.72	.54	.42	.34	.28	.27
43 D 9772	200	N	.75	.56	.44	.35	.29	.28

25 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 9596	3	A	.48	.35	.27	.22	.18	.17
43 D 9758	6	B	.48	.35	.27	.22	.18	.17
43 D 9759	8	B	.48	.35	.27	.22	.18	.17
43 D 9608	10	C	.48	.35	.27	.22	.18	.17
43 D 8660	15	F	.48	.35	.27	.22	.18	.17
43 D 9760	25	H	.54	.39	.31	.25	.21	.19
43 D 9761	30	H	.54	.39	.31	.25	.21	.19
43 D 9741	35	J	.54	.39	.31	.25	.21	.19
43 D 9762	40	J	.66	.50	.39	.31	.26	.25
43 D 9763	50	K	.66	.50	.39	.31	.26	.25
43 D 0393	75	M	.69	.52	.40	.33	.27	.26
43 D 9764	100	N	.72	.54	.42	.34	.28	.27

50 WVDC

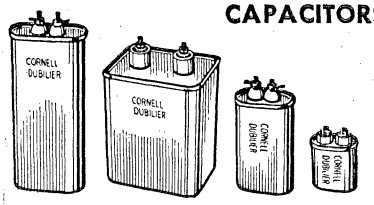
Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 0915	1	A	.48	.35	.27	.22	.18	.17
43 D 9754	2	A	.48	.35	.27	.22	.18	.17
43 D 0916	3	B	.48	.35	.27	.22	.18	.17
43 D 9755	4	B	.48	.35	.27	.22	.18	.17
43 D 8662	5	C	.48	.35	.27	.22	.18	.17
43 D 0917	6	C	.48	.35	.27	.22	.18	.17
43 D 0394	8	F	.48	.35	.27	.26	.18	.17
43 D 8663	10	F	.54	.39	.31	.25	.21	.19
43 D 0919	15	H	.54	.39	.31	.25	.21	.19
43 D 8664	20	H	.66	.50	.39	.31	.26	.25
43 D 0920	25	J	.66	.50	.39	.31	.26	.25
43 D 0395	30	J	.69	.52	.40	.33	.27	.26
43 D 0921	35	K	.69	.52	.40	.33	.27	.26
43 D 9756	40	L	.72	.54	.42	.34	.28	.27
43 D 9757	50	M	.72	.54	.42	.34	.28	.27
43 D 0396	75	N	.75	.56	.44	.35	.29	.28

100 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 0397	2	C	.54	.39	.31	.25	.21	.19
43 D 0923	3	F	.60	.44	.34	.28	.23	.22
43 D 9599	6	H	.66	.50	.39	.31	.26	.25
43 D 9753	8	J	.69	.52	.40	.33	.27	.26
43 D 9605	10	K	.69	.52	.40	.33	.27	.26
43 D 9607	20	N	.75	.56	.44	.35	.29	.28

150 WVDC

Stock No.	µF	*	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 9750	1	B	.51	.38	.30	.24	.20	.19
43 D 9751	2	F	.54	.39	.31	.25	.21	.19
43 D 9600	5	H	.66	.50	.39	.31	.26	.25
43 D 9601	8	K	.69	.52	.40	.33	.27	.26
43 D 9602	10	L	.72	.54	.42	.34	.28	.27
43 D 9752	15	N	.75	.56	.44	.35	.29	.28



CAPACITORS FOR SCR COMMUTATION APPLICATIONS

Reliable oil-filled capacitors, primarily designed for breadboard prototype work in specialized silicon controlled rectifier commutation and other similar square-wave voltage applications. Precision-made capacitors have low inductance and minimum equivalent series resistance; internal connections carry high currents frequently encountered in operation. Paint finish on cases increases emissivity and holds dielectric temperature increase to a minimum.

Oil dielectric maintains nominal (25°C) capacity within 2.5% over temperature range of —55°C to 80°C. Table below is based on 50 microseconds current pulse width. In no case should maximum voltage, current, ambient and case temperatures be exceeded. Capacitors are oil-impregnated paper, except *metallized paper and †polycarbonate. They have oval cases, except §rectangular. ‡Max. rms VA at maximum ambient and case temps. Av. Wt., 5 lbs.

Stock No.	Mfr's Type	µF	rms Volts AC Max.	Volts DC Max.	Size Inches (WxDxH)	Max. rms (Amps) Ambient Temperature 80° C	70° C	60° C	50° C	Case Temperature 87° C	83° C	80° C	77° C	EACH 1-9	10-99	100-999
43 D 9475	KKSCR101	3.0	165	200	2 5/32x1 5/16x2 5/16	7.0	10.0	12.3	14.2	5.37	2.17	1.81
43 D 9476	KKSCR102	5.0	165	200	2 5/32x1 5/16x2 5/16	9.8	14.2	17.4	19.9	5.89	2.38	1.98
43 D 9477	KMSCR103§	10.0	165	200	3¾x1¼x4¼	22.0	31.6	39.5	42.9	15.43	6.24	5.20
43 D 9478	KMSCR104§	20.0	165	200	3¾x1¼x4½	38.0	43.0	43.1	43.4	24.38	9.82	8.18
43 D 9480	KKSCR105	2.0	200	250	2 5/32x1 5/16x2 5/16	5.7	7.9	9.8	11.7	4.96	2.01	1.68
43 D 9481	KKSCR106	2.0	330	600	2 5/32x1 5/16x2 13/16	6.3	8.8	11.0	12.6	5.70	2.30	1.91
43 D 9482	KKSCR107	3.0	330	600	2 5/32x1 5/16x3 13/16	8.5	12.3	14.8	17.4	6.89	2.78	2.32
43 D 9483	KMSCR108§	5.0	380	600	3¾x1¼x4¾	15.8	22.1	28.4	31.6	13.94	5.78	4.87
43 D 9484	KMSCR109§	10.0	330	600	3¾x2¼x4½	25.3	37.9	42.9	43.0	23.57	9.49	7.91
43 D 9485	KMSCR110§	20.0	330	600	3¾x3 5/16x5½	43.0	43.0	43.0	43.0	32.19	12.94	10.77
43 D 9486	KKSCR111	1.0	400	800	2 5/32x1 5/16x2 5/16	4.1	5.7	6.9	8.2	4.89	1.98	1.65
43 D 9488	KKSCR112	.5	660	1500	2 5/32x1 5/16x2 1/16	3.0	4.3	5.6	6.7	5.59	2.23	1.86
43 D 9489	KKSCR113	1.0	700	2000	2 5/32x1 5/16x4 3/8	5.3	7.2	9.1	10.7	5.66	2.29	1.91
43 D 9490	KMSCR114§	2.0	700	2000	3¾x1¼x4¾	10.7	15.2	18.3	21.2	17.76	7.17	5.98
43 D 9491	KMSCR115§	3.0	700	2000	3¾x2¼x4½	14.5	20.5	25.3	28.4	24.67	10.08	8.44
43 D 9492	KMSCR116§	5.0	700	2000	3¾x3 5/16x5⅛	22.1	30.6	36.3	42.6	28.30	11.39	9.48
43 D 9493	KMSCR117§	10.0	700	2000	4 9/16x3¾x6	36.3	43.0	43.0	43.0	38.33	15.40	12.82
43 D 9494	SCR2025*	25.0	115	200	2 1 1/16x1 9/16x2⅛	33‡	125‡	230‡	350‡	19.43	7.77	6.46
43 D 9495	SCR2050*	50.0	115	200	2 1 1/16x1 9/16x2⅞	42‡	160‡	290‡	430‡	26.83	10.73	8.92
43 D 9496	SCR2100*	100.0	115	200	3 21/32x1 31/32x3⅛	65‡	245‡	440‡	670‡	36.80	15.50	12.95
43 D 9497	SCR2125*	125.0	115	200	3 21/32x1 31/32x3⅞	76‡	285‡	520‡	782‡	42.15	16.90	14.17
43 D 9498	SCR6020†	20.0	330	600	3 21/32x1 31/32x6	43.0	43.0	43.0	43.0	52.98	21.19	17.61
43 D 9499	SCR20010†§	10.0	700	2000	4 9/16x3¾x5⅛	43.0	43.0	43.0	43.0	92.50	37.00	30.75

When Ordering, Specify Stock No., Mfr's Type No. and Capacitance

Cornell-Dubilier Capacitors

TYPE MCR METALLIZED POLYCARBONATE CAPACITORS

These low-cost Type MCR capacitors are non-inductively wound with metallized polycarbonate, wrap and fill style construction. Feature very high operating temperature capability and capacitance stability. Operating temperature, —55° to +125° C. Capacitance change over this range is only —2.5%, +2.0% (25° C measurement as reference). Capacitance tolerance, ±20%. Film-wrap, epoxy end-seal encasement construction provides superior moisture resistance in a compact package. Capacitance drift, .5% maximum while dissipation factor is less than .75% at +25° C. May be operated at temperatures up to 125° C with 50% voltage derating. Lead length, 1½" minimum. Av. shpg. wt., 2 oz.

INSULATION RESISTANCE FACTOR

Temperature (°C)	Megs x μF	Need Not Exceed (Megohms)
+25	50,000	200,000
+85	3000	30,000
+125	200	2000

100 WVDC

Stock No.	Type MCR-	Cap. μF	Size Dia. x L.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 3816	1P1	.1	1/4x9/16"	.99	.74	.58	.50	.42	.33
43 D 3817	1P22	.22	19/64x11/16"	1.20	.90	.70	.60	.50	.40
43 D 3818	1P33	.33	11/32x11/16"	1.32	.99	.77	.66	.55	.44
43 D 3819	1P47	.47	11/32x7/8"	1.53	1.15	.89	.77	.64	.51
43 D 3820	1W1	1.0	7/16x1"	2.01	1.51	1.17	1.01	.84	.68
43 D 3821	1W2	2.0	9/16x1 1/4"	2.82	2.12	1.65	1.41	1.18	.94
43 D 3822	1W3	3.0	5/8x1 3/8"	3.48	2.61	2.03	1.74	1.45	1.16
43 D 3823	1W4	4.0	43/64x1 1/2"	4.29	3.22	2.50	2.15	1.79	1.43
43 D 3824	1W5	5.0	3/4x1 1/2"	5.07	3.80	2.96	2.54	2.11	1.69

200 WVDC

Stock No.	Type MCR-	Cap. μF	Size Dia. x L.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 3825	2S1	.01	5/32x9/16"	.72	.54	.42	.36	.20	.24
43 D 3826	2S15	.015	11/64x9/16"	.72	.54	.42	.36	.30	.24
43 D 3828	2S22	.022	3/16x9/16"	.72	.54	.42	.36	.30	.24
43 D 3829	2S33	.033	7/32x9/16"	.72	.54	.42	.36	.30	.24
43 D 3832	2S47	.047	1/4x9/16"	.81	.61	.47	.41	.34	.27
43 D 3833	2S68	.068	7/32x11/16"	.87	.65	.51	.44	.37	.29
43 D 3836	2P1	.1	9/32x11/16"	.90	.68	.53	.45	.38	.30
43 D 3837	2P15	.15	5/16x11/16"	.99	.74	.58	.50	.42	.33
43 D 3839	2P22	.22	3/8x11/16"	1.08	.81	.63	.54	.45	.36
43 D 3840	2P33	.33	7/16x11/16"	1.20	.90	.70	.60	.50	.40
43 D 3841	2P47	.47	3/8x1"	1.38	1.04	.81	.69	.58	.46
43 D 3842	2P68	.68	7/16x1"	1.56	1.17	.91	.78	.65	.52
43 D 3847	2W1	1.0	1/2x1"	1.83	1.37	1.07	.92	.77	.61
43 D 3848	2W1P5	1.5	9/16x1 1/4"	2.25	1.69	1.31	1.13	.94	.75
43 D 3850	2W2	2.0	21/32x1 1/4"	2.58	1.94	1.51	1.29	1.08	.86
43 D 3852	2W3	3.0	11/16x1 1/2"	3.18	2.39	1.86	1.59	1.33	1.06
43 D 3854	2W4	4.0	3/4x1 3/4"	3.90	2.93	2.28	1.95	1.63	1.30
43 D 3855	2W5	5.0	13/16x1 3/4"	4.62	3.47	2.70	2.31	1.93	1.54

TYPE DYR PAPER-OIL "BATH-TUB" CAPACITORS

For severe heat and humidity conditions. Rugged "bathtub" type metal shells; solder terminals. Capacity tolerance: single section, ±10%; others +20%, —10%. 600 WVDC, except *1000 volts. Satisfy MIL-C-25A test requirements. Similar to JAN CP53. Dual section units have common case. Temperature range: from —55°C to +85°C. Av. wt., 5 oz.

Stock No.	Type DYR-	μF	EACH 1-9	10-24	25-49	50-99	100-499	500-599	1000-Up
43 D 4621	6010	.1	1.89	1.26	1.10	.79	.72	.69	.63
43 D 4622	6025	.25	1.92	1.28	1.12	.80	.74	.70	.61
43 D 4623	6050	.5	2.13	1.42	1.24	.89	.82	.78	.71
43 D 4624	6100	1.0	2.55	1.70	1.49	1.06	.98	.94	.85
43 D 4625	6200	2.0	3.33	2.22	1.94	1.39	1.28	1.22	1.11
43 D 4626	60055	.05-.05	2.52	1.68	1.47	1.05	.97	.92	.84
43 D 4627	6011j	.1-.1	2.61	1.74	1.52	1.09	1.00	.96	.87
43 D 4628	6022	.25-.25	2.85	1.90	1.66	1.19	1.09	1.05	.95
43 D 4629	6055	.5-.5	3.30	2.20	1.93	1.38	1.27	1.21	1.10
43 D 4630	6110	1.0-1.0	4.08	2.72	2.38	1.70	1.56	1.50	1.36
43 D 4631	6111	.1-.1-.1	2.97	1.98	1.73	1.24	1.14	1.09	.99
43 D 4602	1005*	.05	1.83	1.22	1.09	.76	.70	.67	.61
43 D 4603	10010*	.1	1.92	1.28	1.12	.80	.74	.70	.64
43 D 4615	10025*	.25	2.07	1.38	1.21	.86	.79	.76	.69
43 D 4616	10050*	.5	2.25	1.50	1.31	.94	.86	.83	.75
43 D 4604	10100*	1.0	3.00	2.00	1.75	1.25	1.15	1.10	1.00
43 D 4607	10055*	.5-.5	4.17	2.78	2.43	1.74	1.60	1.53	1.39

TYPE WCR FILM WRAP POLYCARBONATE CAPACITORS

A recent development in capacitor dielectrics, these film wrap polycarbonate capacitors offer characteristics similar to polystyrene types at considerably lower cost. High operating temperature range from —55°C to +85°C without voltage derating and up to 125°C with 50% derating—overcoming one of the limitations of polystyrene units. Tolerance is ±10%. Measured at 1000 Hz, the average capacitance charge is within —1%; +3% of the 25°C value throughout the temperature range from —55°C to +125°C. Average shpg. wt., 2 oz.

50 WVDC

Stock No.	Type WCR-	Cap. μF	Size Dia. x L.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 3892	05S1	.01	11/64x5/8"	.51	.39	.30	.26	.22	.18
43 D 3893	05S22	.022	7/32x5/8"	.54	.40	.31	.27	.22	.18
43 D 3894	05S33	.033	1/4x5/8"	.57	.42	.33	.29	.24	.19
43 D 3895	05S47	.047	9/32x5/8"	.60	.45	.35	.30	.25	.20
43 D 3896	05P1	.1	21/64x3/4"	.69	.52	.41	.35	.29	.24
43 D 3897	05P22	.22	7/16x3/4"	.87	.64	.50	.43	.36	.29
43 D 3898	05P33	.33	15/32x1"	1.02	.77	.60	.52	.43	.35
43 D 3899	05P47	.47	1/2x1 1/8"	1.20	.80	.69	.60	.50	.40
43 D 3900	05W1	1.0	5/8x1 1/2"	1.86	1.40	1.09	.94	.78	.63
43 D 3901	05W2	2.0	25/32x1 3/4"	3.30	2.28	1.93	1.65	1.38	1.10

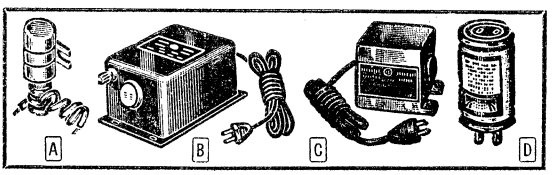
100 WVDC

Stock No.	Type WCR-	Cap. μF	Size Dia. x L.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 3902	1S1	.01	15/64x3/4"	.48	.35	.27	.24	.20	.16
43 D 3903	1S22	.022	19/64x3/4"	.48	.36	.28	.24	.20	.16
43 D 3904	1S33	.033	11/32x3/4"	.51	.38	.30	.26	.22	.17
43 D 3905	1S47	.047	25/64x3/4"	.54	.41	.32	.27	.23	.18
43 D 3906	1P1	.1	29/64x1"	.63	.47	.37	.32	.27	.21
43 D 3907	1P22	.22	19/32x13/16"	.78	.59	.46	.39	.33	.26
43 D 3908	1P33	.33	41/64x13/16"	.93	.70	.54	.47	.39	.31
43 D 3909	1P47	.47	47/64x15/8"	1.08	.81	.63	.54	.45	.36
43 D 3910	1W1	1.0	59/64x17/8"	1.71	1.27	.99	.85	.71	.57

200 WVDC

Stock No.	Type WCR-	Cap. μF	Size Dia. x L.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 3911	2D1	.001	1/5x15/16"	.48	.25	.27	.24	.20	.16
43 D 3912	2D22	.0022	7/32x15/16"	.48	.35	.27	.24	.20	.16
43 D 3913	2D47	.0047	19/64x15/16"	.48	.35	.27	.24	.20	.16
43 D 3914	2S1	.01	19/64x15/16"	.48	.35	.27	.24	.20	.16
43 D 3915	2S22	.022	25/64x15/16"	.57	.42	.32	.28	.24	.19
43 D 3916	2S33	.033	15/32x15/16"	.63	.46	.36	.31	.26	.21
43 D 3917	2S47	.047	13/32x15/16"	.69	.51	.39	.34	.29	.23
43 D 3918	2P1	.1	19/32x15/16"	.84	.63	.49	.42	.35	.28
43 D 3919	2P22	.22	43/64x17/8"	1.11	.82	.64	.55	.46	.37
43 D 3920	2P33	.33	13/16x17/8"	1.29	.96	.74	.64	.54	.43
43 D 3921	2P47	.47	61/64x17/8"	1.47	1.10	.86	.74	.62	.49

RADIO-TV INTERFERENCE FILTERS



A Type IF-24. Industrial filter for permanent installation directly at equipment causing interference. Flex-leads and metal housing, mtg. lug. For 110-120 V, AC/DC. Shpg. wt., 6 oz.
60 D 9987 ..... 1.14

B Type IF-18. All-wave capacitive-inductive filter for severe interference caused by air conditioners, machine tools, etc. Bakelite case, 6x3¾x2½". With line cord, plug. Binding post for ground wire. 5 amps. For 115 V, AC/DC. Shpg. wt., 4 lbs.
60 D 9988 ..... 7.67

C Type IF-19. Capacitive-inductive for severe interference caused by fans, diathermy machines, neon signs, etc. Mtg. holes. Ground term. 5 amps. 115 V, AC/DC. 4x2¼x2⅞". Wt., 3 lbs.
60 D 9989 ..... 7.30

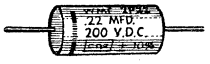
D Type IF-4. Plug-in, cylindrical type for medium interference produced by fluorescent lights, electric shavers, similar devices. Filter plugs into wall; appliance plugs into filter. 5 amps. 110 V. AC/DC. 1⅜x2". Shpg. wt., 5 oz.
60 D 9990 ..... 1.08

D Type IF-6. Similar to above, but has ground terminal. Connects between power line and appliance, or power line and receiver. 5 amps. 110 V, AC/DC. 1⅜x2". Shpg. wt., 6 oz.
60 D 9991 ..... 1.87

*Contact Allied for Prices on Quantities not Shown.

Cornell-Dubilier Capacitors

TYPE WMF "MYLAR" DIELECTRIC TUBULAR CAPACITORS



Encased in "Mylar" film and end-sealed with a high-density thermosetting epoxy. Outstanding features are high resistance to humidity, excellent capacitance stability, wide temperature range and long life. Operating temperature range: —55°C to +125°C. Full rated voltage at 85°C. Derate voltage 10% at 100°C, and 50% at 125°C. Capacitance tolerance, ±10%. Av. shpg. wt., 2 oz.

50 WVDC

Stock No.	Type WMF-	μF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 6967	05P1	.1	1/4x13/16"	.33	.24	.19	.17	.14	.11
43 D 6968	05P22	.22	21/64x13/16"	.36	.26	.21	.18	.15	.12
43 D 6969	05P33	.33	13/32x13/16"	.42	.31	.24	.21	.18	.14
43 D 6970	05P5	.50	13/32x1 1/16"	.51	.39	.30	.26	.22	.18
43 D 6971	05P68	.68	1/2x1 1/16"	.66	.49	.38	.33	.27	.22
43 D 6972	05W1	1.0	1/2x1 3/8"	.90	.68	.53	.46	.38	.31
43 D 6973	05W2	2.0	37/64x1 5/8"	1.50	1.12	.87	.75	.63	.50
43 D 6974	05W5	5.0	21/32x1 7/8"	3.09	2.32	1.80	1.55	1.29	1.03

100 WVDC

43 D 6975	1D1	.001	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6976	1D15	.0015	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6977	1D22	.0022	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6978	1D33	.0033	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6979	1D47	.0047	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6980	1D68	.0068	11/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6981	1S1	.01	13/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6982	1S15	.015	15/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6983	1S22	.022	9/32x5/8"	.27	.20	.15	.14	.11	.09
43 D 6984	1S33	.033	19/64x5/8"	.27	.20	.15	.14	.11	.09
43 D 6985	1S47	.047	17/64x3/4"	.27	.21	.16	.14	.12	.10
43 D 6986	1S68	.068	9/32x3/4"	.30	.22	.17	.15	.12	.10
43 D 6987	1P1	.1	19/64x7/8"	.30	.22	.17	.15	.13	.10
43 D 6988	1P15	.15	31/64x7/8"	.30	.23	.18	.15	.13	.10
43 D 6989	1P22	.22	25/64x1"	.33	.24	.19	.16	.14	.11
43 D 6990	1P33	.33	27/64x1 1/8"	.39	.28	.22	.19	.16	.13
43 D 6991	1P47	.47	15/32x1 1/4"	.45	.34	.27	.23	.20	.16
43 D 6992	1P68	.68	9/16x1 1/4"	.60	.44	.34	.30	.25	.20
43 D 6993	1W1	1.0	5/8x1 1/2"	.84	.62	.48	.42	.35	.28
43 D 6995	1W1P5	1.5	25/32x1 3/4"	1.11	.84	.65	.56	.47	.38
43 D 6996	1W2	2.0	61/64x1 3/4"	1.35	1.02	.79	.68	.57	.46

200 WVDC

43 D 6877	2D1	.001	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6878	2D15	.0015	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6879	2D22	.0022	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6880	2D33	.0033	5/32x1/2"	.27	.20	.15	.14	.11	.09
43 D 6881	2D47	.0047	11/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6882	2D68	.0068	13/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6883	2S1	.01	15/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6884	2S15	.015	19/64x1/2"	.27	.20	.15	.14	.11	.09
43 D 6885	2S22	.022	9/32x5/8"	.27	.20	.15	.14	.11	.09
43 D 6886	2S33	.033	17/64x3/4"	.27	.20	.15	.14	.11	.09

200 WVDC (Cont'd)

43 D 6887	2S47	.047	21/64x3/4"	.27	.21	.16	.14	.12	.10
43 D 6888	2S68	.068	11/32x3/4"	.30	.22	.17	.15	.12	.10
43 D 6889	2P1	.1	13/32x7/8"	.36	.26	.20	.18	.15	.12
43 D 6890	2P15	.15	1/2x7/8"	.36	.28	.22	.19	.16	.33
43 D 6891	2P22	.22	1/2x1 1/8"	.39	.29	.23	.20	.17	.13
43 D 6892	2P33	.33	35/64x1 1/8"	.45	.33	.26	.23	.20	.15
43 D 6893	2P47	.47	19/32x1 1/4"	.51	.38	.29	.26	.21	.17
43 D 6894	2P68	.68	21/32x1 5/8"	.60	.44	.34	.30	.25	.20
43 D 6895	2W1	1.0	3/4x1 3/4"	.84	.62	.48	.42	.35	.28
43 D 6897	2W1P5	1.5	29/32x1 3/4"	1.11	.84	.65	.56	.47	.38
43 D 6898	2W2	2.0	61/64x1 7/8"	1.35	1.02	.79	.68	.67	.46

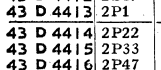
400 WVDC

43 D 4330	4D22	.0022	5/32x5/8"	.30	.22	.17	.15	.13	.10
43 D 4331	4D47	.0047	13/64x5/8"	.30	.22	.17	.15	.13	.10
43 D 6832	4S1	.01	19/64x5/8"	.30	.22	.17	.15	.13	.10
43 D 6833	4S15	.015	23/64x5/8"	.30	.22	.17	.15	.13	.10
43 D 6834	4S22	.022	5/16x3/4"	.30	.22	.17	.15	.13	.10
43 D 6835	4S33	.033	11/32x7/8"	.30	.22	.17	.15	.13	.10
43 D 6836	4S47	.047	13/32x7/8"	.30	.23	.18	.16	.13	.11
43 D 6837	4S68	.068	25/64x1"	.33	.25	.19	.17	.14	.11
43 D 6838	4P1	.1	15/32x1"	.33	.25	.20	.17	.14	.12
43 D 6839	4P15	.15	33/64x1 1/4"	.36	.26	.20	.18	.15	.12
43 D 6840	4P22	.22	9/16x1 3/8"	.42	.30	.24	.21	.17	.14
43 D 6841	4P33	.33	19/32x1 5/8"	.66	.49	.38	.33	.28	.22
43 D 6842	4P47	.47	45/64x1 5/8"	.78	.58	.46	.39	.33	.26
43 D 6843	4P68	.68	11/64x1 3/4"	.96	.71	.56	.48	.40	.32
43 D 6844	4W1	1.0	7/8x2"	1.14	.85	.66	.57	.48	.38
43 D 6846	4W1P5	1.5	31/32x2 1/4"	1.41	1.06	.82	.71	.59	.47
43 D 6847	4W2	2.0	1 1/4x2 1/4"	1.86	1.39	1.08	.93	.77	.62

600 WVDC

43 D 4312	6D1	.001	11/64x3/4"	.33	.26	.20	.17	.15	.12
43 D 4318	6D22	.0022	3/16x3/4"	.33	.26	.20	.17	.15	.12
43 D 4323	6D47	.0047	15/64x3/4"	.33	.26	.20	.17	.15	.12
43 D 2715	6S1	.01	19/64x3/4"	.33	.26	.20	.17	.15	.12
43 D 2717	6S22	.022	21/64x7/8"	.33	.26	.20	.17	.15	.12
43 D 2719	6S47	.047	27/64x1"	.33	.26	.20	.17	.15	.12
43 D 2721	6P1	.1	33/64x1 3/8"	.45	.33	.26	.22	.19	.15
43 D 2723	6P22	.22	21/32x1 5/8"	.54	.39	.31	.27	.22	.18
43 D 2725	6P47	.47	55/64x2"	1.14	.86	.67	.58	.48	.39
43 D 2727	6W1	1.0	1 1/16x2 1/2"	2.43	1.81	1.41	1.21	1.01	.81

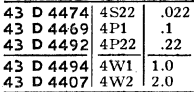
TYPE MMW MINIATURE METALLIZED FILM TUBULARS



Ideal for transistorized circuits—can be used in conventional manner or imbedded in sub-assemblies. Constructed of metallized polyester film dielectric, tightly wound and encased in poly-film tape wrap; and sealed with high-density thermosetting resin. Resistant to humidity and moisture. Operating temperature range, —55°C to +85°C. Tolerance, ±20%. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type MMW-	μF	WV DC	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4428	05P1	.1	50	.170x1 1/16"	.69	.51	.39	.34	.29	.23
43 D 4429	05P22	.22	50	.215x1 1/16"	.81	.61	.47	.41	.34	.27
43 D 4430	05P33	.33	50	.265x1 1/16"	.93	.69	.54	.46	.39	.31
43 D 4431	05P47	.47	50	.315x1 1/16"	.96	.71	.55	.48	.40	.32
43 D 4432	05W1	1.0	50	.325x1"	1.14	.86	.67	.58	.48	.39
43 D 4433	05W2	2.0	50	.405x1 1/4"	1.65	1.25	.97	.83	.70	.56
43 D 4434	05W5	5.0	50	.510x1 3/4"	3.00	2.24	1.74	1.49	1.24	1.00
43 D 4411	2S33	.033	200	.180x9/16"	.69	.52	.40	.32	.28	.23
43 D 4412	2S47	.047	200	.200x9/16"	.69	.52	.40	.32	.28	.23
43 D 4413	2P1	.1	200	.240x1 1/16"	.75	.56	.44	.35	.30	.25
43 D 4414	2P22	.22	200	.340x1 1/16"	.90	.68	.53	.42	.36	.30
43 D 4415	2P33	.33	200	.390x1 1/16"	.93	.69	.54	.46	.39	.31
43 D 4416	2P47	.47	200	.370x1"	.96	.71	.55	.48	.40	.32
43 D 4417	2W1	1.0	200	.500x1"	1.14	.86	.67	.58	.49	.39
43 D 4418	2W2	2.0	200	.620x1 1/4"	1.65	1.25	.97	.83	.70	.56
43 D 4419	4S1	.01	400	.180x9/16"	.60	.45	.35	.30	.25	.20
43 D 4420	4S22	.022	400	.210x1 1/16"	.63	.47	.36	.32	.26	.21
43 D 4422	4S47	.047	400	.300x1 1/16"	.69	.51	.39	.34	.29	.23
43 D 4423	4P1	.1	400	.325x1"	.75	.57	.44	.38	.32	.26
43 D 4424	4P22	.22	400	.400x1 1/4"	.93	.69	.54	.46	.39	.31
43 D 4426	4P47	.47	400	.520x1 1/2"	1.23	.91	.71	.61	.51	.41
43 D 4427	4W1	1.0	400	.675x1 3/4"	1.74	1.30	1.01	.87	.73	.58

TYPE MPY 125°C METALLIZED PAPER



For applications where low impedance is required. Feature superior moisture resistance, and self-healing properties of metallized dielectric capacitors. Resin impregnated Triclad tube with resin end-fill is wax-free for clean handling; virtually unaffected by hot irons. Range, —55°C to +85°C. Tolerance, ±20%. 3 oz.

200 WVDC

Stock No.	Mfr's Type MPY-	μF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000* Up
43 D 4470	2S22	.022	1/4x5/8"	.45	.34	.26	.23	.19	.16
43 D 4402	2S47	.047	1/4x5/8"	.45	.34	.26	.23	.19	.16
43 D 4485	2P1	.1	3/8x5/8"	.51	.38	.30	.26	.22	.17
43 D 4486	2P22	.22	15/32x5/8"	.63	.47	.37	.32	.27	.21
43 D 4403	2P47	.47	7/16x1 1/8"	.75	.56	.44	.38	.32	.25
43 D 4488	2W1	1.0	9/16x1 1/8"	1.08	.81	.63	.54	.45	.36
43 D 4404	2W2	2.0	5/8x1 7/16"	1.47	1.10	.86	.77	.62	.49

400 WVDC

43 D 4474	4S22	.022	5/16x5/8"	.45	.34	.26	.23	.19	.15
43 D 4469	4P1	.1	3/8x1 1/8"	.57	.43	.33	.29	.24	.19
43 D 4492	4P22	.22	1/2x1 1/8"	.72	.54	.42	.36	.30	.24
43 D 4494	4W1	1.0	11/16x1 13/16"	1.32	.99	.77	.66	.55	.44
43 D 4407	4W2	2.0	13/16x2 3/8"	1.74	1.31	1.02	.87	.73	.58

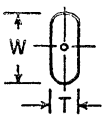
600 WVDC

43 D 4495	6S1	.01	1/4x5/8"	.45	.34	.26	.23	.19	.15
43 D 4478	6S22	.022	3/8x5/8"	.48	.36	.28	.24	.20	.16
43 D 4408	6S47	.047	15/32x5/8"	.54	.41	.32	.27	.23	.18
43 D 4496	6P1	.1	3/8x1 1/8"	.60	.45	.35	.30	.25	.20
43 D 4409	6P47	.47	5/8x1 7/16"	1.14	.86	.67	.57	.48	.38
43 D 4499	6W1	1.0	23/32x1 13/16"	1.44	1.08	.84	.72	.60	.48
43 D 4410	6W2	2.0	29/32x2 3/8"	2.10	1.58	1.23	1.05	.88	.70

Allied Can Supply CDE Capacitors in Any Quantity at Factory Prices

Cornell-Dubilier Capacitors

TYPE MFP SPACE-SAVING FLAT-OVAL "MYLAR" CAPACITORS



Solve tight space problems. Similar to type WMF tubular on facing page, but with flat pressed section for oval configuration. Mylar dielectric with tough yellow outer film wrap, epoxy end seals bonded to wrapper and leads. Moisture and humidity resistant. Copper-weld leads, 1½" long for easy connections to circuitry. Temperature range, —55°C to +85°C at full rated voltage. Derate 10% for 100°C, 50% for 125°C operation. All units listed have tolerance of ±10%. Av. shpg. wt., 2 oz.

Stock No.	Type MFP-	µF	WV DC	Size, In. LxWxT	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4260	05S1	.01	50	7/64x15/64x1/2	.36	.27	.21	.18	.15	.12
43 D 4261	05S22	.022	50	9/64x17/64x1/2	.39	.29	.23	.20	.17	.13
43 D 4263	05S47	.047	50	5/32x9/32x5/8	.39	.29	.23	.20	.17	.13
43 D 4265	05P1	.1	50	11/64x19/64x13/16	.45	.34	.26	.23	.19	.15
43 D 4266	05P22	.22	50	17/64x25/64x13/16	.51	.38	.30	.26	.22	.17
43 D 4267	05P33	.33	50	19/64x31/64x13/16	.57	.43	.33	.29	.24	.19
43 D 4268	05P5	.50	50	9/32x15/32x11/16	.63	.47	.37	.32	.27	.21
43 D 4269	05W1	1.0	50	23/64x9/16x13/8	.96	.72	.56	.48	.40	.32
43 D 4270	05W2	2.0	50	13/32x45/64x15/8	1.53	1.15	.89	.77	.64	.51
43 D 4271	05W5	5.0	50	13/32x63/64x17/8	3.09	2.32	1.80	1.55	1.29	1.03
43 D 4272	1S22	.022	100	5/8x11/32x7/32	.33	.24	.18	.16	.13	.11
43 D 4273	1S33	.033	100	5/8x5/16x3/16	.36	.26	.30	.18	.15	.12
43 D 4274	1S47	.047	100	3/4x5/16x3/16	.36	.26	.20	.18	.15	.12
43 D 4275	1P1	.1	100	7/8x11/32x7/32	.39	.30	.23	.20	.17	.14
43 D 4276	1P22	.22	100	1x15/32x9/32	.48	.35	.27	.24	.20	.16
43 D 4277	1P33	.33	100	1 1/8x1/2x5/16	.51	.37	.29	.25	.21	.17
43 D 4278	1P47	.47	100	1 1/4x17/32x3/8	.57	.42	.33	.29	.24	.19
43 D 4280	1W1	1.0	100	1 1/2x23/32x1/2	.84	.64	.49	.43	.36	.29
43 D 4281	1W1P5	1.5	100	1 3/4x27/32x21/32	1.14	.86	.67	.57	.48	.38
43 D 4282	1W2	2.0	100	1 3/4x1 1/16x27/32	1.38	1.04	.81	.69	.58	.46
43 D 4283	2S22	.022	200	5/8x11/32x7/32	.33	.24	.18	.16	.13	.11
43 D 4284	2S47	.047	200	3/4x3/8x1/4	.36	.26	.20	.18	.15	.12
43 D 4285	2P1	.1	200	7/8x1/2x5/16	.39	.30	.23	.20	.17	.14
43 D 4287	2P22	.22	200	1 1/8x9/16x13/32	.48	.35	.27	.24	.20	.16
43 D 4288	2P47	.47	200	1 1/4x21/32x1/2	.57	.42	.33	.29	.24	.19
43 D 4289	2W1	1.0	200	1 3/4x1 3/16x5/8	.84	.64	.49	.43	.36	.29
43 D 4291	2W2	2.0	200	1 7/8x1 1/16x27/32	1.38	1.04	.81	.69	.58	.46
43 D 4292	4S22	.022	400	3/4x3/8x1/4	.36	.26	.20	.18	.15	.12
43 D 4293	4S47	.047	400	7/8x1/2x11/32	.39	.29	.22	.20	.16	.13
43 D 4295	4P1	.1	400	1x17/32x3/8	.39	.30	.23	.20	.17	.14
43 D 4296	4P22	.22	400	1 3/8x5/8x1/2	.43	.35	.27	.24	.20	.16
43 D 4297	4P47	.47	400	15/8x25/32x19/32	.84	.64	.53	.45	.38	.30
43 D 4309	4W1	1.0	400	2x15/16x3/4	1.17	.88	.68	.59	.49	.39
43 D 4310	4W1P5	1.5	400	2 1/4x1 1/16x27/32	1.41	1.06	.82	.71	.59	.48
43 D 4311	4W2	2.0	400	2 1/4x15/16x1 1/8	1.86	1.39	1.08	.93	.77	.62

TYPE PKM "BLACK CAT" KRAFT-PAPER "MYLAR" CAPACITORS

Extremely moisture resistant. Molded plastic cases. Note: 400 WVDC units are identical in price and size to 200 WVDC units. —55°C to +125°C. Tolerance, ±10%. Av. 3 oz.

Equivalent Type Available—See Page 177

400 WVDC

Stock No.	Type PKM-	µF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4210	4S1	.01	5/16x1"	.21	.15	.12	.11	.09	.07
43 D 4200	4S39	.039	3/8x1 1/4"	.24	.18	.14	.12	.10	.08
43 D 4221	4S5	.05	7/16x1 1/4"	.27	.20	.16	.14	.12	.09
43 D 4216	4P1	.1	1/2x1 1/2"	.27	.20	.16	.14	.12	.09
43 D 4201	4P15	.15	1/2x1 1/2"	.27	.20	.16	.14	.12	.09
43 D 4218	4P22	.22	5/8x1 7/8"	.36	.27	.21	.18	.15	.12
43 D 4202	4P25	.25	5/8x1 7/8"	.42	.32	.25	.21	.18	.14
43 D 4203	4P47	.47	11/16x1 15/16"	.57	.43	.33	.29	.24	.19
43 D 4231	4P5	.5	11/16x1 15/16"	.63	.47	.37	.32	.26	.21
43 D 4205	4W1	1.0	1x2 1/8"	.96	.72	.56	.48	.40	.32

600 WVDC

Stock No.	Type PKM-	µF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4224	6D22	.0022	5/16x1"	.21	.15	.12	.11	.09	.07
43 D 4226	6S1	.01	3/8x1 1/4"	.21	.15	.12	.11	.09	.07
43 D 4208	6S15	.015	3/8x1 1/4"	.21	.15	.12	.11	.09	.07
43 D 4211	6S39	.039	1/2x1 1/2"	.24	.18	.14	.12	.10	.08
43 D 4230	6S47	.047	1/2x1 1/2"	.24	.18	.14	.12	.10	.08
43 D 4243	6S5	.05	1/2x1 1/2"	.27	.20	.16	.14	.12	.09
43 D 4212	6S68	.068	1/2x1 1/2"	.27	.20	.16	.14	.12	.09
43 D 4232	6P1	.1	9/16x1 9/16"	.33	.25	.19	.17	.14	.11
43 D 4235	6P22	.22	11/16x1 15/16"	.54	.41	.32	.27	.23	.18
43 D 4213	6P25	.25	11/16x1 15/16"	.63	.47	.37	.32	.27	.21
43 D 4239	6P47	.47	1x2 1/8"	.87	.65	.51	.44	.37	.29
43 D 4256	6P5	.5	1x2 1/8"	.93	.70	.54	.47	.39	.31

1000 WVDC

Stock No.	Type PKM-	µF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4244	10D5	.005	3/8x1 1/4"	.24	.17	.13	.12	.10	.08
43 D 4245	10S1	.01	7/16x1 1/4"	.27	.20	.16	.14	.12	.09
43 D 4246	10S15	.015	7/16x1 1/4"	.30	.23	.18	.15	.13	.10
43 D 4247	10S22	.022	1/2x1 1/2"	.30	.23	.18	.15	.13	.10
43 D 4248	10S47	.047	9/16x1 9/16"	.42	.36	.28	.25	.20	.14
43 D 4249	10S68	.068	5/8x1 7/8"	.42	.36	.28	.25	.20	.14
43 D 4250	10P1	.1	11/16x1 15/16"	.54	.41	.32	.27	.23	.18

1600 WVDC

Stock No.	Type PKM-	µF	Size	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 4252	16D1	.001	3/8x1 1/4"	.27	.20	.16	.14	.12	.09
43 D 4251	16D33	.0033	3/8x1 1/4"	.27	.20	.16	.14	.12	.09
43 D 4259	16S1	.01	1/2x1 1/2"	.48	.36	.28	.24	.20	.16
43 D 4264	16S47	.047	5/8x1 7/8"	.66	.50	.39	.33	.28	.22
43 D 4254	16S5	.050	5/8x1 7/8"	.75	.56	.44	.38	.32	.25

TYPE UHL EXTENDED TEMPERATURE RANGE CAPACITORS

Stock No.	Mfr's Type UHL-	µF	WV DC	Size Lx Dia. In.	EACH 1-24	25-49	50-99	100-499	500-999	1000-Up
43 D 6715	560-5	560	5	3/8x1 5/8	4.60	3.08	2.69	1.92	1.69	1.54
43 D 6716	820-5	820	5	3/8x2 3/16	4.95	3.30	2.90	2.06	1.82	1.66
43 D 6717	1000-5	1000	5	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6718	150-10	150	10	3/8x15/16	2.30	1.54	1.35	.96	.85	.77
43 D 6719	270-10	270	10	3/8x1 3/8	4.50	3.00	2.62	1.87	1.65	1.50
43 D 6720	390-10	390	10	3/8x1 5/8	4.60	3.08	2.69	1.92	1.69	1.54
43 D 6721	560-10	560	10	3/8x2 3/16	4.95	3.30	2.90	2.06	1.82	1.66
43 D 6722	680-10	680	10	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6723	33-40	33	40	3/8x15/16	2.30	1.54	1.35	.96	.85	.77
43 D 6724	68-40	68	40	3/8x1 3/8	4.50	3.00	2.62	1.87	1.65	1.50
43 D 6725	100-40	100	40	3/8x1 5/8	4.60	3.08	2.69	1.92	1.82	1.54
43 D 6726	180-40	180	40	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6727	15-75	15	75	3/8x1 1/8	3.00	2.00	1.75	1.25	1.10	1.01
43 D 6728	33-75	33	75	3/8x1 5/8	4.60	3.08	2.69	1.92	1.69	1.54
43 D 6729	47-75	37	75	3/8x2 3/16	4.95	3.30	2.90	2.06	1.82	1.66
43 D 6730	68-75	68	75	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6731	6-100	6	100	3/8x13/16	2.15	1.44	1.25	.90	.79	.72
43 D 6732	12-100	12	100	3/8x1 1/8	3.00	2.00	1.75	1.25	1.10	1.01
43 D 6733	22-100	22	100	3/8x1 5/8	4.60	3.08	2.69	1.92	1.69	1.54
43 D 6734	33-100	33	100	3/8x2 3/16	4.95	3.30	2.90	2.06	1.82	1.66
43 D 6735	56-100	56	100	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6736	6-150	6	150	3/8x15/16	2.30	1.54	1.35	.96	.85	.77
43 D 6737	13-150	13	150	3/8x1 3/8	4.50	3.00	2.62	1.87	1.65	1.50
43 D 6738	26-150	26	150	3/8x2 3/16	4.95	3.30	2.90	2.06	1.82	1.66
43 D 6739	39-150	39	150	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95
43 D 6740	3.3-200	3.3	200	3/8x13/16	2.15	1.44	1.25	.90	.79	.72
43 D 6741	6.8-200	6.8	200	3/8x1 1/8	3.00	2.00	1.75	1.25	1.10	1.01
43 D 6742	12-200	12	200	3/8x1 5/8	4.60	3.08	2.69	1.92	1.69	1.54
43 D 6743	27-200	27	200	3/8x2 11/16	5.85	3.90	3.41	2.44	2.15	1.95

All-welded aluminum electrolytic capacitors for by-pass, filtering and coupling applications over a wide temperature range of —55° to +125°C (without derating voltage). Meets or exceeds established reliability specs of MIL-C-39018. Etched foil design replaces equivalent tantalums in case size and parameters, plus has greater capacitance per voltage range. All aluminum construction for minimum weight—ideal for airborne and space uses. Standard capacitance tolerance, —10%, +75%.

Can withstand 2000 hours of rated DC voltage at +125°C, with maximum capacitance change of only +15%. Also withstand prolonged periods of off-voltage storage without detrimental effects. Limits after 500 hours at 125°C: capacitance within 10% of initial measured value; DC leakage not more than 200% of initial requirement; dissipation factor not greater than 115% of initial requirement. May be operated and stored up to 80,000 feet without evidence of mechanical damage or electrolyte leakage. Meets or exceeds requirements of barometric pressure test per MIL-STD-202, Method 105.

Maximum capacitance change at temperature of −55°C is −30%; at +125°C, +25%. Average capacitance change; low-voltage units, −55°C, −20%; +125°C, +8%: high-voltage units, −55°C, −10%; +125°C, +8%. Maximum dissipation factor limits: 30 WVDC and below; at +25°C, +20%; at +125°C, +25%. Above 30 WVDC: at +25°C, +10%; at +125°C, +20%.

Withstand 1000 cycles (30 second surge, 5½ minute discharge) at +125°C. Capacitance remains within ±6% of initial value. Meets or exceeds requirements for vibration of 10-2000 cps at 15g (Method 204); shock of 50g, 11 msec (Method 205, Test Condition C) of MIL-STD-202B. Also moisture resistance test of MIL-STD-202, METHOD 106 (No polarizing voltage). Salt spray test (Method 101, Test Condition B per MIL-STD-202) shows no harmful corrosion on at least 90% of case area or terminals and no obliteration of markings. Wire leads. Av. shpg. wt., 4 oz.

MALLORY Solid Tantalum Capacitors

MILITARY CS13 SOLID ELECTROLYTE TANTALUM CAPACITORS

- Ultraminiature Hermetically Sealed Case
- Meet MIL-C-26655B, Replacing MIL-C-26655A
- 10% Tolerance
- Plastic Insulating Sleeve
- Temperature Range, −55° to +85° C

Subminiature, hermetically sealed capacitors meet MIL-C-26655B interchangeable with, and superior to MIL-C-26655A. Temperature range: −55° to +85° C. Provide tighter leakage current and dissipation-factor characteristics over MIL-C-26655A. Low DCL and long storage life. At high frequencies, impedance remains low above 1 MHz. Withstands 2000-cycle vibration test and 50g shock test without adverse effects. Also withstands severe humidity conditions.

NOTE: CS12 with uninsulated bare can is available on Special Order in same values listed below; deduct 2¢ each from prices shown.

Values listed generally combine highest voltages with smallest case sizes, for each capacity. Higher voltages offer greater surge protection without altering performance at lower voltages, and at no extra cost. Prices are based on case size, through 35 WVDC. For price and size, see Case Size (*), then see Price and Size Locator.

ATTENTION MILITARY USERS: Equivalent Solid Tantalum Capacitors to Latest MIL Spec 39003—Established Reliability at Failure M (1%) and L (2%) Are Available at Allied. See p. 168.

PRICE AND SIZE LOCATOR

Price & Size Code*	Diameter x Length Inches	EACH 1-24	25-49	50-99	100-499	500-999
A	.135x.322	1.34	1.07	.75	.62	.53
B	.135x.322	2.47	1.99	1.68	1.45	1.31
C	.185x.510	1.55	1.25	.77	.64	.54
D	.185x.510	2.62	2.10	1.77	1.52	1.39
E	.289x.722	2.23	1.79	1.35	1.12	.94
F	.289x.722	2.55	2.05	1.42	1.16	.97
G	.289x.722	4.27	3.42	2.90	2.47	2.26
H	.351x.822	4.50	3.55	2.34	1.91	1.60
J	.351x.822	4.55	3.65	2.53	2.05	1.81
K	.351x.822	4.75	3.80	2.80	2.29	1.91
L	.351x.822	7.97	6.35	5.37	4.60	4.20

Stock No.	Commercial Mfr's Type TAS-	Military Mil-C-26655B Type CS13-	Cap., µF	WV DC	Case Size*
43 D 8570	472K006P1A	.....	.0047	6	A
43 D 8571	562K006P1A	.....	.0056	6	A
43 D 8572	682K006P1A	.....	.0068	6	A
43 D 8573	103K006P1A	.....	.010	6	A
43 D 8574	153K006P1A	.....	.015	6	A
43 D 8575	273K006P1A	.....	.027	6	A
43 D 8576	333K006P1A	.....	.033	6	A
43 D 8577	393K006P1A	.....	.039	6	A
43 D 8578	473K006P1A	.....	.047	6	A
43 D 8579	104K006P1A	.....	.10	6	A
43 D 8580	154K006P1A	.....	.15	6	A
43 D 8581	274K006P1A	.....	.27	6	A
43 D 8582	394K006P1A	.....	.39	6	A
43 D 8583	105K006P1A	.....	1.0	6	A
43 D 8584	155K006P1A	.....	1.5	6	A
43 D 8585	335K006P1A	.....	3.3	6	A
43 D 8586	565K006P1A	BB565K	5.6	6	A
43 D 8587	685K006P1A	BB685K	6.8	6	A
43 D 8588	476K006P1C	BB476K	47	6	C
43 D 8589	566K006P1C	BB566K	56	6	C
43 D 8590	157K006P1F	BB157K	150	6	E
43 D 8591	187K006P1F	BB187K	180	6	E
43 D 8592	277K006P1G	BB277K	270	6	H
43 D 8593	337K006P1G	BB337K	330	6	H
43 D 8594	395K010P1A	BC395K	3.9	10	A
43 D 8595	475K010P1A	BC475K	4.7	10	A
43 D 8596	276K010P1C	BC276K	27	10	C
43 D 8597	336K010P1C	BC336K	33	10	C
43 D 8598	396K010P1C	BC396K	39	10	C
43 D 8599	826K010P1F	BC826K	82	10	E
43 D 8600	107K010P1F	BC107K	100	10	E
43 D 8601	127K010P1F	BC127K	120	10	E
43 D 8602	187K010P1G	BC187K	180	10	H
43 D 8603	227K010P1G	BC227K	220	10	H
43 D 8604	275K015P1A	BD275K	2.7	15	A
43 D 8605	335K015P1A	BD335K	3.3	15	A
43 D 8606	186K015P1C	BD186K	18	15	C
43 D 8607	226K015P1C	BD226K	22	15	C
43 D 8608	566K015P1F	BD566K	56	15	E
43 D 8610	686K015P1F	BD686K	68	15	E
43 D 8611	127K015P1G	BD127K	120	15	H
43 D 8617	157K015P1G	BD157K	150	15	H
43 D 8618	125K020P1A	BE125K	1.2	20	A
43 D 8626	155K020P1A	BE155K	1.5	20	A
43 D 8634	185K020P1A	BE185K	1.8	20	A
43 D 8652	225K020P1A	BE225K	2.2	20	A
43 D 8653	825K020P1C	BE825K	8.2	20	C
43 D 8659	106K020P1C	BE106K	10	20	C
43 D 8663	126K020P1C	BE126K	12	20	C
43 D 8668	156K020P1C	BE156K	15	20	C
43 D 8670	276K020P1F	BE276K	27	20	E
43 D 8671	336K020P1F	BE336K	33	20	E
43 D 8672	396K020P1F	BE396K	39	20	E
43 D 8673	476K020P1F	BE476K	47	20	E
43 D 8674	566K020P1G	BE566K	56	20	H
43 D 8675	686K020P1G	BE686K	68	20	H
43 D 8676	826K020P1G	BE826K	82	20	H

Stock No.	Commercial Mfr's Type TAS-	Military CS13 Mil-C-26655B Type CS13-	Cap., µF	WV DC	Case Size*
43 D 8677	107K020P1G	BE107K	100	20	H
43 D 8678	334K035P1A	BF334K	.33	35	A
43 D 8679	394K035P1A	BF394K	.39	35	A
43 D 8680	474K035P1A	BF474K	.47	35	A
43 D 8681	564K035P1A	BF564K	.56	35	A
43 D 8682	684K035P1A	BF684K	.68	35	A
43 D 8683	824K035P1A	BF824K	.82	35	A
43 D 8684	105K035P1A	BF105K	1.0	35	A
43 D 8685	125K035P1C	BF125K	1.2	35	C
43 D 8686	155K035P1C	BF155K	1.5	35	C
43 D 8687	185K035P1C	BF185K	1.8	35	C
43 D 8688	225K035P1C	BF225K	2.2	35	C
43 D 8689	275K035P1C	BF275K	2.7	35	C
43 D 8690	335K035P1C	BF335K	3.3	35	C
43 D 8691	395K035P1C	BF395K	3.9	35	C
43 D 8692	475K035P1C	BF475K	4.7	35	C
43 D 8693	565K035P1C	BF565K	5.6	35	C
43 D 8694	685K035P1C	BF685K	6.8	35	C
43 D 8695	825K035P1F	BF825K	8.2	35	F
43 D 8696	106K035P1F	BF106K	10	35	F
43 D 8697	126K035P1F	BF126K	12	35	F
43 D 8698	156K035P1F	BF156K	15	35	F
43 D 8699	186K035P1F	BF186K	18	35	F
43 D 8700	226K035P1F	BF226K	22	35	F
43 D 8701	276K035P1G	BF276K	27	35	J
43 D 8702	336K035P1G	BF336K	33	35	J
43 D 8703	396K035P1G	BF396K	39	35	K
43 D 8704	476K035P1G	BF476K	47	35	K
43 D 8705	105K050P1A	BG105K	1.0	50	B
43 D 8706	125K050P1C	BG125K	1.2	50	D
43 D 8707	155K050P1C	BG155K	1.5	50	D
43 D 8708	185K050P1C	BG185K	1.8	50	D
43 D 8709	225K050P1C	BG225K	2.2	50	D
43 D 8710	275K050P1C	BG275K	2.7	50	D
43 D 8711	335K050P1C	BG335K	3.3	50	D
43 D 8713	395K050P1C	BG395K	3.9	50	D
43 D 8714	475K050P1C	BG475K	4.7	50	D
43 D 8715	565K050P1F	BG565K	5.6	50	G
43 D 8716	685K050P1F	BG685K	6.8	50	G
43 D 8717	825K050P1F	BG825K	8.2	50	G
43 D 8718	106K050P1F	BG106K	10	50	G
43 D 8719	126K050P1F	BG126K	12	50	G
43 D 8720	156K050P1F	BG156K	15	50	G
43 D 8721	186K050P1F	BG186K	18	50	G
43 D 8722	226K050P1G	BG226K	22	50	L

ATTENTION INDUSTRIAL BUYERS

Allied maintains complete stocks of Mallory capacitors. For complete information on any types not listed in this catalog, simply contact the Allied facility nearest you. Depend on Allied for prompt service, fast shipment and OEM prices on all your electronic needs.

Specify Stock No., Mfr's Type No. and Capacitance on Capacitor Orders

Tantalum Capacitors

MALLORY

TIM AND TAC PRICE AND SIZE LOCATOR

Type	Price & Size Code*	Tolerance	Size, Inches	3-35 VOLT TYPES, EACH 1-24	25-49	50-99	100-499	500-999	50 VOLT TYPES, EACH 1-24	25-49	50-99	100-499	500-999
TIM	A	±10%	.225x.285x.170	1.31	1.05	.72	.59	.49	1.62	1.30	.90	.73	.59
	B	±10%	.225x.285x.170	1.33	1.07	.74	.61	.51	1.75	1.40	.97	.78	.63
	C	±10%	.335x.360x.170	1.33	1.07	.74	.61	.51	1.75	1.40	.97	.78	.63
	D	±10%	.335x.360x.170	2.52	2.02	1.39	1.13	.95	4.15	3.32	2.49	2.01	1.62
TAC	2	±10%	.105 dia. x .295	.63	.53	.48	.43	.35	.68	.55	.50	.45	.37
	3	±10%	.137 dia. x .340	.63	.53	.48	.43	.35	.68	.55	.50	.45	.37
	4	±10%	.187 dia. x .530	.65	.55	.50	.45	.37	.71	.57	.52	.47	.39

TIM SERIES RECTANGULAR SOLID TANTALUM CAPACITORS

Ultra-miniature tantalum capacitors in molded epoxy case with tinned nickel radial leads, precisely positioned for PC board mounting. High stability, long shelf life, excellent performance in severe environments. Uniform size for automatic assembly. Temperature range, —55° to +85° C. Tolerance, ±10%. Lead spacing, .200". Av. shpg. wt., 2 oz.

Stock No.	Type TIM-	Cap., µF	WV DC	Case Code*
43 D 8723	186K006P0X	18	6	B
43 D 8724	226K006P0X	22	6	B
43 D 8725	566K006P0V	56	6	C
43 D 8726	686K006P0V	68	6	C
43 D 8727	826K006P0V	82	6	D
43 D 8728	106K010P0X	10	10	B
43 D 8729	156K010P0X	15	10	B
43 D 8737	336K010P0Y	33	10	C
43 D 8738	396K010P0V	39	10	C
43 D 8739	104K035P0X	0.1	35	A
43 D 8740	124K035P0X	0.12	35	A
43 D 8741	154K035P0X	0.15	35	A
43 D 8742	184K035P0X	0.18	35	A
43 D 8743	224K035P0X	.22	35	A
43 D 8744	274K035P0X	.27	35	A
43 D 8745	334K035P0X	.33	35	A
43 D 8746	394K035P0X	.39	35	A
43 D 8748	474K035P0X	.47	35	A
43 D 8752	564K035P0X	.56	35	A
43 D 8754	684K035P0X	.68	35	A
43 D 8756	824K035P0X	.82	35	A
43 D 8762	105K035P0X	1.0	35	A
43 D 8763	125K035P0X	1.2	35	A
43 D 8764	155K035P0X	1.5	35	B
43 D 8765	185K035P0X	1.8	35	B
43 D 8766	225K035P0X	2.2	35	B
43 D 8767	275K035P0X	2.7	35	B
43 D 8768	335K035P0X	3.3	35	B
43 D 8769	395K035P0X	3.9	35	B
43 D 8770	475K035P0V	4.7	35	C
43 D 8771	565K035P0Y	5.6	35	C
43 D 8772	685K035P0Y	6.8	35	C
43 D 8773	825K035P0V	8.2	35	D
43 D 8774	106K035P0V	10	35	D
43 D 8775	104K050P0X	.1	50	A
43 D 8776	124K050P0X	.12	50	A
43 D 8777	154K050P0X	.15	50	A
43 D 8778	184K050P0X	.18	50	A
43 D 8779	224K050P0X	.22	50	A
43 D 8780	274K050P0X	.27	50	A
43 D 8781	474K050P0X	.47	50	A
43 D 8782	105K050P0X	1.0	50	A
43 D 8783	185K050P0X	1.8	50	B
43 D 8784	225K050P0X	2.2	50	B
43 D 8785	275K050P0Y	2.7	50	C
43 D 8786	335K050P0V	3.3	50	C
43 D 8787	395K050P0Y	3.9	50	C
43 D 8788	475K050P0Y	4.7	50	C
43 D 8789	565K050P0V	5.6	50	D

TAC SERIES SUBMINIATURE TUBULAR SOLID TANTALUM CAPACITORS

High-reliability axial-lead capacitors in precision-molded epoxy case. Excellent environmental protection. Rated for —55° C to +85° C. Tolerance, ±10%. 1/10 oz.

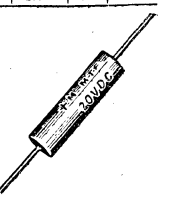
Stock No.	Type TAC-	Cap., µF	WV DC	Case Code*
43 D 8790	156K003P02	15	3	2
43 D 8791	186K003P02	18	3	2
43 D 8792	686K003P04	68	3	4
43 D 8793	826K003P04	82	3	4
43 D 8794	106K006P02	10	6	2
43 D 8795	476K006P04	47	6	4
43 D 8796	566K006P04	56	6	4
43 D 8797	395K010P02	3.9	10	2
43 D 8798	475K010P02	4.7	10	2
43 D 8799	565K010P02	5.6	10	2
43 D 8900	685K010P02	6.8	10	2
43 D 8901	276K010P04	27	10	4
43 D 8902	336K010P04	33	10	4
43 D 8903	396K010P04	39	10	4
43 D 8904	564K035P02	.56	35	2
43 D 8905	684K035P02	.68	35	2
43 D 8906	824K035P02	.82	35	2
43 D 8907	105K035P03	1.0	35	3
43 D 8908	125K035P03	1.2	35	3
43 D 8909	155K035P04	1.5	35	4
43 D 8910	185K035P04	1.8	35	4
43 D 8911	225K035P04	2.2	35	4
43 D 8913	275K035P04	2.7	35	4
43 D 8914	335K035P04	3.3	35	4
43 D 8915	395K035P04	3.9	35	4
43 D 8916	475K035P04	4.7	35	4
43 D 8917	565K035P04	5.6	35	4
43 D 8918	685K035P04	6.8	35	4
43 D 8919	825K035P04	8.2	35	4
43 D 8920	823K050P02	.082	50	2
43 D 8921	104K050P02	.1	50	2
43 D 8992	124K050P02	.12	50	2
43 D 8923	154K050P02	.15	50	2
43 D 8924	184K050P02	.18	50	2
43 D 8925	224K050P02	.22	50	2
43 D 8926	274K050P03	.27	50	3
43 D 8927	334K050P03	.33	50	3
43 D 8928	394K050P03	.39	50	3
43 D 8929	474K050P03	.47	50	3
43 D 8930	564K050P03	.56	50	3
43 D 8931	684K050P03	.68	50	3
43 D 8932	824K050P03	.82	50	3
43 D 8933	105K050P03	1.0	50	3
43 D 8934	125K050P04	1.2	50	4
43 D 8935	155K050P04	1.5	50	4
43 D 8936	185K050P04	1.8	50	4
43 D 8937	225K050P04	2.2	50	4
43 D 8938	275K050P04	2.7	50	4
43 D 8939	335K050P04	3.3	50	4
43 D 8940	395K050P04	3.9	50	4
43 D 8941	475K050P04	4.7	50	4

MTP SERIES ULTRAMINIATURE TANTALUM CAPACITORS

Sintered tantalum anode, polar wet slug units offer higher capacity-voltage than ordinary wet slug, solid or foil tantalum capacitors. Meet MIL-STD-202 for high frequency vibration, shock, temperature cycling moisture resistance, sleeve strength. Silver case, closed on elastomer end seal. Insulated sleeve. —55° C to +85° C. ±20%. Max. DC leakage, 2 µA at 25° C. Av. shpg. wt., 1 oz.

PRICE AND SIZE LOCATOR

Case Size†	Diameter x Length	EACH 1-9	10-24	25-49	50-99	100-499	500-999
A	.115 x .400"	2.59	2.28	1.99	1.71	1.37	1.25
B	.145 x .590"	3.11	2.74	2.39	2.06	1.64	1.51
C	.225 x .775"	3.62	3.18	2.78	2.39	1.91	1.75
D	.115 x .312"	2.57	2.26	1.97	1.69	1.35	1.23



- Higher Capacity-Voltage Product Than Ordinary Wet Slug, Tantalum Capacitors
- Meets MIL-STD-202 Specifications for High-Frequency Vibration and Rigid Construction

Stock No.	Type MTP-	Cap. µF	WV DC	Case Size†
43 D 0552	335M060P1D	3.3	60	D
43 D 0650	405M050P1D	4	50	D
43 D 0553	475M035P1D	4.7	35	D
43 D 0559	475M060P1A	4.7	60	A
43 D 0651	605M030P1D	6	30	D
43 D 0561	685M020P1D	6.8	20	D
43 D 0652	685M050P1A	6.8	50	A
43 D 0563	685M060P1A	6.8	60	A
43 D 0577	106M010P1D	10	10	D
43 D 0653	106M030P1A	10	30	A
43 D 0654	106M035P1A	10	35	A
43 D 0578	106M060P1B	10	60	B
43 D 0579	156M006P1D	15	6	D
43 D 0581	156M020P1A	15	20	A
43 D 0582	156M060P1B	15	60	B
43 D 0600	226M015P1A	22	15	A
43 D 0655	226M060P1B	22	60	B
43 D 0656	306M050P1B	30	50	B
43 D 0602	336M010P1A	33	10	A
43 D 0657	336M050P1B	33	50	B
43 D 0603	336M060P1C	33	60	C
43 D 0658	456M030P1B	45	30	B
43 D 0605	476M006P1A	47	6	A
43 D 0607	476M020P1B	47	20	B
43 D 0608	476M060P1C	47	60	C
43 D 0659	606M020P1B	60	20	B
43 D 0609	686M015P1B	68	15	B
43 D 0610	686M050P1C	68	50	C
43 D 0660	786M050P1C	78	50	C
43 D 0661	806M015P1B	80	15	B
43 D 0662	107M010P1B	100	10	B
43 D 0663	107M035P1C	100	35	C
43 D 0664	127M010P1B	120	10	B
43 D 0613	157M006P1B	150	6	B
43 D 0614	157M020P1C	150	20	C
43 D 0665	127M030P1C	120	30	C
43 D 0666	187M006P1B	180	6	B
43 D 0667	207M015P1C	200	15	C
43 D 0668	227M015P1C	220	15	C
43 D 0669	307M010P1C	300	10	C
43 D 0616	337M010P1C	330	10	C
43 D 0670	457M006P1C	450	6	C
43 D 0618	477M006P1C	470	6	C

MALLORY Aluminum Electrolytic Capacitors

TYPE CGS 65°C COMPUTER-GRADE ELECTROLYTICS

*Size Code	Dia. x Lgth. (Inches)	*Size Code	Dia. x Lgth. (Inches)	*Size Code	Dia. x Lgth. (Inches)
BB	1 25/64 x 2 9/64	DD	2 1/64 x 3 9/64	FF	3 1/64 x 4 9/64
BD	1 25/64 x 3 9/64	DF	2 1/64 x 4 9/64	FH	3 1/64 x 5 9/64
BF	1 25/64 x 4 9/64	DI	2 1/64 x 5 41/64	FJ	3 1/64 x 5 55/64

High-reliability use in computer-type equipment for both military and commercial applications. Feature same quality construction and design as Type CG capacitors listed at right, but are designed for operation at +65° C. The lower temperature rating makes it possible to provide a greater capacitance in a given can size for a given working voltage. All have plastic insulating sleeve. 7/32" high terminal posts, with #10-32 binding head screws and integral washers. Temp. range, —40° C to +65° C. Capacitance tolerance: —10, +75% for units to 150 WVDC; —10, +50%, 250 WVDC. Av. shpg. wts: BB thru BF, ¾ lb.; DD thru DI, 1¼ lbs.; FF thru FJ, 2 lbs.

Stock No.	Type CGS-	µF	WV DC	*Size Code	EACH 1-24	25-49	50-99	100-249
43 D 8500	722U010BB1	7200	10	BB	2.41	1.92	1.69	1.30
43 D 8501	133U010BD1	13,000	10	BD	2.85	2.28	2.00	1.54
43 D 8502	203U010BF1	20,000	10	BF	3.42	2.74	2.40	1.85
43 D 8503	303U010DD1	30,000	10	DD	4.42	3.54	3.10	2.39
43 D 8504	443U010DF1	44,000	10	DF	5.40	4.32	3.79	2.92
43 D 8505	663U010DI1	66,000	10	DI	7.38	5.91	5.18	3.99
43 D 8506	104U010FF1	100,000	10	FF	10.32	8.26	7.24	5.58
43 D 8507	134U010FH1	130,000	10	FH	12.10	9.68	8.48	6.54
43 D 8508	164U010FJ1	160,000	10	FJ	13.86	11.09	9.71	7.49
43 D 8509	552U015BB1	5500	15	BB	2.26	1.81	1.58	1.22
43 D 8510	103U015BD1	10,000	15	BD	2.89	2.31	2.02	1.56
43 D 8511	153U015BF1	15,000	15	BF	3.50	2.80	2.45	1.89
43 D 8512	233U015DD1	23,000	15	DD	4.51	3.61	3.16	2.44
43 D 8513	343U015DF1	34,000	15	DF	5.59	4.47	3.92	3.02
43 D 8514	503U015DI1	50,000	15	DI	7.38	5.91	5.18	3.99
43 D 8515	803U015FF1	80,000	15	FF	9.90	7.92	6.94	5.25
43 D 8516	104U015FH1	100,000	15	FH	12.21	9.77	8.56	6.60
43 D 8517	124U015FJ1	120,000	15	FJ	14.15	11.32	9.92	7.65
43 D 8518	302U025BB1	3000	25	BB	2.37	1.89	1.66	1.28
43 D 8519	356U025BD1	5600	25	BD	2.81	2.25	1.97	1.52
43 D 8520	822U025BF1	8200	25	BF	3.24	2.59	2.27	1.75
43 D 8521	123U025DD1	12,000	25	DD	4.01	3.21	2.81	2.17
43 D 8522	183U025DF1	18,000	25	DF	5.20	4.16	3.64	2.81
43 D 8523	273U025DI1	27,000	25	DI	6.88	5.51	4.82	3.72
43 D 8524	433U025FF1	43,000	25	FF	9.36	7.49	6.56	5.06
43 D 8525	573U025FH1	57,000	25	FH	12.12	9.69	8.50	6.55
43 D 8526	673U025FJ1	67,000	25	FJ	13.47	10.77	9.44	7.28
43 D 8527	222U040BB1	2200	40	BB	2.50	2.00	1.75	1.35
43 D 8528	422U040BD1	4200	40	BD	2.87	2.29	2.01	1.55
43 D 8529	622U040BF1	6200	40	BF	3.61	2.89	2.53	1.95
43 D 8530	932U040DD1	9300	40	DD	4.61	3.69	3.23	2.49
43 D 8531	133U040DF1	13,000	40	DF	5.62	4.50	3.94	3.04
43 D 8532	203U040DI1	20,000	40	DI	7.46	5.96	5.23	4.03
43 D 8533	323U040FF1	32,000	40	FF	10.73	8.58	7.52	5.80
43 D 8534	433U040FH1	43,000	40	FH	13.41	10.73	9.40	7.25
43 D 8535	503U040FJ1	50,000	40	FJ	15.13	12.11	10.61	8.18
43 D 8536	162U050BB1	1600	50	BB	2.41	1.92	1.69	1.30
43 D 8537	292U050BD1	2900	50	BD	2.96	2.37	2.08	1.60
43 D 8538	432U050BF1	4300	50	BF	3.50	2.80	2.45	1.89
43 D 8539	652U050DD1	6500	50	DD	4.50	3.60	3.15	2.43
43 D 8540	962U050DF1	9600	50	DF	5.59	4.47	3.92	3.02
43 D 8541	143U050DI1	14,000	50	DI	7.40	5.92	5.19	4.00
43 D 8542	223U050FF1	22,000	50	FF	10.08	8.07	7.07	5.45
43 D 8543	303U050FH1	30,000	50	FH	12.86	10.29	9.01	6.95
43 D 8544	353U050FJ1	35,000	50	FJ	14.43	11.54	10.12	7.80
43 D 8545	821U075BB1	820	75	BB	2.37	1.89	1.66	1.28
43 D 8546	152U075BD1	1500	75	BD	2.74	2.19	1.92	1.48
43 D 8547	232U075BF1	2300	75	BF	3.20	2.56	2.24	1.73
43 D 8548	342U075DD1	3400	75	DD	4.07	3.26	2.85	2.20
43 D 8550	502U075DF1	5000	75	DF	4.96	3.97	3.48	2.68
43 D 8551	752U075DI1	7500	75	DI	6.48	5.18	4.54	3.50
43 D 8552	651U100BB1	650	100	BB	2.55	2.04	1.79	1.38
43 D 8553	122U100BD1	1200	100	BD	3.15	2.52	2.20	1.70
43 D 8554	182U100BF1	1800	100	BF	3.87	3.09	2.71	2.09
43 D 8555	272U100DD1	2700	100	DD	4.92	3.94	3.45	2.66
43 D 8556	402U100DF1	4000	100	DF	6.38	5.11	4.47	3.45
43 D 8557	592U100DI1	5900	100	DI	8.51	6.81	5.97	4.60
43 D 8558	401U150BB1	400	150	BB	2.52	2.01	1.76	1.36
43 D 8559	721U150BD1	720	150	BD	2.96	2.37	2.08	1.60
43 D 8560	112U150BF1	1100	150	BF	3.66	2.93	2.57	1.98
43 D 8561	162U150DD1	1600	150	DD	4.59	3.67	3.22	2.48
43 D 8562	252U150DF1	2500	150	DF	5.92	4.74	4.15	3.20
43 D 8563	352U150DI1	3500	150	DI	7.68	6.14	5.38	4.15
43 D 8564	201T250BB1	200	250	BB	2.31	1.85	1.62	1.25
43 D 8565	381T250BD1	380	250	BD	2.78	2.22	1.95	1.50
43 D 8566	551T250BF1	550	250	BF	3.24	2.59	2.27	1.75
43 D 8567	851T250DD1	850	250	DD	4.07	3.26	2.85	2.20
43 D 8568	122D250DF1	1200	250	DF	5.11	4.08	3.58	2.76
43 D 8569	192T250DI1	1900	250	DI	7.18	5.74	5.03	3.88

TYPE CG 85°C COMPUTER-GRADE ELECTROLYTICS

*Size Code	Dia. x Lgth. (Inches)	*Size Code	Dia. x Lgth. (Inches)
A	1 3/8 x 2 1/4	E	3 x 5 5/8
B	1 3/8 x 4 1/8	F	2 x 3 1/8
C	2 x 4 1/8	G	1 25/64 x 3 9/64
D	3 x 4 1/8	H	1 49/64 x 3 9/64

Type CG electrolytics are high-quality aluminum electrolytic capacitors designed to provide high reliability in power supplies of both military and commercial computer-type equipment. Pressure-sensitive safety-vent design for extended life. Special design prevents electrolyte leakage. All have high-dialectric polyester film insulating sleeve with 7/32" terminal posts. Electrolytics are designed to take momentary surge higher than working voltage. Temperature range, —20°C to +85°C. Capacity tolerance, —10% to +75% for units rated up to 150 working volts DC; —10% to +50% for units rated to 450 working volts DC. For mounting clamps, see page 189 of this catalog. Av. shpg. wt. for size code A through C, ¾ lb.; for size code D through F, 2 lbs.

Stock No.	Mfr's Type CG	µF	WV DC	*Size Code	EACH 1-49	50-99	100 Up
43 D 8108	15U5G1	100,000	5	E	9.39	7.38	6.03
43 D 8100	822U10C1	8200	10	B	2.84	2.23	1.82
43 D 8101	1352U10K1	13,500	10	F	3.72	2.92	2.39
43 D 8124	183U10D1	18,000	10	C	4.59	3.61	2.96
43 D 8125	4352U10F1	43,500	10	D	8.25	6.48	5.31
43 D 8109	683U10G1	68,000	10	E	9.66	7.59	6.21
43 D 8102	252U15A1	2500	15	A	1.97	1.55	1.27
43 D 8103	642U15C1	6400	15	B	2.69	2.11	1.73
43 D 8116	83U15H1	8000	15	H	3.07	2.41	1.97
43 D 8104	1052U15K1	10,500	15	F	3.38	2.66	2.17
43 D 8126	143U15D1	14,000	15	C	4.47	3.51	2.88
43 D 8127	343U15F1	34,000	15	D	7.11	5.59	4.57
43 D 7954	533U15G1	53,000	15	E	9.30	7.30	5.98
43 D 7955	152U25A1	1500	25	A	1.72	1.35	1.11
43 D 7550	282U25B1	2800	25	G	2.12	1.67	1.36
43 D 8105	382U25C1	3800	25	B	2.60	2.05	1.60
43 D 7961	452U25H1	4500	25	H	2.77	2.18	1.78
43 D 8106	63U25K1	6000	25	F	3.23	2.54	2.08
43 D 8128	852U25D1	8500	25	C	3.90	3.07	2.51
43 D 8129	24U25F1	20,000	25	D	6.55	5.15	4.21
43 D 8110	3152U25G1	31,500	25	E	8.78	6.90	5.64
43 D 8148	82U50A1	800	50	A	1.74	1.37	1.12
43 D 8117	152U50B1	1500	50	G	2.05	1.62	1.32
43 D 8149	23U50C1	2000	50	B	2.29	1.80	1.47
43 D 8118	252U50H1	2500	50	H	2.52	1.98	1.62
43 D 8159	332U50K1	3300	50	F	3.25	2.56	2.09
43 D 8130	452U50D1	4500	50	C	3.47	2.72	2.23
43 D 8131	14U50F1	10,000	50	D	6.70	5.27	4.30
43 D 7956	1652U50G1	16,500	50	E	9.20	7.23	5.91
43 D 7957	62U75A1	600	75	A	2.01	1.58	1.30
43 D 8160	152U75C1	1500	75	B	2.84	2.23	1.82
43 D 8162	252U75K1	2500	75	F	3.70	2.90	2.38
43 D 8132	3451U75D1	3450	75	C	4.03	3.17	2.59
43 D 8133	822U75F1	8200	75	D	7.25	5.70	4.66
43 D 8111	1252U75G1	12,500	75	E	9.45	7.42	6.08
43 D 8164	42U100A1	400	100	A	2.01	1.58	1.30
43 D 8169	13U100C1	1000	100	B	2.73	2.15	1.76
43 D 8177	1651U100K1	1650	100	F	3.17	2.49	2.04
43 D 8134	2251U100D1	2250	100	C	4.12	3.23	2.67
43 D 8135	532U100F1	5300	100	D	6.74	5.30	4.33
43 D 7958	832U100G1	8300	100	E	9.68	7.61	6.23
43 D 8184	2750U150A1	275	150	A	1.63	1.29	1.05
43 D 8185	72U150C1	700	150	B	2.40	1.89	1.54
43 D 8186	112U150K1	1100	150	F	3.13	2.46	2.01
43 D 8136	1551U150D1	1550	150	C	4.01	3.15	2.58
43 D 8137	362U150F1	3600	150	D	7.08	5.56	4.55
43 D 8112	562U150G1	5600	150	E	9.87	7.76	6.35
43 D 8187	181T200A1	180	200	A	2.02	1.59	1.30
43 D 8188	451T200C1	450	200	B	2.58	2.03	1.66
43 D 8189	751T200K1	750	200	F	3.30	2.59	2.12
43 D 8138	13T200D1	1000	200	C	4.51	3.54	2.90
43 D 8139	2451T200F1	2450	200	D	6.83	5.37	4.39
43 D 8113	382T200G1	3800	200	E	12.26	9.64	7.88
43 D 8191	3750T250C1	375	250	B	2.99	2.35	1.92
43 D 8192	62T250K1	600	250	F	3.65	2.88	2.35
43 D 8140	82T250D1	800	250	C	4.72	3.71	3.04
43 D 8114	33T250G1	3000	250	E	10.16	8.00	6.53
43 D 8142	72T300D1	700	300	C	4.74	3.72	3.05
43 D 8143	1651T300F1	1650	300	D	8.46	6.65	5.44
43 D 8193	12T350A1	100	350	A	2.43	1.91	1.57
43 D 8194	251T350C1	250	350	B	2.96	2.33	1.90
43 D 8144	551T350D1	550	350	C	5.10	4.01	3.28
43 D 8145	132T350F1	1300	350	D	8.59	6.75	5.52
43 D 8115	23T350G1	2000	350	E	10.63	8.35	6.84
43 D 8022	151T400C1	150	400	B	2.96	2.33	1.90
43 D 8146	3250T400D1	325	400	C	3.80	2.99	2.44
43 D 8199	181T450K1	180	450	F	3.09	2.43	1.99
43 D 8147	241T450D1	240	450	C	3.42	2.69	2.20

Be Sure to Specify Stock No., Mfr's Type No. and Capacitance

Selected Capacitors

MALLORY

TYPES HC AND NP DRY ELECTROLYTICS

Plastic-cased electrolytics can operate at wide temperature range and are moisture-resistant. Screw terminals. Temperature range: —40°C to +85°C. ‡Aluminum case, lug terminals—for fence control. *NP non-polarized types for intermittent AC use only. Others are HC polarized types for high-capacity, low voltage uses. †For photoflash. **Dual section. See page 194 for mounting clamps. Tolerances: NP, ±25%, except 3003A, ±15%; HC, 0.50 WVDC, —10% to +150%; 51-350 WVDC, —10% to +100%; 351 WVDC and up, —10% to +50%. Average shpg. wt. for size code A through D, ½ lb.; E through H, Shpg. wt., 1½ lbs.

§	Size	Clamp	§	Size	Clamp
A	1 7/16x2 3/4"	43 D 7973	E	1 7/16x4 3/8"	43 D 7973
B	1 7/16x3 3/8"	43 D 7973	F	1 7/16x2 3/4"	43 D 7973
C	2 1/16x4 3/8"	43 D 7975	G	1 13/16x4 3/8"	43 D 7960
D	1 13/16x3 3/8"	43 D 7960	H	3x4 1/8"	43 D 7977

Stock No.	Mfr's Type	μF	WV DC	§	EACH 1-9	10-24	25-49	50-99	100-249
43 D 8429	10100	10000	10	C	7.82	6.70	3.90	3.02	2.60
43 D 7581	1540A	4000	15	E	5.37	4.61	2.69	2.07	1.69
43 D 7589	1560A	6000	15	D	5.62	4.82	2.81	2.17	1.75
43 D 9935	2050-50	5000	20**	C	8.00	6.86	4.00	3.09	2.18
43 D 9936	2060A	6000	20	G	6.11	5.24	3.05	2.36	2.29
43 D 9923	20250‡	25,000	20	H	12.88	11.04	6.44	4.96	4.02
43 D 7582	2510A	1000	25	F	3.19	2.73	1.59	1.23	1.00
43 D 7583	2520A	2000	25	B	4.15	3.56	2.07	1.60	1.30
43 D 7584	2540A	4000	25	D	5.58	4.79	2.79	2.15	1.75
43 D 9937	4040A	4000	40	G	6.98	6.00	3.49	2.69	2.18
43 D 9938	5005A	500	50	A	3.33	2.85	1.66	1.28	1.04
43 D 7586	5010A	1000	50	B	4.25	3.65	2.13	1.64	1.33
43 D 7590	5020A	2000	50	D	5.06	4.34	2.53	1.95	1.58
43 D 8098	5040	4000	50	C	7.32	6.27	3.66	2.82	2.29
43 D 7805	1255A*	500	125	G	6.30	5.40	3.15	2.42	1.90
43 D 9939	15010A	1000	150	G	6.44	5.52	3.22	2.48	2.01
43 D 9944	20005	500	200	C	5.97	5.12	2.99	2.30	1.87
43 D 7592	20005A	500	200	D	5.53	4.74	2.77	2.13	1.73
43 D 9943	3014A*	100	300	D	6.13	5.25	3.06	2.36	1.85
43 D 7588	3025*	200	300	C	7.00	6.00	3.50	2.70	2.11
43 D 7810	4505*	50	450	D	6.30	5.40	3.15	2.42	1.88
43 D 7811	4510*	100	450	C	7.70	6.60	3.85	2.97	2.64
43 D 7820	45003†	300	450	C	8.47	7.26	4.24	3.27	2.65

SX POLYSTYRENE CAPACITORS

- Less than 1.3% Change: —10°C to +70°C
- High Insulation Resistance
- Small Size
- Power Factor Less Than .05%
- Low Cost

Stretched polystyrene dielectric fused to high-purity aluminum foil, produces excellent humidity barrier. Excellent where utmost capacitance stability versus temperature and time are required, due to high insulation resistance and power factor of less than .05%. Capacitance change from —10°C to +70°C is less than 1.3% total, and is negative. Temp. coefficient, —150 ppm/°C, ±60 ppm/°C. 600 WVDC. ±5% capacitance tolerance. Temp. range —40°C to +85°C. Average shipping weight, 1 oz. Price Locator below. For larger quantities, contact Allied.

SIZE CHART

pF	Nominal Lgth.	Diameter
5 to 300	.395"	.165 to .255"
330 to 1000	.590"	.194 to .233"
1100 to 3000	.590"	.238 to .348"
3300 to 5000	.590 to .790"	.366 to .466"
5100 to 10,000	.590 to .790"	.470 to .590"

CAPACITANCE CHART

pF	pF	pF	pF	pF	pF	pF	pF
5	30	75	180	430	1000	2400	5000
10	33	82	200	470	1100	2500	5100
12	36	91	220	510	1200	2700	5600
15	39	100	240	560	1300	3000	6200
18	43	110	270	620	1500	3300	6800
20	47	120	300	680	1600	3600	7500
22	56	130	330	750	1800	3900	8200
24	62	150	360	820	2000	4300	9100
27	68	160	390	910	2200	4700	10,000

PRICE LOCATOR—SPECIFY pF FROM TABLE ABOVE

Stock No.	Capacity pF	EACH 1-24	25-99	100-249	250-499	500-999	1000-Up
43 D 0400 C	5 to 300	.12	.112	.093	.07	.054	.051
43 D 0401 C	330 to 1000	.12	.112	.093	.07	.054	.051
43 D 0402 C	1100 to 3000	.15	.13	.111	.086	.066	.062
43 D 0403 C	3300 to 5000	.18	.16	.13	.103	.076	.07
43 D 0404 C	5100 to 10,000	.21	.16	.14	.105	.079	.076

MTA ALUMINUM ELECTROLYTICS

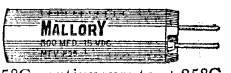
Polypropylene case provides humidity protection by excluding molecules of water vapor while allowing molecular venting. Operating temperature range, —30°C to +85°C. Tolerance, —10%, +100%. DC leakage not over .03 μA per μF volt or 6 μA, whichever is greater. Av. shpg. wt., 2 oz.

PRICE AND SIZE LOCATOR†

Size Code	Dia.	Length	EACH 1-24	25-49	50-99	100-249	250-499	500-999	1000-Up
A	.313x	.750"	.36	.27	.24	.21	.18	.15	.13
B	.375x1	.000"	.40	.30	.26	.22	.20	.17	.15
C	.500x1	.375"	.45	.34	.30	.26	.23	.19	.17
D	.500x1	.375"	.51	.38	.33	.27	.25	.21	.19
E	.500x1	.375"	.54	.40	.35	.30	.27	.23	.20
F	.500x1	.375"	.57	.43	.37	.32	.28	.24	.21

Stock No.	Type MTA	μF	Max WV DC	†	Stock No.	Type MTA	μF	Max WV DC	†
43 D 0483	1D50	1	50	A	43 D 0408	D6	50	6	A
43 D 0484	2D50	2	50	A	43 D 0420	50E15	50	15	B
43 D 0485	3D50	3	50	A	43 D 0447	50E25	50	25	B
43 D 0486	4D50	4	50	A	43 D 0524	50F50	50	50	C
43 D 0487	5D50	5	50	A	43 D 0405	60D3	60	3	A
43 D 0488	6D50	6	50	A	43 D 0441	60E20	60	20	B
43 D 0489	7D50	7	50	A	43 D 0525	60F50	60	50	D
43 D 0490	8D50	8	50	A	43 D 0445	70E20	70	20	B
43 D 0459	10D35	10	35	A	43 D 0526	70F50	70	50	D
43 D 0492	10E50	10	50	B	43 D 0421	80E15	80	15	B
43 D 0460	15D35	15	35	A	43 D 0529	80F50	80	50	E
43 D 0493	15E50	15	50	B	43 D 0415	100E10	100	10	B
43 D 0456	20D30	20	30	A	43 D 0431	100E15	100	15	B
43 D 0494	20E50	20	50	B	43 D 0465	100F35	100	35	D
43 D 0435	25D20	25	20	A	43 D 0409	125E6	125	6	B
43 D 0461	25E35	25	35	B	43 D 0481	125F35	125	35	E
43 D 0495	25F50	25	50	C	43 D 0410	150E6	150	6	B
43 D 0418	30D15	30	15	A	43 D 0482	150F35	150	35	F
43 D 0462	30E35	30	35	B	43 D 0406	175E3	175	3	C
43 D 0501	30F50	30	50	C	43 D 0452	175F25	175	25	E
43 D 0419	35D15	35	15	A	43 D 0416	200F10	200	10	C
43 D 0463	35E35	35	35	B	43 D 0433	300F15	300	15	F
43 D 0505	35F50	35	50	C	43 D 0434	350F15	350	15	F
43 D 0413	40D10	40	10	A	43 D 0411	450F6	450	6	D
43 D 0457	40E30	40	30	B	43 D 0412	500F6	500	6	D
43 D 0506	40F50	40	50	C	43 D 0407	600F3	600	3	C

TYPE MTV ALUMINUM ELECTROLYTIC CAPACITORS



Molded in plastic case for moisture-tight seal, uniform size. 3 molded stand-off mounts for PC board mounting. Uniform spacing of .200". #20 AWG leads. Temp. range, —30° to +65°C continuous; to ±85°C intermittent. 1000 hrs. life test at 65°C. Capacity tolerance, —10%, +100% at 25°C, 120 Hz. Case size, indicated in Type No. Wt., 1 oz.

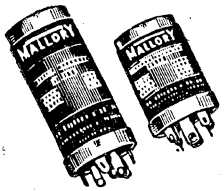
§Size Code	Dia. x L. (Inches)	§Size Code	Dia. x L. (Inches)	§Size Code	Dia. x L. (Inches)	§Size Code	Dia. x L. (Inches)
CB	3/8x1 3/16	CF	3/8x1 1/16	DE	1/2x1	DN	1/2x1 1/2
CD	3/8x1 5/16	CP	3/8x1 9/16	DJ	1/2x1 1/4	.....	.....

PRICES FOR TYPE MTV CAPACITORS†

Price Code	EACH 1-24	25-49	50-99	100-249	250-499	500-999	1000-Up
A	.40	.30	.26	.22	.20	.17	.15
B	.42	.32	.27	.23	.21	.18	.15
C	.48	.36	.31	.27	.24	.20	.18
D	.54	.40	.36	.29	.27	.23	.20
E	.56	.42	.37	.32	.28	.24	.21
F	.60	.45	.40	.34	.30	.25	.22

Stock No.	§Type MTV	μF	WV DC	‡	Stock No.	§Type MTV	μF	WV DC	‡
43 D 2664	1000DN3	1000	3	F	43 D 2694	200DJ25	200	25	F
43 D 2665	100CB6	100	6	B	43 D 2695	250DN25	250	25	F
43 D 2669	400DE6	400	6	C	43 D 2697	50CF35	50	35	C
43 D 2670	500DJ6	500	6	D	43 D 2699	100DE35	100	35	D
43 D 2672	70CB10	70	10	B	43 D 2701	200DN35	200	35	F
43 D 2673	100CD10	100	10	B	43 D 2702	1CB50	1	50	A
43 D 2675	250CP10	250	10	C	43 D 2703	2CB50	2	50	A
43 D 2676	300DE10	300	10	D	43 D 2704	3CB50	3	50	A
43 D 2677	400DJ10	400	10	E	43 D 2705	4CB50	4	50	A
43 D 2679	50CB15	50	15	B	43 D 2706	5CB50	5	50	A
43 D 2682	90CD15	90	15	B	43 D 2707	6CB50	6	50	A
43 D 2683	100CF15	100	15	B	43 D 2710	10CB50	10	50	B
43 D 2686	250DE15	250	15	D	43 D 2711	15CD50	15	50	B
43 D 2687	400DJ15	400	15	F	43 D 2712	20CD50	20	50	B
43 D 2688	500DN15	500	15	F	43 D 2713	25CF50	25	50	C
43 D 2690	50CD25	50	25	B	43 D 2750	50DE50	50	50	C
43 D 2693	100CP25	100	25	C	43 D 2752	100DN50	100	50	F

Twist-Prong Electrolytic Capacitors



Types FP, WP, PWP. For filter, audio by-pass, TV circuits. Stable under high ripple current, surge voltages and temperatures (+85°C). Can is common negative. Both FP and WP types have etched-plate anodes. Tolerances: 0-50 WVDC, −10 to +150%, 150-350 WVDC, −10 to 100%; over 350 WVDC; −10 to +50%. With insulating washer. §In table refers to size. *PC terminals. Av. shpg. wt., 6 oz.

For Listing of Equivalent Electrolytics—See Pages 172 and 173

§	Dia. x L	§	Dia. x L	§	Dia. x L	§	Dia. x L	§	Dia. x L	§	Dia. x L
A	1x1½″	C	1x2″	E	1x3″	G	1⅜x2½″	J	1⅜x3½″	L	1⅜x1¾″
B	1x1¾″	D	1x2½″	F	1⅜x2″	H	1⅜x3″	K	1⅜x4″		

SINGLE SECTION (FP, Except †WP, *PWP)—Specify Stock No. and Type When Ordering

Stock No.	Mfr's Type	Cap. μF	WV DC	§	EACH 1-9	10-24	25-49	50-99	100-249	Stock No.	Mfr's Type	Cap. μF	WV DC	§	EACH 1-9	10-24	25-49	50-99	100-249
43 D 9554	039A†	1000	15	A	1.56	1.20	.90	.70	.56	43 D 9547	118A	200	150	F	1.88	1.45	1.09	.85	.68
43 D 9555	041A†	2000	15	F	2.35	1.82	1.37	1.06	.85	43 D 9548	119A	300	150	F	2.15	1.66	1.25	.97	.78
43 D 9556	042A†	3000	15	F	2.92	2.25	1.69	1.31	1.05	43 D 9540	121	120	200	F	1.79	1.38	1.04	.81	.65
43 D 9663	055A†	100	25	A	1.14	.88	.66	.52	.41	43 D 9665	123A†	500	200	H	3.38	2.61	1.95	1.52	1.22
43 D 9515	056	400	25	B	1.32	1.02	.77	.60	.48	43 D 9538	128A	80	300	D	1.61	1.25	.94	.73	.59
43 D 9552	057A†	500	25	A	1.35	1.05	.78	.61	.49	43 D 9539	129.1A	100	300	D	1.75	1.36	1.02	.79	.64
43 D 9553	059†	1000	25	F	1.89	1.47	1.10	.86	.69	43 D 9666	132†	200	300	G	2.71	2.10	1.57	1.22	.98
43 D 9570	060.2	2000	25	L	2.56	1.96	1.48	1.15	.92	43 D 9667	138A	80	350	F	2.00	1.55	1.16	.90	.72
43 D 9571	060.6	5000	25	J	4.63	3.57	2.68	2.08	1.67	43 D 9537	140A	125	350	G	2.41	1.86	1.40	1.09	.87
43 D 9664	064A†	100	50	A	1.18	.91	.69	.53	.43	43 D 9668	140.6A	150	350	G	2.63	2.03	1.53	1.19	.95
43 D 9549	065†	500	50	F	1.73	1.34	1.01	.78	.63	43 D 9669	141	320	350	K	4.23	3.27	2.45	1.91	1.53
43 D 9517	066A	500	50	C	1.51	1.17	.88	.68	.55	43 D 9531	144	20	450	C	1.31	1.02	.76	.59	.48
43 D 9572	066.5	1000	50	F	2.18	1.68	1.26	.98	.79	43 D 9533	146	40	450	D	1.58	1.22	.91	.71	.57
43 D 9518	067A*	1250	50	G	2.47	1.91	1.43	1.11	.89	43 D 9534	149	80	450	G	2.37	1.83	1.37	1.07	.86
43 D 9550	068†	1500	50	H	2.70	2.09	1.57	1.22	.98	43 D 9535	150A	100	450	H	2.68	2.06	1.55	1.20	.96
43 D 9573	070	2000	50	J	3.21	2.48	1.86	1.45	1.16	43 D 9525	173A	20	500	C	1.41	1.09	.82	.64	.51
43 D 9543	116A	100	150	A	1.34	1.04	.78	.61	.49	43 D 9527	177	40	500	G	1.79	1.38	1.04	.81	.65
43 D 9546	117A	150	150	C	1.48	1.15	.86	.67	.54	43 D 9528	187A	90	500	H	2.95	2.30	1.72	1.34	1.07

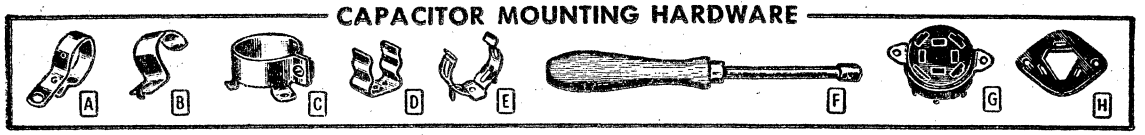
DUAL SECTION (FP, Except †WP, *PFP)—Specify Stock No. and Type When Ordering

43 D 9458	200†	1000-1000	15	F	2.48	1.91	1.44	1.12	.89	43 D 9656	217.87	40-40	300	F	2.02	1.56	1.17	.91	.73
43 D 9574	200.1B	1000-1000	15	C	2.27	1.75	1.32	1.02	.82	43 D 9578	220.1	40-25	350	B	1.61	1.25	.94	.73	.58
43 D 9670	201.5A†	1000-1000	35	G	2.96	2.28	1.71	1.33	1.07	43 D 9653	227A	20-20	350	C	1.55	1.20	.90	.70	.56
43 D 9456	202.5A†	100-100	50	A	1.46	1.13	.85	.66	.53	43 D 9654	227.3A	30-30	350	D	1.73	1.34	1.01	.78	.63
43 D 9575	205.8	50-1000	150	B	1.89	1.46	1.10	.85	.68	43 D 9677	227.6A	80-80	350	H	2.92	2.26	1.69	1.32	1.06
43 D 9576	213.1A*	50-30	150	L	1.47	1.14	.85	.67	.53	43 D 9655	227.7A	100-100	350	J	3.29	2.54	1.91	1.48	1.19
43 D 9449	214A	50-50	150	D	1.50	1.16	.87	.68	.54	43 D 9587	231A	10-10	450	C	1.46	1.13	.85	.66	.53
43 D 9577	214.3*	70-30	150	B	1.53	1.18	.89	.69	.55	43 D 9591	234A	20-20	450	D	1.73	1.34	1.01	.78	.63
43 D 9674	216.4A	200-200	150	G	2.66	2.05	1.54	1.20	.96	43 D 9593	238A	40-40	450	G	2.54	1.96	1.47	1.15	.92
43 D 9658	221A	40-40	250	B	1.63	1.26	.95	.74	.59	43 D 9581	247A	100-40	450	J	3.41	2.63	1.98	1.54	1.23
43 D 9659	217.7A	150-150	250	G	3.12	2.41	1.81	1.41	1.13	43 D 9582	264.5A	80-40	475	K	3.43	2.64	1.98	1.54	1.24
43 D 9675	217.74A	200-200	250	H	3.70	2.85	2.14	1.66	1.33										

TRIPLE SECTION—Specify Stock No. and FP Type When Ordering (‡400-400-50 WVDC)

43 D 9511	311.5A	40-40-40	150	B	1.69	1.31	.98	.76	.61	43 D 9461	375.8	10-10-10	450	D	1.75	1.35	1.01	.79	.63
43 D 9507	320	40-20-20	250	F	2.05	1.59	1.19	.93	.74	43 D 9464	376.5A	20-20-20	450	G	2.44	1.88	1.41	1.10	.88
43 D 9487	330.7A	30-20-10	350	D	1.88	1.45	1.09	.85	.68	43 D 9469	377.1A	40-40-40	450	J	3.28	2.53	1.90	1.48	1.18
43 D 9690	331.3A	80-60-60	350	J	3.45	2.66	2.00	1.55	1.24	43 D 9470	378	80-40-20	450	K	3.58	2.76	2.07	1.61	1.29
43 D 9588	333.2A	80-40-100	‡	J	3.24	2.50	1.87	1.46	1.17										

CAPACITOR MOUNTING HARDWARE



Selection of mounting hardware for capacitors subject to moderate or acute vibration. Hold capacitors securely in position, positively eliminating any chance of wobble or strain on terminals or body. Straps are tinned steel; all others are cadmium plated.

A TUBULAR STRAPS (Wt., 1 oz.)

Stock No.	Dia. Size	EACH 1-99	100-999	1000-Up
43 D 7962	⅝″	.09	.07	.05
43 D 7963	11/16″	.09	.07	.05
43 D 7964	¾″	.09	.07	.05
43 D 7965	13/16″	.09	.07	.05
43 D 7966	⅞″	.12	.10	.08
43 D 7967	15/16″	.12	.10	.08
43 D 7968	1″	.12	.10	.08
43 D 7969	1⅛″	.12	.10	.08

B "C" CLAMPS (Wt., 1 oz.)

43 D 7970	⅝-¾″	.12	.10	.08
43 D 7971	⅞-1″	.12	.10	.08

C MOUNTING RINGS (Wt., 1 oz.)

43 D 7972	1-1 1/16″	.25	.15	.11
43 D 7973	1⅜-1 7/16″	.25	.15	.11
43 D 7974	1½-1 9/16″	.25	.15	.11
43 D 7960	1¾-1 13/16″	.30	.18	.13
43 D 7975	2-2 1/16″	.50	.30	.22
43 D 7976	2½-2 9/16″	.50	.30	.22

C MOUNTING RINGS (Cont'd)

Stock No.	Dia. Size	EACH 1-99	100-999	1000-Up
43 D 7977	3″	.60	.36	.22

D MOUNTING CLIPS (Wt., 1 oz.)

43 D 7978	¾″	.12	.08	.06
43 D 7979	1″	.12	.09	.07
43 D 7980	1⅜″	.18	.15	.13

E UNIVERSAL CLIPS (Wt., 1 oz.)

43 D 7981	⅜-7/16″	.12	.10	.08
43 D 7982	½-9/16″	.12	.10	.08
43 D 7983	⅝-11/16″	.12	.10	.08
43 D 7984	¾-13/16″	.15	.11	.09
43 D 7985	⅞-15/16″	.15	.11	.09
43 D 7986	1-1 1/16″	.15	.12	.10
43 D 7987	1⅜x1 7/16″	.15	.12	.10

G MOUNTING SOCKETS (Wt., 2 oz.)

47 D 0335	1″	.52	.42	.....
47 D 0336	1⅜″	.76	.61	.....

F MOUNTING WRENCH

For locking "Twist-Prong" electrolytic capacitors securely into position. Length of unit, 7⅞″. Shpg. wt., 1 lb.

43 D 7990..... 1.49

H MOUNTING PLATES (Wt., 1 oz.)

Standard mounting plates for mounting "Twist-Prong" capacitors. *Phenolic. †Metal. #Mount 1″ dia. can over a 1⅜″ dia. hole.

Stock No.	Size	Stock No.	Size
43 D 7945	1″*	43 D 7948	1″†
43 D 7946	1⅜″*	43 D 7949	1⅜″†
43 D 7947	#*	43 D 7950	#†

1-99 Ea. .09 100-999 Ea. .08 1000-Up Ea. .07

KRAFT INSULATING SLEEVES (Not Illus.)

43 D 7510	¾x2″	43 D 7517	1⅜x2½″
43 D 7511	1x2″	43 D 7514	1⅜x3″
43 D 7515	1x2½″	43 D 7988	1⅜x3½″
43 D 7512	1x3″	43 D 7518	1⅜x4″
43 D 7513	1⅜x2″	43 D 7989	1⅜x4⅛″

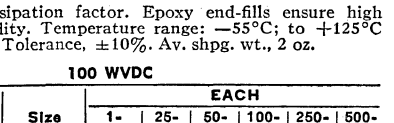
1-99 Ea. .09 100-999 Ea. .08 1000-Up Ea. .07

Use the Services of the Allied Facility Nearest You

"Mylar" and Variable Capacitors

TRW "MYLAR" CAPACITORS

TYPE 663UW "MYLAR" CAPACITORS



Space-saving capacitors have "skin-tight" cases. Offer long, stable life, high insulation resistance, and low dissipation factor. Epoxy end-fills ensure high resistance to humidity. Temperature range: —55°C; to +125°C with 50% derating. Tolerance, ±10%. Av. shpg. wt., 2 oz.

100 WVDC

Stock No.	μF	Size	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 1079	.001	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1081	.0022	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1082	.0033	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1083	.0047	5/32x1/2"	.73	.44	.32	.29	.25	.23
43 D 1084	.0068	5/32x1/2"	.73	.44	.32	.29	.25	.23
43 D 1086	.01	5/32x1/2"	.77	.46	.34	.30	.26	.24
43 D 1088	.022	13/64x5/8"	.77	.46	.34	.30	.26	.24
43 D 1089	.033	7/32x5/8"	.81	.48	.35	.32	.28	.25
43 D 1090	.047	15/64x3/4"	.81	.48	.35	.32	.28	.25
43 D 1091	.068	17/64x3/4"	.81	.48	.35	.32	.28	.25
43 D 1092	.10	9/32x7/8"	.86	.52	.37	.34	.29	.26
43 D 1093	.22	21/64x1"	.96	.56	.41	.37	.33	.30
43 D 1094	.33	3/8x1 1/8"	.99	.59	.44	.39	.35	.32
43 D 1095	.47	15/32x1 1/4"	1.09	.65	.47	.42	.37	.35
43 D 1096	.68	9/16x1 1/4"	1.19	.70	.51	.46	.41	.37
43 D 1098	1.0	19/32x1 1/2"	1.32	.79	.57	.51	.46	.42
43 D 1099	2.0	13/16x1 3/4"	1.73	1.03	.75	.68	.59	.54

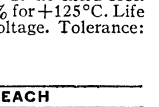
200 WVDC

43 D 1300	.001	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1301	.0015	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1302	.0022	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1303	.0033	5/32x1/2"	.68	.41	.29	.26	.24	.22
43 D 1304	.0047	5/32x1/2"	.73	.44	.32	.29	.25	.23
43 D 1307	.01	11/64x1/2"	.77	.46	.34	.30	.26	.24
43 D 1311	.047	19/64x3/4"	.81	.48	.35	.32	.28	.25
43 D 1313	.10	3/8x7/8"	.86	.52	.37	.34	.29	.26
43 D 1314	.22	7/16x1 1/8"	.96	.56	.41	.37	.33	.30
43 D 1315	.33	31/64x1 1/8"	.99	.59	.44	.39	.35	.32
43 D 1316	.47	35/64x1 1/4"	1.09	.65	.47	.42	.37	.35
43 D 1319	1.0	43/64x1 3/4"	1.32	.79	.57	.51	.46	.42
43 D 1320	2.0	7/8x1 7/8"	1.73	1.03	.75	.68	.59	.54

400 WVDC

43 D 1377	.0022	5/32x5/8"	.73	.44	.32	.29	.25	.23
43 D 1323	.0047	3/16x5/8"	.77	.46	.34	.30	.26	.24
43 D 1324	.01	1/4x5/8"	.81	.48	.35	.32	.28	.25
43 D 1325	.022	5/16x3/4"	.86	.52	.37	.34	.29	.26
43 D 1327	.047	11/32x7/8"	.90	.54	.40	.35	.32	.29
43 D 1328	.10	27/64x1"	.96	.56	.41	.37	.33	.30
43 D 1329	.22	35/64x1 3/8"	1.09	.65	.47	.42	.37	.35
43 D 1331	.47	43/64x1 5/8"	1.32	.79	.57	.51	.46	.43
43 D 1332	1.0	13/16x2"	1.90	1.16	.83	.75	.67	.59

TYPE X663F METALLIZED "MYLAR" CAPACITORS

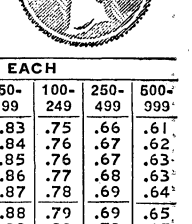


Thin, oval design. Extended-foil metallized "Mylar" dielectric is self-healing, has high insulation resistance and low dissipation factor. NOTE: the 200 WVDC units listed below are identical in price and size to 100 WVDC units (not listed)—you get this higher voltage rating at no extra cost. Temperature range: —55° to +100°C; derate 50% for +125°C. Life test: 250 hours at 100°C. and 125% of rated voltage. Tolerance: ±10%. Av. shpg. wt., 2 oz.

200 WVDC

Stock No.	μF	Size	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 1929	.01	5/32x13/64x7/16"	1.55	.94	.67	.61	.54	.50
43 D 1930	.022	13/64x17/64x7/16"	1.44	.87	.64	.56	.50	.47
43 D 1931	.033	7/32x9/32x7/16"	1.35	.81	.58	.53	.47	.43
43 D 1932	.047	11/64x17/64x9/16"	1.24	.75	.54	.48	.43	.40
43 D 1933	.10	1/4x23/64x9/16"	1.13	.68	.48	.45	.40	.37
43 D 1934	.22	17/64x3/8x1 1/16"	1.30	.78	.55	.51	.45	.41
43 D 1935	.33	19/64x31/64x1 1/16"	1.58	.95	.68	.62	.55	.51
43 D 1936	.47	23/64x35/64x1 1/16"	1.78	1.07	.78	.70	.62	.57
43 D 1937	.68	11/32x33/64x15/16"	1.98	1.19	.86	.78	.68	.64
43 D 1938	1.00	27/64x19/32x15/16"	2.23	1.33	.97	.87	.78	.72
43 D 1940	1.5	9/16x37/64x1 1/4"	2.50	1.50	1.09	.98	.87	.80
43 D 1939	2.00	27/64x23/32x1 1/4"	2.77	1.66	1.20	1.09	.96	.88
43 D 1941	3.00	29/64x49/64x1 1/2"	3.31	1.98	1.44	1.30	1.16	1.07
43 D 1942	4.00	1/2x37/64x1 1/2"	4.13	2.49	1.79	1.62	1.43	1.32
43 D 1943	5.00	33/64x29/32x1 3/4"	4.68	2.81	2.04	1.83	1.62	1.50

TYPE 608 MICROMINIATURE "MYLAR" CAPACITORS



Foil-wound mylars for high-component-density applications. Temperature range, —55°C to +85°C.; to 125°C. with 50% derating. Dissipation factor less than 1.0% at 1000 Hz., 25°C. Humidity resistance meets MIL-C-27287 paragraph 3.12 when tested at 40°C for 240 hours. Life: 1000 hours at 85°C and 125% of rated voltage. Tolerance: ±10%. 100 WVDC. Av. shpg. wt., 1 oz.

Stock No.	μF	Size	EACH 1-24	25-49	50-99	100-249	250-499	500-999
43 D 1342	.001	5/64x3/8"	1.52	1.11	.83	.75	.66	.61
43 D 1343	.0015	3/32x3/8"	1.54	1.12	.84	.76	.67	.62
43 D 1344	.0022	3/32x3/8"	1.56	1.13	.85	.76	.67	.63
43 D 1345	.0033	7/64x3/8"	1.57	1.14	.86	.77	.68	.63
43 D 1346	.0047	7/64x3/8"	1.60	1.16	.87	.78	.69	.64
43 D 1347	.0068	1/8x3/8"	1.62	1.18	.88	.79	.69	.65
43 D 1364	.0082	1/8x3/8"	1.63	1.19	.89	.80	.70	.65
43 D 1365	.01	9/64x3/8"	1.63	1.19	.89	.80	.70	.65
43 D 1366	.015	5/32x3/8"	1.67	1.21	.90	.81	.73	.67
43 D 1367	.022	11/64x3/8"	1.67	1.21	.90	.81	.73	.67
43 D 1385	.033	7/32x3/8"	1.74	1.27	.95	.85	.75	.69
43 D 1386	.047	1/4x3/8"	1.78	1.29	.97	.87	.77	.70
43 D 1387	.068	11/32x17/32"	2.50	1.50	1.09	.98	.87	.80
43 D 1388	.10	3/8x17/32"	2.64	1.58	1.16	1.03	.91	.85

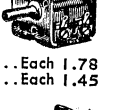
TYPE 601PE "MYLAR" CAPACITORS

Space-saving capacitors are designed for transistor printed circuits. Replace ceramic discs where stability with temperature change is important. Temp. range: —55°C to +85°C. Derate 50% for +125°C. Life test: 500 hours at +85°C and 125% of rated voltage. Dipped epoxy coating seals winding and lead entries, provides high-dielectric strength, and humidity resistance. Rated 50 WVDC. Tolerance, ±10%. Av. shpg. wt.,1 oz.

43 D 1946	.01	13/32x1 1/32x13/64"	.83	.50	.35	.32	.28	.26
43 D 1947	.022	27/64x25/64x13/64"	.91	.55	.40	.35	.32	.29
43 D 1948	.033	17/32x13/32x3/16"	.96	.57	.41	.37	.33	.31
43 D 1949	.047	17/32x29/64x13/64"	1.00	.61	.44	.39	.35	.32
43 D 1950	.068	17/32x1/2x7/32"	1.05	.63	.45	.41	.36	.34
43 D 1951	.10	21/32x17/32x15/64"	1.13	.68	.50	.45	.39	.36
43 D 1952	.15	43/64x21/32x17/64"	1.19	.72	.51	.46	.41	.37
43 D 1953	.22	47/64x11/16x5/16"	1.28	.76	.56	.50	.44	.41
43 D 1954	.33	13/16x3/4x5/16"	1.36	.83	.59	.53	.47	.44

RADIO CONDENSER VARIABLE CAPACITORS

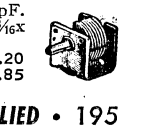
2-GANG CAPACITORS



For superhets without RF stage, or 2-stage TRF receivers. 29 plates per section. 15.5 pF to 467.8 pF. Ccw increase. Use series padder in oscillator circuits. 3/8" dia. shaft. 15/8x113/16x213/16". 8 oz.

43 D 3528. 1-49.....Each 3.00 50-99.....Each 2.65
100-249.....Each 2.32 250-499.....Each 2.15

2- AND 3-GANG CAPACITORS



Choice of two or three sections on one shaft. Trimmers on side, slotted plates. Range: 12 to 367 pF each section. Shaft dia. 3/8". Size of two-gang: 23/16x113/16x15/8". Size of 3-gang: 33/16x113/16x15/8". Av. shpg. wt., 6 oz.

43 D 3521. 2-Gang. 1-49.....Each 3.22
50-99.....Each 2.76 100-249.....Each 2.40
250-499.....Each 2.25

43 D 3522. 3-Gang. 1-49..Each 4.95 50-99.....Each 4.28
100-249.....Each 3.75 250-499.....Each 3.50

2-SECTION SUPERHET

19-plate oscillator section with 10.6 to 172.6 pF. 27-plate RF section with 14.5 to 434 pF. Both have 2-17 pF trimmer. Ccw increase. 15/8x113/16x23/16". 1/4" dia. shaft. 8 oz.

43 D 3529. 1-49...Ea. 2.50 50-99...Ea. 2.15
100-249.....Ea. 1.88 250-499.Ea. 1.75

MIDGET SUPERHET AND TRF TYPES

Midget Superhet. RF section—14.5 to 368 pF, 27 plates. Oscillator section—11.6 to 136.6 pF, 15 plates. Counter-clockwise increase. For 455 kHz IF. Trimmers. 111/16x11/2x15/16". 1/4" dia. shaft. 6 oz.

43 D 3523. 1-49.....Each 2.08 50-99.....Each 1.78
100-249.....Each 1.55 250-499.....Each 1.45

Midget TRF. 33-plate single-gang capacitor. 15-409 pF. Increases its capacity with clockwise rotation. 13/8x 13/8x15/16" high. 1/4" dia. shaft. 3/4" long. 5 oz.

43 D 3524. 1-49.....Ea. 1.30 50-99.....Ea. 1.20
100-249.....Each 1.08 250-499.....Each .85

Centralab Ceramic Capacitors

CENTRALAB

SERIES DD DISC CERAMICS

Recommended for use where high capacity is required and control stability is secondary. Operate for long periods under extreme moisture, vibration, and temperature conditions. *Price code. 1000 WVDC except: DD6-103, DD-153 through DD-503, 600 WVDC. Tolerance: ±10% except †GMV; ‡±20%; §—20%, +80%. Size, ¼"x⅝". Av. shpg. wt., 2 oz.

PRICES FOR DD SERIES

* Code	EACH 1-99	EACH, Pkgs. of 100 Only 100	200-400	500-1000	EACH, Pkgs. of 1000 Only 1000-3000	4000-5000
A	.15	.12	.08	.07	.06	.05
B	.15	.12	.08	.06	.05	.04
C	.15	.12	.08	.06	.05	.04
D	.15	.12	.08	.06	.05	.04
E	.15	.12	.08	.06	.05	.04
F	.15	.12	.08	.06	.05	.04
G	.24	.19	.12	.09	.05	.04
H	.24	.19	.12	.09	.06	.05
J	.24	.19	.12	.09	.07	.06
K	.45	.36	.23	.17	.06	.05
L	.45	.36	.23	.17	.16	.15

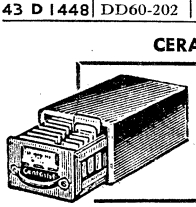
Stock No.	Mfr's Type	pF	*	Stock No.	Mfr's Type	pF	*
43 D 1407	DD-050	5	A	43 D 1431	DD-471	470	C
43 D 1409	DD-100	10	B	43 D 1432	DD-501	500	C
43 D 1410	DD-150	15	B	43 D 1433	DD-561	560	C
43 D 1411	DD-200	20	B	43 D 1434	DD-681	680	C
43 D 1525	DD-220	22	B	43 D 1435	DD-751	750	C
43 D 1412	DD-250	25	B	43 D 1537	DD-821	820	C
43 D 1527	DD-270	27	B	43 D 1437	DD-102	1000	E
43 D 1528	DD-300	30	B	43 D 1707	DD-102G	1000†	F
43 D 1413	DD-330	33	B	43 D 1438	DD-152	1500	E
43 D 1450	DD-390	39	B	43 D 1403	DD-182	1800	E
43 D 1415	DD-470	47	B	43 D 1439	DD-202	2000†	B
43 D 1416	DD-500	50	B	43 D 1542	DD-222	2200†	B
43 D 1417	DD-560	56	B	43 D 1406	DD-252	2500†	B
43 D 1418	DD-680	68	B	43 D 1452	DD-272	2700†	B
43 D 1451	DD-820	82	B	43 D 1440	DD-302	3000†	B
43 D 1420	DD-101	100	B	43 D 1600	DD-332	3300†	E
43 D 1421	DD-121	120	B	43 D 1441	DD-472	4700‡	D
43 D 1422	DD-151	150	B	43 D 1442	DD-5022	5000‡	D
43 D 1423	DD-181	180	B	43 D 1037	DD-502	5000†	E
43 D 1424	DD-201	200	B	43 D 1605	DD-682	6800†	E
43 D 1425	DD-221	220	B	43 D 1615	DD-103	10,000†	H
43 D 1426	DD-251	250	C	43 D 1106	DD-1032	10,000‡	J
43 D 1427	DD-271	270	C	43 D 1453	DD-6-103	10,000†	G
43 D 1428	DD-301	300	C	43 D 1686	DD-153	15,000§	H
43 D 1429	DD-331	330	C	43 D 1042	DD-203	20,000§	K
43 D 1430	DD-391	390	C	43 D 1689	DD-503	50,000§	L

HIGH-VOLTAGE DISC CERAMICS

Buffer capacitors. Capacitance tolerance: ±20%, except *guaranteed minimum value. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	pF	WV DC	EACH 1-99	EACH, Pkgs. of 100 100	200-400	500-1000
43 D 1371	DD16-502	5000*	1600	.27	.21	.14	.10
43 D 1375	DD16-103	10,000*	1600	.27	.21	.14	.10
43 D 1634	DD30-330	33	3000	.24	.19	.12	.09
43 D 1614	DD30-101	100	3000	.24	.19	.12	.09
43 D 1621	DD30-501	500	3000	.24	.19	.12	.09
43 D 1622	DD30-102	1000	3000	.30	.24	.15	.12
43 D 1626	DD30-502	5000	3000	.30	.24	.15	.12
43 D 1680	DD60-100	10	6000	.36	.29	.18	.14
43 D 1681	DD60-150	15	6000	.36	.29	.18	.14
43 D 1468	DD60-500	50	6000	.36	.29	.18	.14
43 D 1473	DD60-101	100	6000	.36	.29	.18	.14
43 D 1486	DD60-501	500	6000	.36	.29	.18	.14
43 D 1683	DD60-751	750	6000	.36	.29	.18	.14
43 D 1445	DD60-102	1000	6000	.60	.48	.30	.23
43 D 1448	DD60-202	2000	6000	.60	.48	.30	.23

CERAMIC CAPACITOR KIT

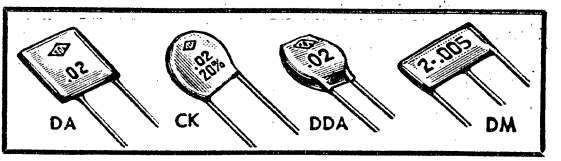


DDK-200 Ceramic Capacitor Kit. Handy assortment contains 200 of the most commonly used Type DD Ceramic Discs in a convenient metal storage tray. All capacitors in clearly labeled reusable plastic packages.

All are 1000 WVDC unless otherwise specified. Five each: 5, 10, 25, 33, 47, 50, 68, 120, 150, 180, 220, 250, 270, 300, 330, 390, 470, 500, 680, 1500, 3000, 4700, 10,000 (600 V) pF. Ten each: 100, 200 pF. Fifteen each: 1000, 5000; 20,000 (600 V) pF. Twenty: 10,000 pF. Cabinet size, 4x6x11". Shpg. wt., 6 lbs.

43 D 8912 ..... Each 34.10

LOW-VOLTAGE CAPACITORS



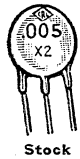
Feature double-Durex resin insulation. All are high-vacuum wax impregnated. Specially designed for transistor circuit applications. Type DA: ½x½x3/16" thick; tolerance, —20% to +100%. Type DDA: ⅝" dia. x 5/32" thick; tolerance —30% to +80%. Type DM: 17/32x7/32x7/64" thick; tolerance *—20% to +50% and †—20% to +80%. Type CK, —20% to +80%; sizes: 502 and 103, ⅜" dia. x3/32" thick; 203, 253 and 303 are 9/16" dia. x 5/32"; 503, 1/16x5/32"; 104 ¾x1¼". Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	µF	WV DC	EA. 1-99	EA., Pkgs. of 100 100	200-400	500-1000	EA., Pkgs. of 1000 1000-3000	4000-5000
43 D 1627	DA-203	.02	30	.36	.29	.18	.14	.11	.09
43 D 1628	DA-503	.05	30	.81	.65	.41	.31	.24	.21
43 D 1629	DA-104	.1	30	1.35	1.07	.68	.51	.40	.36
43 D 1642	CK-502	.005	50	.21	.17	.11	.08	.06	.05
43 D 1643	CK-103	.01	50	.21	.17	.11	.08	.06	.05
43 D 1644	CK-203	.02	50	.21	.17	.11	.09	.08	.07
43 D 1645	CK-253	.025	50	.21	.17	.11	.09	.08	.07
43 D 1646	CK-303	.03	50	.21	.17	.11	.09	.08	.07
43 D 1647	CK-503	.05	50	.30	.24	.15	.12	.09	.08
43 D 1648	CK-104	.1	50	.60	.48	.30	.23	.22	.20
43 D 1630	DDA-503	.05	75	.30	.24	.16	.12	.09	.08
43 D 1631	DDA-104	.1	75	.60	.48	.30	.23	.21	.18
43 D 1865	DM-501*	.0005	150	.90	.72	.45	.34	.....	.....
43 D 1636	DM-102*	.001	150	.90	.72	.45	.34	.....	.....
43 D 1637	DM-202†	.002	150	.90	.72	.45	.34	.....	.....
43 D 1638	DM-302†	.003	150	.90	.72	.45	.34	.....	.....
43 D 1639	DM-502†	.005	150	.90	.72	.45	.34	.....	.....
43 D 1640	DM-103†	.01	150	.90	.72	.45	.34	.....	.....

CE AND CF CERAMIC DISC CAPACITORS

Type CE: temperature stable "K", operate from —55° C to +85° C with ±7½% capacity variation; Type CF: temperature semi-stable "K", ±15% variation. Phenolic vacuum insulation is impregnated with high-melting-point wax. All are 500 WVDC. Life test: 1000 hours at 1000 volts at +85° C. Leakage resistance: initial, 10,000 megohms minimum; after humidity, over 1000 megohms. Power factor: 2% maximum at 1 kHz. Tolerance: ±10%. 1½" minimum lead length. No. 22 copper leads. Capacities range from 150 to 10,000 picofarads. All types are 5/32" thick. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	pF	Dia. (In.)	EACH 1-99	EACH, Pkgs. of 100 100	200-400	500-1000
43 D 0873	CE-151	150	.290	.18	.15	.09	.07
43 D 0874	CE-221	220	.290	.18	.15	.09	.07
43 D 0875	CE-131	330	.290	.18	.15	.09	.07
43 D 0876	CE-471	470	.290	.18	.15	.09	.07
43 D 0877	CE-501	500	.390	.18	.15	.09	.07
43 D 0878	CE-561	560	.390	.18	.15	.09	.07
43 D 0879	CE-681	680	.390	.18	.15	.09	.07
43 D 0889	CE-751	750	.390	.18	.15	.09	.07
43 D 0890	CE-801	800	.390	.18	.15	.09	.07
43 D 0891	CE-102	1000	.590	.18	.15	.09	.07
43 D 1454	CF-122	1200	.590	.18	.15	.09	.07
43 D 1455	CF-152	1500	.590	.18	.15	.09	.07
43 D 1458	CF-182	1800	.590	.18	.15	.09	.07
43 D 1459	CF-202	2000	.590	.21	.17	.11	.08
43 D 1460	CF-222	2200	.590	.21	.17	.11	.08
43 D 1461	CF-322	3300	.590	.21	.17	.11	.08
43 D 1463	CF-392	3900	.590	.21	.17	.11	.08
43 D 1464	CF-472	4700	.690	.21	.17	.11	.08
43 D 1465	CF-502	5000	.690	.21	.17	.11	.08
43 D 1467	CF-622	6200	.690	.21	.17	.11	.08
43 D 1471	CF-822	8200	.920	.24	.19	.12	.09
43 D 1474	CF-103	10,000	.920	.24	.19	.12	.09



DD-2 CERAMIC DISC CAPACITORS

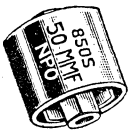
Single disc, dual capacity. Double-Durex insulation. Stamped with capacity. Operating temperature: —55°C to +85° C. Dissipation factor: 2% maximum at 1 kHz. Tolerance: —20% to +80%. 600 WVDC. Average shpg. wt., 1 oz.

Stock No.	Mfr's Type	pF	Dia. (In.)	EACH 1-99	EACH, Pkgs. of 100 100	200-400	500-1000
43 D 0015	DD2-102	2x.001	.408	.24	.19	.12	.09
43 D 0016	DD2-152	2x.0015	.594	.24	.19	.12	.09
43 D 0017	DD2-502	2x.005	.719	.36	.29	.18	.14

Specify Stock No., Mfr's Type No. and Capacitance When Ordering

Centralab Capacitors

850 SERIES TRANSMITTING CAPACITORS



850S

Designed for transmitters, induction heaters, electronic welding equipment, X-ray, diathermy, and other high voltage, high frequency circuits. Have extremely low power factor, stable retrace characteristics, and long leakage paths. All ±10% tol., except 858 types— ±20%. Type nos. with N have temp. coeff. of neg. 750 parts/million/°C, types with Z have zero (NPO) coeff., types with no suffix letter are Hi-K, variable. Type 850S and type 858S have ⅛″ axial hex studs tapped 6-32; Type 857 has axial studs tapped 10-32 NF-2, ¼″ deep. *Typical RF characteristics @ 30 MHz.

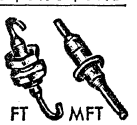
Types 850S, 858S, 13/16″ dia. x 5/8″ long. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	pF	WV DC	*RF Load, Amps	EACH 1-4	EACH, Pkgs. of 5: 5-25	30-100	105-250
43 D 1100	850S-25Z	25	7500	7	2.70	2.43	2.14	1.92
43 D 1101	850S-50Z	50	7500	10	2.70	2.43	2.14	1.92
43 D 1104	850S-100N	100	5000	9.8	2.70	2.43	2.14	1.92
43 D 1107	858S-500	500	5000	.....	2.70	2.43	2.14	1.92
43 D 1108	858S-1000	1000	5000	.....	2.70	2.43	2.14	1.92

Type 857, 1 9/32″ dia., 1 57/64″ long. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	pF	WV DC	*RF Load, Amps	EACH 1-9	10-24	25-99	100-249
43 D 1725	857-25Z	25	15,000	12	8.40	7.56	6.65	5.99
43 D 1726	857-50Z	50	15,000	12	8.40	7.56	6.65	5.99
43 D 1727	857-100N	100	15,000	14.4	7.20	6.48	5.70	5.13
43 D 1728	857-200N	200	7500	18.2	7.20	6.48	5.70	5.13

FEED-THRU CERAMIC HI-KAPS



Type FT. For high-frequency circuits where feed-thru plus capacity ground is required. Double-flatted bushing, .281″ long with 12-28 thread bushing and nut; .050″ dia. tinned copper leads. Length, 1 5/32″. Av. shpg. wt., 3 oz.

Type MFT. Miniature version of FT, above. ¼″ max.-dia. flange eyelet for insertion in .160″ hole. Solder to chassis; #16 leads. Max. length, 1 3/8″. 500 WVDC; 1000 VDC test. Tol.: *±20%; †—20 to +50%; §±10%; ‡guaranteed min. value. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	pF	EACH 1-99	EACH, Pkgs. of 100: 100	200-400	500-1000
43 D 1390	FT-500	*500	.75	.60	.38	.28
43 D 1391	FT-1000	*1000	.75	.60	.38	.28
43 D 2392	FT-1500	†1500	.75	.60	.38	.28
43 D 1393	FT-1800	†1800	.75	.60	.38	.28
43 D 1394	FT-2300	†2300	.75	.60	.38	.28
43 D 1488	MFT-50	§50	.30	.24	.15	.12
43 D 1489	MFT-100	§100	.30	.24	.15	.12
43 D 1490	MFT-500	*500	.30	.24	.15	.12
43 D 1491	MFT-1000	†1000	.30	.24	.15	.12

SERIES 829 TRIMMERS

Small, lightweight ceramic trimmers. Rugged steatite bodies with fired silver stator plates. Initial resistance: 10,000 megohms, minimum; resistance after humidity: 1000 megs. Rated at 500 WVDC; 1000 VDC test. Power factor: less than 0.25% at 1 MHz. Supplied with locknut for mounting against metal panel or chassis. Av. shpg. wt., 2 oz.

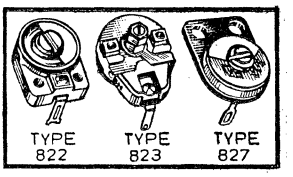
Stock No.	Mfr's Type	pF	L.	EACH 1-24	EACH, Pkgs. OF 25: 25-100	125-475	500-1000
43 D 1400	829-3	0.5-3	½″	.30	.24	.15	.12
43 D 1402	829-6	1.0-6	5/8″	.30	.24	.15	.12
43 D 1404	829-10	1.5-10	¾″	.30	.24	.15	.12

TYPE C1 CERAMIC BY-PASS CAPACITORS

Recommended for AC line by-pass application, or where a steady or intermittent higher voltage may occur. Leakage resistance: initial, over 10,000 megohms; after humidity, over 1000 megohms. Dissipation factor: 2% maximum at 1 kHz. Tolerance: ±20%. Operating temperature: to +85° C. Working voltage: 1000 VDC minimum (suitable for continuous operation at 150 VAC rms, 60 Hz). Leads: #22 tinned copper, 1½″ long. Case stamped with capacity, tolerance, and voltage. U.L. Component Program-Recognized. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	pF	Dia. (in.)	EACH 1-99	EACH, Pkgs. of 100: 100	200-400	500-1000
43 D 4834	C1-471	470	.440	.18	.15	.09	.07
43 D 4836	C1-681	680	.440	.18	.15	.09	.07
43 D 4837	C1-102	1000	.640	.21	.17	.11	.08
43 D 4838	C1-122	2200	.640	.18	.15	.09	.07
43 D 4839	C1-502	5000	.730	.18	.15	.09	.07
43 D 4840	C1-103	10,000	.840	.24	.19	.12	.09

CERAMIC DIELECTRIC TRIMMERS



Feature ceramic dielectric for high insulating strength. Full capacity range with 180° rotation. Designed to compensate for variation in tube capacities. Rated at 500 WVDC. Power factor: less than 0.2% at 1 M Hz. Insulation resistance is 10,000 megohms min. Types 822 and 823 have steatite base; Type 827 phenolic base. Letter N in Type Number indicates negative temperature coefficient; letter Z in Type Number indicates zero temperature coefficient. Mounting holes of Type 822 take #4 machine screws; Type 823 is tapped for #4-40 machine screws; Type 827 has 5/16″ mounting centers. Terminals are silver-plated brass. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	pF	Base Size	EACH 1-4	EACH, Pkgs. of 5: 5-25	30-100	105-250
43 D 1651	822-EN	4-30	41/64x27/32″	1.14	.95	.90	.76
43 D 1125	822-CN	4.5-25		1.14	.95	.90	.76
43 D 1124	822-BN	7-45		1.14	.95	.90	.76
43 D 1123	822-AN	8-50		1.14	.95	.90	.76
43 D 1653	822-EZ	1.5-7	41/64x27/32″	1.14	.95	.90	.76
43 D 1128	822-BZ	2.5-13		1.14	.95	.90	.76
43 D 1654	822-FZ	3-12		1.14	.95	.90	.76
43 D 1127	822-AZ	4.5-25		1.14	.95	.90	.76
43 D 1512	823-DN	8-50	15/16x17/32″	3.60	3.00	2.85	2.40
43 D 1511	823-BN	10-100		3.60	3.00	2.85	2.40
43 D 1510	823-AN	20-125		3.60	3.00	2.85	2.40
43 D 1513	823-AZ	12-62		3.60	3.00	2.85	2.40
43 D 1516	827-A	2.5-7	17/32x3/4″	.90	.75	.71	.60
43 D 1517	827-B	3.5-12		.90	.75	.71	.60
43 D 1518	827-C	6-30		.90	.75	.71	.60
43 D 1519	827-D	7-35		.90	.75	.71	.60

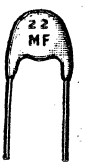
SERIES 825 TRIMMERS

Ceramic trimmers meet MIL-C-81 specs and are marked with MIL No. Pure silver stator plate fired on top of low-loss steatite base. Rated at 500 WVDC; 1500 VDC test. Power factor: less than 0.2% at 1 MHz. Body size, 27/32x41/64″. *Temperature characteristic. Av. shpg. wt., 2 oz.

Stock No.	MIL No.	CRL No.	pF	*Temp. Char.
43 D 2393	CV11A070	825-EZ	1.5-7.0	NPO
43 D 2394	CV11A120	825-FZ	3.0-12.0	NPO
43 D 2395	CV11A250	825-AZ	4.5-25.0	NPO
43 D 2325	CV11B200	825-FN	5.0-20.0	N300
43 D 2326	CV11C300	825-CN	4.0-30.0	N500
43 D 2327	CV11C450	825-GN	7.0-45.0	N500
43 D 2398	CV11D450	825-BN	7.0-45.0	N650

1-4.....Each 1.17 5-25 (Pkgs. of 5).....98
30-100 (Pkgs. of 5) .....93 105-250 (Pkgs. of 5).....78

UK ULTRA-KAP MINIATURE DISC CAPACITORS



Miniature ceramic disc capacitors for transistor circuitry. Designed for low-voltage applications requiring high capacities and low power factors. Insulated with double coating of "Durez" and impregnated with high-vacuum wax. Dissipation factor at 1 kHz, 5-10%. Tolerance: 3 WVDC types, guaranteed minimum value; 10 and 20 WVDC, +80 —20%. 5/32″ thick; ¼ to ¾″ diameter. All types listed have No. 22 leads. Av. shpg. wt., 1 oz.

3 WVDC

Stock No.	Mfr's Type	μF	EACH 1-99	EA., Pkgs. of 100: 100	200-400	500-1000	EA., Pkgs. of 1000: 1000-3000	4000-5000
43 D 1701	UK 104	.1	.42	.34	.21	.16	.15	.13
43 D 1293	UK 224	.22	.30	.24	.15	.12	.10	.09
43 D 1294	UK 474	.47	.30	.24	.15	.12	.10	.09
43 D 1295	UK 105	1.0	.36	.29	.18	.14	.13	.11
43 D 1296	UK 225	2.2	.42	.34	.21	.17	.16	.14

10 WVDC

43 D 1702	UK 10-503	.05	.18	.15	.09	.08	.07	.06
43 D 1703	UK 10-104	.1	.18	.15	.09	.08	.07	.06
43 D 1704	UK 10-474	.47	.30	.24	.15	.12	.10	.09
43 D 1705	UK 10-474	.47	.42	.34	.21	.16	.15	.13

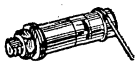
20 WVDC (13/32 to 27/32″ dia.)

43 D 1274	UK 20-503	.05	.18	.15	.09	.08	.07	.06
43 D 1279	UK 20-104	.1	.21	.17	.11	.09	.08	.07
43 D 1290	UK 20-204	.2	.39	.31	.20	.15	.14	.13

JFD Tubular Piston Trimmer Capacitors

Precision-bore solid dielectric, with anti-corrosion metalizing. Meet MIL-C-14409B. Glass types usable from —55° to +125°C (Q 500 min. @ 20 MHz); quartz, —55° to +150°C (Q 1500 min. @ 20 MHz). Five dielectric materials and matched metalizing for homogeneous bond of metalizing to dielectric. Low temperature coefficient, low loss and inductance. High shock and vibration resistance. Green Glass "N" prefix units with higher Q increase delta C's 30% over other similar-size units, and include Hi-Life "Y" mechanism. Low-cost "Y" suffix units combine Hi-Life mechanism with standard glass dielectric; interchangeable with standard units.

NVC/VC GLASS AND NMQ QUARTZ MINIATURE TRIMMERS



Telescoping assembly for 50% savings in length. Positive stops at both ends. NVC and VC glass dielectric, ¼" dia. NMQ quartz dielectric, ¼" dia. Y Series interchangeable with standard VC, and NMQ with standard MQ with added features of longer life and lower cost. Av. shpg. wt., 1 oz.

PANEL MOUNT TYPES

Stock No.	Mfr's Type	Cap., pF Min.-Max.	Lgth., In.	EACH 1-24	25-49	50-99	100-299	300-499
43 D 6125	NVC20G	0.8-11.0	35/64	4.20	3.80	3.40	3.00	2.70
43 D 6126	NVC21G	0.8- 5.5	19/64	3.80	3.40	3.05	2.65	2.40
43 D 6127	NVC22G	0.8-16.0	3/4	4.80	4.30	3.85	3.35	3.05
43 D 6128	NVC23G	0.8-23.0	63/64	5.40	4.85	4.35	3.80	3.45
43 D 6129	NVC24G	1.0-38.0	1 1/32	6.00	5.40	4.85	4.25	3.80
43 D 6425	VC20GY	0.8- 8.5	35/64	3.40	3.05	2.70	2.25	2.15
43 D 6424	VC21GY	0.8- 4.5	19/64	3.20	2.95	2.50	2.10	2.00
43 D 6426	VC22GY	0.8-12.0	3/4	3.75	3.40	2.95	2.45	2.35
43 D 6427	VC23GY	0.8-18.0	63/64	4.35	3.95	3.40	2.85	2.70
43 D 6428	VC24GY	1.0-30.0	1 1/32	4.55	4.15	3.60	3.05	2.90
43 D 6134	NMQ101	0.6- 1.8	19/64	5.00	4.50	4.05	3.55	3.25
43 D 6135	NMQ103	0.6- 5.5	35/64	5.60	5.05	4.55	4.00	3.65
43 D 6136	NMQ106	0.6- 9.5	63/64	7.40	6.65	6.00	5.25	4.75
43 D 6137	NMQ109	0.8-16.0	1 1/32	9.20	8.30	7.45	6.55	5.85

PRINTED CIRCUIT TYPES—*Lug, †Wire Mtg.

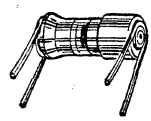
43 D 6138	†NVC9GW	0.8-11.0	9/16	3.80	3.40	3.05	2.65	2.40
43 D 6139	†NVC10GW	0.8- 5.5	5/16	3.40	3.05	2.75	2.40	2.15
43 D 6145	†NVC31GW	0.8-16.0	49/64	4.40	3.95	3.55	3.10	2.80
43 D 6146	†NVC32GW	0.8-23.0	1	5.00	4.50	4.05	3.55	3.25
43 D 6147	†NVC43GW	1.0-38.0	1 33/64	5.60	5.05	4.55	4.00	3.65
43 D 6433	†VC9GWY	0.8- 8.5	9/16	3.00	2.75	2.40	2.00	1.90
43 D 6430	†VC10GWY	0.8- 4.5	5/16	2.80	2.60	2.20	1.85	1.75
43 D 6436	†VC31GWY	0.8-12.0	49/64	3.35	3.05	2.65	2.20	2.10
43 D 6439	†VC32GWY	0.8-18.0	1	3.95	3.60	3.10	2.60	2.45
43 D 6441	†VC43GWY	1.0-30.0	1 33/64	4.15	3.80	3.30	2.80	2.65
43 D 6148	*NVC9G	0.8-11.0	9/16	3.80	3.40	3.05	2.65	2.40
43 D 6149	*NVC10G	0.8- 5.5	5/16	3.40	3.05	2.75	2.40	2.15
43 D 6154	*NVC31G	0.8-16.0	49/64	4.40	3.95	3.55	3.10	2.80
43 D 6155	*NVC32G	0.8-23.0	1	5.00	4.50	4.05	3.55	3.25
43 D 6156	*NVC43G	1.0-38.0	1 33/64	5.60	5.05	4.55	4.00	3.65
43 D 6431	*VC9GY	0.8- 8.5	9/16	3.00	2.75	2.40	2.00	1.90
43 D 6429	*VC10GY	0.8- 4.5	5/16	2.80	2.60	2.20	1.85	1.75
43 D 6435	*VC31GY	0.8-12.0	49/64	3.35	3.05	2.65	2.20	2.10
43 D 6438	*VC32GY	0.8-18.0	1	3.95	3.60	3.10	2.60	2.45
43 D 6440	*VC43GY	1.0-30.0	1 33/64	4.15	3.80	3.30	2.80	2.65
43 D 6157	*NMQ111	0.6- 1.8	5/16	4.60	4.15	3.75	3.30	2.95
43 D 6158	*NMQ113	0.6- 5.5	9/16	5.20	4.70	4.20	3.70	3.35
43 D 6159	*NMQ116	0.6- 9.5	1	7.00	6.30	5.65	4.95	4.45
43 D 6184	*NMQ119	0.8-16.0	1 33/64	8.80	7.90	7.10	6.20	5.60
43 D 6185	†NMQ121	0.6- 1.8	5/16	4.60	4.15	3.75	3.30	2.95
43 D 6190	†NMQ123	0.6- 5.5	9/16	5.20	4.70	4.20	3.70	3.35
43 D 6191	†NMQ126	0.6- 9.5	1	7.00	6.30	5.65	4.95	4.45
43 D 6192	†NMQ129	0.8-16.0	1 33/64	8.80	7.90	7.10	6.20	5.60

SCY/NSC/NQS SEALCAP MINIATURE PANEL-MOUNT SERIES

Sealed against moisture, atmospheric effects, corona and voltage breakdown. SCY (glass), NQS (quartz), NSC (High-K, High-Q Green Glass) miniature panel mount. Hi-Life adjustment mechanism has a 500 cys adjustment life, exceeding MIL-C-14409B by 600%. "Y" series SC interchangeable with std. SC series and NQS with QS. NSC has 30% greater delta C than SC, and superior Q. NQS has longer-adjustment-life mechanism and TC 25 ±25. Av. wt., 1 oz.

Stock No.	Mfr's Type	Cap., pF Min.-Max.	Lgth., In.	EACH 1-24	25-49	50-99	100-299	300-499
43 D 6193	NSC131	0.8- 5.5	23/64	4.60	4.15	3.75	3.30	2.95
43 D 6194	NSC133	0.8-11.0	19/32	5.00	4.50	4.05	3.55	3.25
43 D 6195	NSC134	0.8-16.0	13/16	5.60	5.05	4.55	4.00	3.65
43 D 6196	NSC136	0.8-23.0	1 1/16	6.20	5.60	5.05	4.45	4.05
43 D 6197	NSC139	1.0-38.0	1 21/32	6.80	6.10	5.50	4.80	4.35
43 D 6460	SC131Y	0.8- 4.5	23/64	3.80	3.40	3.05	2.65	2.40
43 D 6461	SC133Y	0.8- 8.5	19/32	4.00	3.60	3.25	2.85	2.55
43 D 6462	SC134Y	0.8-12.0	13/16	4.40	3.95	3.55	3.10	2.80
43 D 6463	SC136Y	0.8-18.0	1 1/16	5.00	4.50	4.05	3.55	3.25
43 D 6464	SC139Y	1.0-30.0	1 21/32	5.20	4.70	4.20	3.70	3.35
43 D 6198	NQS171	0.6- 1.8	23/64	7.00	6.30	5.65	4.95	4.45
43 D 6199	NQS173	0.6- 5.5	19/32	7.60	6.80	6.10	5.30	4.80
43 D 6200	NQS176	0.6- 9.5	1 1/16	9.40	8.45	7.65	6.70	6.10
43 D 6202	NQS179	0.8-16.0	1 21/32	11.20	10.10	9.10	8.00	7.30

MAX-C EXTENDED-RANGE SERIES



Max-C embedded electrode technique gives three times more capacity than standard metalizing in standard glass. All units sealed. "Y" Series positive mechanical stops at both ends of adjustment. Offers longer adjustment life and lower cost. "N" series has approximately 30% greater delta C and Hi-Life mechanism. Av. shpg. wt., 1 oz.

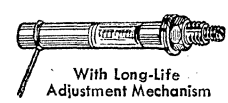
PANEL MOUNT TYPES

Stock No.	Mfr's Type	Cap., pF Min.-Max.	Lgth., In.	EACH 1-24	25-49	50-99	100-299	300-499
43 D 6203	NMC601	1.0-16.0	15/32	10.20	9.20	8.30	7.30	6.60
43 D 6204	NMC603	1.0-36.0	45/64	10.50	9.45	8.50	7.45	6.75
43 D 6206	NMC604	1.0-52.0	59/64	10.80	9.70	8.70	7.60	6.90
43 D 6207	NMC606	1.0-75.0	1 11/64	11.40	10.25	9.25	8.10	7.40
43 D 6208	NMC609	1.0-120.0	1 49/64	12.60	11.35	10.20	8.95	8.10
43 D 6465	MC601Y	1.0-14.0	15/32	6.20	5.60	5.05	4.45	4.05
43 D 6466	MC603Y	1.0-28.0	45/64	6.50	5.85	5.25	4.60	4.20
43 D 6467	MC604Y	1.0-42.0	59/64	6.80	6.10	5.50	4.80	4.35
43 D 6468	MC606Y	1.0-60.0	1 11/64	7.40	6.65	6.00	5.25	4.75
43 D 6469	MC609Y	1.0-90.0	1 49/64	8.60	7.75	7.00	6.15	5.50

PRINTED CIRCUIT BOARD TYPES

43 D 6209	NMC621	1.0-16.0	.750	10.20	9.20	8.30	7.30	6.60
43 D 6210	NMC623	1.0-36.0	.990	10.50	9.45	8.50	7.45	6.75
43 D 6211	NMC624	1.0-52.0	1.205	10.80	9.70	8.70	7.60	6.90
43 D 6213	NMC626	1.0-75.0	1.450	11.40	10.25	9.25	8.10	7.40
43 D 6215	NMC629	1.0-120.0	2.050	12.60	11.35	10.20	8.95	8.10
43 D 6470	MC621Y	1.0-14.0	.750	6.20	5.60	5.05	4.45	4.05
43 D 6471	MC623Y	1.0-28.0	.990	6.50	5.85	5.25	4.60	4.20
43 D 6472	MC624Y	1.0-42.0	1.205	6.80	6.10	5.50	4.80	4.35
43 D 6473	MC626Y	1.0-60.0	1.450	7.40	6.65	6.00	5.25	4.75
43 D 6474	MC629Y	1.0-90.0	2.050	8.60	7.75	7.00	6.15	5.50

STANDARD PANEL-MOUNT SERIES

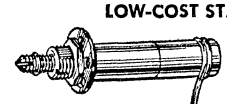


With Long-Life Adjustment Mechanism

Available in glass, quartz and new Green Glass with improved long-life adjustment mechanism. VC99 is designed for unusually high-voltage and power RF use: has closed end to prevent arcing at high altitudes. Rated 5000 WVDC. Use production tool 7104-1 on opposite page. *Glass, †Quartz, ‡Green Glass. Quartz under 5/16" dia., glass and green glass measure ¼". Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Cap., pF Min.-Max.	EACH 1-24	25-49	50-99	100-199	200-299	300-499
43 D 6453	*VC25G	0.5-3.0	1.74	1.55	1.35	1.14	1.14	1.09
43 D 6447	*VC1GC	0.7-9.0	1.66	1.50	1.34	1.12	1.12	1.07
43 D 6448	*VC26G	0.7-9.0	1.74	1.55	1.35	1.14	1.14	1.09
43 D 6450	*VC27G	0.8-18.0	1.80	1.60	1.42	1.20	1.20	1.12
43 D 6449	*VC4G	0.8-18.0	1.70	1.53	1.35	1.13	1.13	1.08
43 D 6451	*VC28G	0.8-30.0	2.00	1.80	1.55	1.30	1.30	1.22
43 D 6216	‡NVC25G	0.5-4.5	2.50	2.25	2.00	1.75	1.75	1.60
43 D 6217	‡NVC26G	0.8-13.0	2.60	2.35	2.10	1.85	1.85	1.65
43 D 6218	‡NVC27G	1.0-24.0	3.00	2.70	2.40	2.10	2.10	1.85
43 D 6219	‡NVC28G	1.0-40.0	3.40	3.05	2.75	2.40	2.40	2.15
43 D 6005	†VC2	0.7-4.5	4.35	3.91	3.91	3.62	3.26	.....
43 D 6000	†VC5	0.6-6.0	5.25	4.72	4.72	4.37	3.94	.....
43 D 6001	†VC11	0.8-10.0	6.00	5.40	5.40	5.00	4.50	.....
43 D 6007	†VC12	0.9-21.0	7.95	7.15	7.15	6.62	5.96	.....
43 D 6220	†VC99	0.8-10.0	8.55	7.69	7.69	7.12	6.41	.....

LOW-COST STANDARD PANEL MOUNTS



Glass and ceramic dielectric direct-traverse trimmers. For commercial and industrial applications not requiring MIL specs. Positive spring-loaded torque mechanism. No split bushings to cause erratic tuning, noise or short adjustment life. Std. panel mount construction. Dia. 17/64". Glass, except *ceramic dielectric. Use Production Tool #7104-1, opposite page. Av. shpg. wt., 1 oz.

PANEL MOUNTING TYPES

Stock No.	Mfr's Type VC-	pF Range	WV DC	Body Length Inches	EACH 1-24	25-99	100-199	200-299
43 D 6442	54G	0.8—13.0	2500	13/16	1.65	1.48	1.37	1.24
43 D 6443	55C*	5.0—50.0	1250	1	1.95	1.75	1.62	1.46
43 D 6444	57G	1.0—12.0	750	1	.99	.89	.83	.74

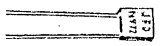
PRINTED CIRCUIT BOARD TYPES

43 D 6445	56C*	5.0—50.0	1250	1 13/64	1.95	1.75	1.62	1.46
43 D 6446	58G	1.0—12.0	750	1 13/64	.99	.89	.83	.74

Specify Stock No., Mfr's Type and Capacitance on Capacitor Orders

JFD Trimmer and Fixed Uniceram Capacitors

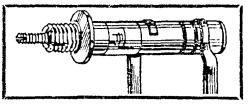
HIGH-K UNICERAM CAPACITORS (±10% TOLERANCE)


ACTUAL SIZE

Offer greatly increased capacitance per unit volume (up to 48 $\mu F/in^3$). Ceramic multilayer unit construction and glass encapsulated package. Meet or exceed MIL-C-11015C. Rated 50 WVDC. TC of +5%, —15% from —55° C to +125° C. Dissipation factor at 25° C, 1 kHz; 3% max. Test VDC, 300% rated. Insulation resistance 10^5 megohms or 100 ohm-farads, whichever is less. Av. shpg. wt., 1 oz.

Stock No.	Type UY-	µF	EACH 1-49	50-99	100-249	250-499	500-999
43 D 0147	12102K	.001	2.25	2.03	1.76	1.50	1.13
43 D 0363	12222K	.0022	2.31	2.06	1.80	1.54	1.14
43 D 0364	12472K	.0047	2.31	2.06	1.80	1.54	1.14
43 D 0149	12103K	.01	2.40	2.16	1.86	1.59	1 20
43 D 0365	14223K	.022	3.19	2.87	2.49	2.14	1.59
43 D 0369	14473K	.047	3.56	3.21	2.78	2.38	1.78
43 D 0151	14104K	.1	4.22	3.81	3.30	2.81	2.12
43 D 0370	15224K	.22	6.56	5.91	5.12	4.39	3.28
43 D 0371	15474K	.47	10.78	9.71	8.42	7.20	5.40

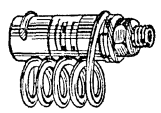
HIGH-RELIABILITY LC TUNERS



Variable-piston capacitor with a coaxial metallized inductor low-loss glass form. Three connectors: common, inductor, and adjustable piston of trimmer (through bushing) for either series or parallel resonance. Panel-mount type with mounting stud for piston connection. Q greater than 135. Panel mounts, ¼x4 1/64" to 1 45/64" long. Bushing: LC303-309—3/16", LC 333-339—¼". *Self-resonating frequency range in MHz. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Range* MHz	EACH 1-24	25-99	100-199	200-299
43 D 6214	LC-303	400-725	4.65	4.18	3.87	3.49
43 D 6346	LC-304	275-550	4.80	4.32	4.00	3.60
43 D 6349	LC-306	200-500	4.95	4.45	4.12	3.71
43 D 6393	LC-309	125-375	5.40	4.86	4.50	4.05
43 D 6401	LC-336	225-500	4.05	3.64	3.37	3.04
43 D 6402	LC-339	150-375	4.20	3.78	3.50	3.15

MINIATURE TANK CIRCUITS



This well built inductor-capacitor comes in a convenient miniature size. It employs a precision-wound air core coil across a miniature trimmer piston capacitor. Cost is little more than cost of trimmer alone with only one small unit to mount instead of two. Have a nominal Q of 230. Trimmer varies from 0.8 to 8.5 mmf. Size: approximately 9/16x½x¼" with 10-32x¼" mtg. bushing and nut. *Indicates self-resonating frequency range. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Range* MHz	EACH 1-24	25-99	100-199	200-299
43 D 6115	LC371	450-1000	4.05	3.64	3.37	3.04
43 D 6116	LC372	280-765	4.05	3.64	3.37	3.04
43 D 6117	LC373	225-580	4.05	3.64	3.37	3.04
43 D 6118	LC374	190-485	4.05	3.64	3.37	3.04
43 D 6119	LC375	170-415	4.05	3.64	3.37	3.04

VC900 SUBMINIATURE PISTON TRIMMERS

Extremely small size with very wide Delta C. "Hi-Life" telescope mechanism. Temperature Coefficient. +75/—75ppm/°C. *Panel mount; other types are printed circuit mountings. 500 WVDC range. Shpg. wt., ½ oz.

Stock No.	Mfr's Type	Min. pF	Max. pF	Body Lgth.	EACH 1-24	25-49	50-99	100-299	300-499
43 D 6778	VC950	1.0	10.0	17/64"*	4.20	3.80	3.40	3.00	2.70
43 D 6779	VC951	1.2	16.0	5/16"*	6.20	5.60	5.05	4.45	4.05
43 D 6781	VC960	1.0	10.0	17/64"	3.80	3.40	3.05	2.65	2.40
43 D 6783	VC961	1.2	16.0	5/16"	5.80	5.22	4.70	4.15	3.70

TUNING (PRODUCTION) TOOLS

Stock No.	Mfr's Type	Description	Wt., Oz.	EACH
43 D 6481	7104-1	.115" aperture, internal .019" screw blade	6	2.50
43 D 6454	5284	.015" screwdriver and .050" hex wrench	5	.85

Contact the nearest Allied facility for prices and delivery on quantities larger than shown

HIGH "Q" UNICERAM CAPACITORS (±5% TOLERANCE)

ACTUAL SIZE

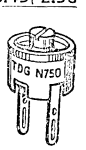
Microminiature multilayer ceramic dielectric capacitors. Up to 10 times more capacitance-to-unit-volume-ratio than competitive units, up to .206 $\mu F/in.^3$. Meet or exceed MIL-C-11272B. Encapsulated in glass with bonded solid silver ribbon leads for low inductance (or round, wire leads on Special Order). Drift-free, low TC of 95 ±20 ppm stability and reliability plus high Q. Low dissipation factor, .0002. No derating, —55°C to +125°C. 300 WVDC, *except 200 WVDC. †±.25 pF tol. Max. UY01, 9/64" sq.; UY02 11/64" sq.; UY03 7/32" sq.; UY05, 7/16" sq. and 3/32" thick. UY04, 9/32" sq. x 1/8" thick. Av. wt., 1 oz.

CAPACITANCE RANGE—SPECIFY pF

1.0	3.9	8.2	22	68	120	220	510	1000
1.5	4.7	9.1	24	75	130	270	560	1800
2.2	5.1	10	30	82	150	300	620	2200
2.7	5.6	12	33	91	160	330	680	2700
3.0	6.2	15	43	100	180	390	750	3000
3.3	6.8	20	47	110	200	470	910	.....

Stock No.	Mfr's Type	pF Range—Specify	EACH 1-49	50-99	100-249	250-499	500-999
43 D 0100 C	UY01†	1 to 4.7	1.98	1.78	1.54	1.31	.99
43 D 0101 C	UY01	5.1 to 24	2.00	1.80	1.56	1.34	1.00
43 D 0102 C	UY01	27 to 62	2.10	1.89	1.64	1.40	1.05
43 D 0112 C	UY02	5.1 to 12	1.91	1.71	1.49	1.28	.95
43 D 0113 C	UY02	13 to 39	1.98	1.78	1.54	1.31	.99
43 D 0114 C	UY02	43 to 82	2.00	1.80	1.56	1.34	1.00
43 D 0115 C	UY02	91 to 130	2.06	1.86	1.61	1.38	1.04
43 D 0157 C	UY03	150 to 200	2.13	1.91	1.66	1.43	1.06
43 D 0118 C	UY03	220 to 300	2.25	2.03	1.75	1.50	1.13
43 D 0103 C	UY03	330 to 470	2.48	2.23	1.93	1.65	1.24
43 D 0107 C	UY04	510 to 680	2.81	2.54	2.20	1.88	1.41
43 D 0108 C	UY04	750 to 1000*	3.13	2.81	2.44	2.09	1.56
43 D 0111 C	UY05	1100 to 1500	4.06	3.66	3.18	2.71	2.04
43 D 0119 C	UY05	1600 to 2000	4.38	3.94	3.41	2.93	2.19
43 D 0105 C	UY05	2200 to 3000	5.16	4.64	4.03	3.45	2.58

STANDARD VARIABLE DISC TRIMMERS

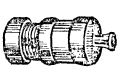


Miniature ceramic variable trimmer capacitors have disc-type tuning, come in 4 temperature coefficients and 4 mounting types. Type PS has short crimped printed circuit leads; Type A has axial leads; Type P has standard printed circuit leads; Type PR has right-angle printed circuit leads. Size, .375" dia.x.275" deep. Wt., 2 oz.

Range pF	Type DV11-	Temp. Coeff.	TYPE PS Stock No.	TYPE A Stock No.	TYPE P Stock No.	TYPE PR Stock No.
2.0-8.0	8A	NP0	43 D 3389	43 D 3414	43 D 3450	43 D 3464
2.5-11.0	11B	N300	43 D 3390	43 D 3430	43 D 3451	43 D 3468
3.0-10.0	10C	N500	43 D 3393	43 D 3434	43 D 3452	43 D 3469
3.0-15.0	15D	N650	43 D 3394	43 D 3435	43 D 3453	43 D 3470
5.5-18.0	18A	NP0	43 D 3396	43 D 3439	43 D 3454	43 D 3471
7.0-25.0	25B	N300	43 D 3398	43 D 3441	43 D 3460	43 D 3472
8.0-25.0	25C	N500	43 D 3399	43 D 3442	43 D 3461	43 D 3473
9.0-35.0	35D	N650	43 D 3410	43 D 3443	43 D 3463	43 D 3474

1-24. Each 1.68 25-49. Each 1.60 50-99. Each 1.34 100-199. Each 1.24
200-499..... Each .74 500-999..... Each .55

VAM AIR VARIABLE CAPACITORS


Actual Size

Tiny, high-Q capacitors have low loss at high frequencies; ideal for microwave. Turret cap will not shift. Cap. range, 0.8-10.0 pf. VAM-010 is panel mtg., VAM010W is printed circuit type. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Overall Lgth.	EACH 1-24	25-49	50-99	100-299	300-499
43 D 3475	VAM010	9/16"	3.95	3.60	3.10	2.60	2.45
43 D 3476	VAM010W	35/64"	3.95	3.60	3.10	2.60	2.45

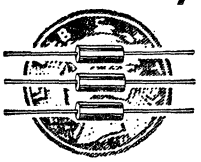
MODUTRIM CERAMIC VARIABLE CAPACITORS

Subminiature variable capacitors for micro-module and hybrid circuits. Choice of 9 wide Delta C ranges. Overall size: ¼x¼x⅛". All are 50 WVDC except *500 V. Specify Series MT300 or MT400. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Capacity Range, pF	EACH 1-24	25-99	100-199	200-299	300-499
43 D3489C	MT300, 400	4.0-15.0*	6.00	5.40	5.00	4.50	4.00
43 D3490C	MT306, 406	1.1- 5.0	6.00	5.40	5.00	4.50	4.00
43 D3492C	MT309, 409	1.6- 9.0	6.00	5.40	5.00	4.50	4.00
43 D3493C	MT312, 412	3.0-12.0	6.00	5.40	5.00	4.50	4.00
43 D3494C	MT320, 420	3.5-20.0	6.00	5.40	5.00	4.50	4.00
43 D3498C	MT330, 430	5.0-30.0	6.00	5.40	5.00	4.50	4.00
43 D3499C	MT340, 440	6.5-40.0	6.00	5.40	5.00	4.50	4.00
43 D3505C	MT350, 450	8.5-50.0	6.00	5.40	5.00	4.50	4.00
43 D3506C	MT360, 460	12.0-60.0	6.00	5.40	5.00	4.50	4.00

Specify Stock No., Mfr's Type and Capacitance on Capacitor Orders

Nytronics Miniature Ceramic Capacitors



"Deci-Caps"

"Hy-Caps"

"DECI-CAPS" AND "HY-CAPS" CERAMIC CAPACITORS

"DECI-CAPS." Ultraminiature ceramic capacitors. All in .250 x .100" dia. rugged epoxy molded envelope (¼-watt resistor size). Standardized size permits high-density cordwood packaging. Feature high stability—less than 7½% capacitance change from —55°C to +125°C operating range. ±10% tol. Meet MIL-C-11015.

"HY-CAPS." New solid-state ceramic capacitors. Extremely stable—offer less than ±12% capacitance change from —55°C to +125°C. Have ±20% tolerance. Rated 100 WVDC with no derating to 125°C. Dissipation factors: less than 2½% at 25°C. With #26 AWG tinned copper leads. Meet MIL-C-11015 requirements.

"DECI-CAPS" ULTRAMINIATURE CERAMIC CAPACITORS (Av. shpg. wt., 1 oz.)

Stock No.	Mfr's Type	pF	WV DC	EACH 1-24	25-49	50-99	100-249	250-499
43 D 8025	DC-047K	4.7	200	.51	.41	.35	.32	.30
43 D 8026	DC-056K	5.6	200	.51	.41	.35	.32	.30
43 D 8027	DC-068K	6.8	200	.51	.41	.35	.32	.30
43 D 8028	DC-082K	8.2	200	.51	.41	.35	.32	.30
43 D 8029	DC-100K	10	200	.51	.41	.35	.32	.30
43 D 8030	DC-120K	12	200	.51	.41	.35	.32	.30
43 D 8031	DC-150K	15	200	.51	.41	.35	.32	.30
43 D 8032	DC-180K	18	200	.51	.41	.35	.32	.30
43 D 8033	DC-220K	22	200	.51	.41	.35	.32	.30
43 D 8034	DC-270K	27	200	.51	.41	.35	.32	.30
43 D 8035	DC-330K	33	200	.51	.41	.35	.32	.30
43 D 8036	DC-390K	39	200	.51	.41	.35	.32	.30
43 D 8037	DC-470K	47	200	.51	.41	.35	.32	.30
43 D 8038	DC-560K	56	200	.51	.41	.35	.32	.30
43 D 8039	DC-680K	68	200	.51	.41	.35	.32	.30
43 D 8040	DC-820K	82	200	.51	.41	.35	.32	.30
43 D 8041	DC-101K	100	200	.51	.41	.35	.32	.30
43 D 8042	DC-121K	120	200	.51	.41	.35	.32	.30
43 D 8043	DC-151K	150	200	.51	.41	.35	.32	.30
43 D 8044	DC-181K	180	200	.51	.41	.35	.32	.30
43 D 8045	DC-221K	220	200	.51	.41	.35	.32	.30
43 D 8046	DC-271K	270	200	.51	.41	.35	.32	.30
43 D 8047	DC-331K	330	200	.51	.41	.35	.32	.30
43 D 8048	DC-391K	390	200	.51	.41	.35	.32	.30
43 D 8049	DC-471K	470	200	.53	.43	.37	.34	.31
43 D 8050	DC-561K	560	100	.53	.43	.37	.34	.31
43 D 8051	DC-681K	680	100	.53	.43	.37	.34	.31
43 D 8052	DC-821K	820	100	.53	.43	.37	.34	.31
43 D 8053	DC-102K	1000	100	1.18	.94	.82	.74	.69
43 D 8054	DC-122K	1200	100	1.30	1.04	.90	.82	.76
43 D 8055	DC-152K	1500	100	1.33	1.06	.92	.84	.78
43 D 8056	DC-182K	1800	100	1.47	1.18	1.02	.93	.86
43 D 8057	DC-222K	2200	100	1.49	1.19	1.04	.94	.87
43 D 8058	DC-272K	2700	100	1.65	1.32	1.15	1.05	.97
43 D 8059	DC-332K	3300	100	1.74	1.39	1.21	1.10	1.01
43 D 8060	DC-392K	3900	100	1.82	1.46	1.26	1.15	1.06
43 D 8061	DC-472K	4700	100	1.87	1.50	1.30	1.18	1.09
43 D 8062	DC-562K	5600	100	2.12	1.69	1.47	1.34	1.24
43 D 8063	DC-682K	6800	100	2.33	1.87	1.62	1.48	1.36
43 D 8064	DC-822K	8200	100	2.55	2.04	1.77	1.61	1.49
43 D 8065	DC-103K	10,000	100	2.81	2.25	1.95	1.78	1.64
43 D 8066	DC-123K	12,000	100	2.93	2.35	2.03	1.85	1.71
43 D 8067	DC-153K	15,000	100	3.20	2.56	2.22	2.02	1.87
43 D 8068	DC-183K	18,000	100	3.20	2.56	2.22	2.02	1.87
43 D 8069	DC-223K	22,000	100	3.25	2.61	2.26	2.06	1.90
43 D 8070	DC-273K	27,000	100	3.66	2.93	2.54	2.32	2.14

"HY-CAPS" SOLID-STATE CERAMIC CAPACITORS (Av. shpg. wt., 2 oz.)

Stock No.	Type HC-	μF	Size (HWD) (Inches)	EACH 1-24	25-49	50-99	100-249	250-499
43 D 8071	A-103-M	.01	.175x.225x.110	1.39	1.11	.97	.88	.82
43 D 8073	A-153-M	.015	.175x.225x.110	1.73	1.38	1.20	1.09	1.01
43 D 8075	A-223-M	.022	.175x.225x.110	2.10	1.68	1.46	1.33	1.23
43 D 8077	A-333-M	.033	.175x.225x.110	2.83	2.26	1.97	1.79	1.66
43 D 8078	B-393-M	.339	.310x.325x.150	3.21	2.57	2.23	2.03	1.88
43 D 8079	B-473-M	.047	.310x.325x.150	3.39	2.71	2.36	2.14	1.98
43 D 8082	B-683-M	.068	.310x.325x.150	3.91	3.12	2.72	2.47	2.29
43 D 8083	B-823-M	.082	.310x.325x.150	4.15	3.32	2.89	2.63	2.43
43 D 8084	B-104-M	.100	.310x.325x.150	4.38	3.50	3.04	2.77	2.56
43 D 8086	C-154-M	.15	.355x.670x.150	4.49	3.59	3.12	2.84	2.63
43 D 8089	C-224-M	.22	.355x.670x.150	4.94	3.95	3.44	3.12	2.89
43 D 8090	C-274-M	.27	.355x.670x.150	5.21	4.17	3.62	3.29	3.05
43 D 8091	C-334-M	.33	.355x.670x.150	5.91	4.41	3.84	3.49	3.23
43 D 8092	C-394-M	.39	.355x.670x.150	5.93	4.74	4.12	3.75	3.47
43 D 8093	C-474-M	.47	.355x.670x.150	6.40	5.12	4.45	4.05	3.75
43 D 8094	D-105-M	1.0	.550x.800x.225	10.10	8.08	7.03	6.39	5.91
43 D 8095	E-155-M	1.5	.550x.800x.250	12.90	10.32	8.98	8.16	7.56
43 D 8096	F-205-M	2.0	.550x.800x.300	16.83	13.47	11.71	10.64	9.86
43 D 8097	G-255-M	2.5	.550x.800x.375	20.76	16.61	14.44	13.03	12.16

EPOXY MOLDED "NYT-CAPS" NPO CERAMIC CAPACITORS WITH HIGH STABILITY AND LOW DISSIPATION FACTOR

"NYT-CAPS." Ultra-high-stability ceramic capacitors recommended for use where high capacity is required and control stability is secondary. Operate for long periods under extreme moisture and vibration conditions. Exceptional stability through an extended temperature range. Temperature coefficient does not exceed ±25 ppm/°C over temperature range of —55°C to +125°C. Offers low loss, with a dissipation factor of less than 0.001 at 25°C. Rugged molded epoxy case with #22 tinned copper axial leads. Small size makes "Nyt-Caps" ideal for transistorized circuit or printed circuit applications. Capacitance values ±10% tolerance. Working voltage 200 volts. Av. shpg. wt. per 100, 3 oz.

Stock No.	Mfr's Type	pF	Size (Inches)	EACH 1-24	25-49	50-99	100-249	250-499
43 D 8150	NC-047	4.7	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8151	NC-056	5.6	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8152	NC-068	6.8	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8153	NC-082	8.2	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8154	NC-100	10	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8155	NC-120	12	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8156	NC-150	15	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8157	NC-180	18	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8158	NC-220	22	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8161	NC-270	27	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8163	NC-330	33	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8165	NC-390	39	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8166	NC-470	47	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8167	NC-560	56	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8168	NC-680	68	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8170	NC-820	82	.1 dia. x .250	1.41	1.14	.98	.90	.83
43 D 8171	NC-101	100	.1 dia. x .250	1.49	1.20	1.04	.94	.87
43 D 8172	NC-121	120	.1 dia. x .250	1.49	1.20	1.04	.94	.87
43 D 8173	NC-151	150	.1 dia. x .250	1.49	1.20	1.04	.94	.87
43 D 8174	NC-181	180	.1 dia. x .250	1.49	1.20	1.04	.94	.87
43 D 8176	NC-221	220	.1 dia. x .250	1.49	1.20	1.04	.94	.87
43 D 8178	NC-271	270	.350x.250x.1	2.44	1.96	1.70	1.54	1.43
43 D 8179	NC-331	330	.350x.250x.1	2.44	1.96	1.70	1.54	1.43
43 D 8180	NC-391	390	.350x.250x.1	2.44	1.96	1.70	1.54	1.43
43 D 8181	NC-471	470	.350x.250x.1	2.44	1.96	1.70	1.54	1.43
43 D 8182	NC-561	560	.350x.250x.1	3.35	2.68	2.32	2.12	1.95
43 D 8183	NC-681	680	.350x.250x.1	3.35	2.68	2.32	2.12	1.95
43 D 8190	NC-821	820	.350x.250x.1	3.35	2.68	2.32	2.12	1.95
43 D 8196	NC-102	1000	.350x.250x.1	3.35	2.68	2.32	2.12	1.95
43 D 8197	NC-122	1200	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8198	NC-152	1500	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8208	NC-182	1800	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8209	NC-222	2200	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8210	NC-272	2700	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8211	NC-332	3300	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8212	NC-392	3900	.350x.250x.1	4.20	3.37	2.92	2.66	2.46
43 D 8213	NC-472	4700	.350x.250x.1	4.20	3.37	2.92	2.66	2.46

Allied offers fast, same-day shipment of industrial quantities at OEM price discounts. To assure the fastest and most accurate service, please specify manufacturer's type number, capacitance and stock number on each order.

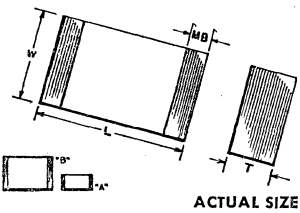
Call the Allied Facility Nearest You—See Page 3

Nytronics, Vitramon and Plastic Capacitors

NYTRONICS CAPACITORS

"NYT-CHIP" CERAMICS

Chip-type capacitors designed for integrated and printed circuits. Provide ultra-high stability and low loss. High packaging density and mounting flexibility. Temperature coefficient, less than ±25 ppm/°C from —55°C to +125°C. Disp. factor less than 0.001 at 25°C. 200 WVDC. Tolerance, ±10%. Av. wt. per 100, 2 oz.



ACTUAL SIZE

PHYSICAL DIMENSIONS (†SIZE CODE)

†	L	W	T	MB
A	.170″ (±.015)	.065″ (±.015)	.070″ max.	.035″ (+.020, —.010)
B	.280″ (±.020)	.195″ (±.020)	.070″ max.	.035″ (+.020, —.010)

Stock No.	Mfr's Type	μF	Size	Stock No.	Mfr's Type	μF	Size
43 D 9781	NCU-047	4.7	A	43 D 9801	NCU-181	180	A
43 D 9782	NCU-056	5.6	A	43 D 9802	NCU-221	220	A
43 D 9783	NCU-068	6.8	A	43 D 9804	NCU-271	270	B
43 D 9784	NCU-082	8.2	A	43 D 9805	NCU-331	330	B
43 D 9785	NCU-100	10	A	43 D 9806	NCU-391	390	B
43 D 9786	NCU-120	12	A	43 D 9807	NCU-471	470	B
43 D 9787	NCU-150	15	A	43 D 9808	NCU-561	560	B
43 D 9788	NCU-180	18	A	43 D 9809	NCU-681	680	B
43 D 9789	NCU-220	22	A	43 D 9810	NCU-821	820	B
43 D 9790	NCU-270	27	A	43 D 9813	NCU-102	1000	B
43 D 9791	NCU-330	33	A	43 D 9814	NCU-122	1200	B
43 D 9792	NCU-390	39	A	43 D 9815	NCU-152	1500	B
43 D 9793	NCU-470	47	A	43 D 9816	NCU-182	1800	B
43 D 9794	NCU-560	56	A	43 D 9817	NCU-222	2200	B
43 D 9795	NCU-680	68	A	43 D 9834	NCU-272	2700	B
43 D 9797	NCU-820	82	A	43 D 9835	NCU-332	3300	B
43 D 9798	NCU-101	100	A	43 D 9836	NCU-392	3900	B
43 D 9799	NCU-121	120	A	43 D 9837	NCU-472	4700	B
43 D 9800	NCU-151	150	A	.....	.....	.....	....

PRICES FOR "NYT-CHIP" CAPACITORS

Capacity Range μF	Size	EACH					
		1-24	25-49	50-99	100-249	250-499	500-999
4.7 to 82	.170x.065x.070″	1.36	1.09	.93	.85	.78	.72
100 to 220	.170x.065x.070″	1.44	1.15	.99	.89	.82	.76
270 to 470	.280x.195x.070″	2.39	1.91	1.65	1.49	1.38	1.28
560 to 1000	.280x.195x.070″	3.30	2.63	2.27	2.07	1.90	1.77
200 to 4700	.280x.195x.070″	4.15	3.32	2.87	2.61	2.41	2.24

VITRAMON CAPACITORS

MILITARY TYPE CY PORCELAIN CAPACITORS

Unaffected by humidity, maintain insulation resistance after immersion. Meet shock requirements of MIL-STD-202. Exceed vibration requirements of MIL-C-11272B; meet requirements of 2000-cycle vibration at 20g acceleration. For centrifugal accelerations over 40,000g. 500 WVDC, except *300. Tolerance, †±5% except ±.25%. (1% or 2% tolerance available on Special Order.) No drift, over 10,000 hours at 80°C at 500 VDC. Av. wt., 1 oz.

CAPACITANCE RANGE—SPECIFY pF DESIRED

0.5	4.7	10	27	68	180	470	4300
1.0	5.1	11	30	75	200	510	4700
1.5	5.6	12	33	82	220	560	5100
2.2	6.2	13	36	91	240	680	.....
2.7	6.8	15	39	100	270	910	.....
3.0	7.5	20	43	120	300	1300	.....
3.3	8.2	22	47	130	330	1600	.....
4.3	9.1	24	51	150	360	3900	.....

Stock No.	Mfr's Type	pF (Specify Value)	EACH				
			1-49	50-99	100-249	250-499	500-999
43 D 2046 C	CY13C†	0.5 to 5.1	1.81	1.72	1.46	1.37	1.15
43 D 2066 C	CY13C	5.6 to 10	1.19	1.13	.96	.91	.76
43 D 2067 C	CY13C	11 to 43	1.27	1.21	1.03	.97	.81
43 D 2068 C	CY13C	47 to 91	1.19	1.13	.96	.91	.76
43 D 2069 C	CY13C	100 to 200	1.19	1.13	.96	.91	.76
43 D 2071 C	CY17C	220 to 360	1.19	1.13	.96	.91	.76
43 D 2072 C	CY17C	470	1.53	1.46	1.23	1.16	.98
43 D 2075 C	CY22C	510 to 910	2.21	2.10	1.78	1.67	1.40
43 D 2078 C	CY32C	1300 to 1600	3.01	2.86	2.42	2.27	1.90
43 D 2081 C	CY32C	3900 to 4300*	6.21	5.90	4.98	4.67	3.90
43 D 2082 C	CY32C	4700 to 5100*	8.83	8.39	7.07	6.64	5.54

PLASTIC CAPACITORS, INC.

PLASTIC DIELECTRIC, GLASS-ENCASED CAPACITORS

Extremely long life even under high temperature. Operate 10,000 hours at 85°C at rated voltage. Range: —55°C to +85°C; derate 60% at 150°C. Units meet or exceed MIL-C-25A specs, except high-altitude flashover. Tolerance: ±10%. Mounting terminals: 8-32x⅜″ for capacitors ¾″ dia. or larger; smaller units have No. 18 tinned-copper axial pigtails.

TYPE OF-20 2000 WVDC. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	μF	Size (Dia. x L.)	EACH				
				1-9	10-24	25-49	50-99	100-249
43 D 6901	103	.01	19/32x1 3/16″	2.44	2.44	2.22	2.00	1.75
43 D 6902	203	.02	19/32x1 9/16″	2.44	2.44	2.22	2.00	1.75
43 D 6903	503	.05	¾x1¾″	2.63	2.63	2.42	2.17	1.89
43 D 6904	104	.1	¾x2¼″	2.98	2.98	2.73	2.47	2.14
43 D 6905	254	.25	29/32x2¾″	3.40	3.40	3.11	2.79	2.44
43 D 2800	504	.5	1⅜x2″	3.72	3.72	3.31	3.07	2.67

TYPE OF-30 3000 WVDC. Av. shpg. wt., 6 oz.

43 D 6909	103	.01	19/32x1 9/16″	2.84	2.84	2.65	2.43	1.87
43 D 6910	203	.02	¾x1¾″	3.05	3.05	2.84	2.63	2.00
43 D 2801	503	.05	¾x2¼″	3.09	3.09	2.90	2.69	2.06
43 D 6911	104	.1	1⅛x1¾″	3.63	3.63	3.38	3.13	2.38
43 D 2802	254	.25	1⅜x2″	4.10	4.10	3.80	3.52	2.68
43 D 2803	504	.5	1⅝x2¾″	5.10	5.10	4.75	4.42	3.34

TYPE OF-50 5000 WVDC. Av. shpg. wt., 8 oz.

43 D 6912	102	.001	19/32x1 3/16″	3.72	3.72	3.30	3.09	2.67
43 D 2807	502	.005	19/32x1 5/8″	3.76	3.76	3.34	3.14	2.71
43 D 6913	103	.01	¾x1¾″	3.78	3.78	3.39	3.17	2.75
43 D 6914	203	.02	¾x2¼″	4.20	4.20	3.72	3.51	3.01
43 D 6915	503	.05	29/32x2¼″	4.57	4.57	4.01	3.79	3.23
43 D 6916	104	.1	1⅜x2¼″	6.14	6.14	5.42	5.09	4.36
43 D 2808	254	.25	1⅝x3″	7.72	7.72	6.83	6.43	5.52
43 D 2809	504	.5	1⅝x6″	8.90	8.90	7.83	7.42	6.35

TYPE OF-80 8000 WVDC. Av. shpg. wt., 1 lb., *3 lbs.

Stock No.	Mfr's Type	μF	Size (Dia. x L.)	EACH				
				1-9	10-24	25-49	50-99	100-249
43 D 6917	102	.001	19/32x1 9/16″	3.89	3.89	3.46	3.25	2.83
43 D 6918	502	.005	¾x1¾″	4.00	4.00	3.51	3.30	2.90
43 D 2810	103	.01	¾x2¼″	4.43	4.28	3.79	3.57	3.07
43 D 6919	203	.02	29/32x2¾″	5.25	4.62	4.12	3.81	3.31
43 D 6920	503	.05	1⅜x2¾″	6.80	5.95	5.25	4.93	4.25
43 D 6921	104*	.1	1⅝x3⅝″	8.15	7.00	6.53	5.97	5.02

TYPE OF-100 10,000 WVDC. Av. shpg. wt., 1½ lbs.

43 D 6923	202	.002	¾x1 9/32″	4.20	3.97	3.46	3.35	2.93
43 D 6925	103	.01	29/32x2¼″	5.32	4.87	4.42	4.14	3.60
43 D 6926	203	.02	1⅛x2¾″	7.04	6.41	5.80	5.44	4.73
43 D 6927	503	.05	1⅝x2¾″	9.90	9.00	8.15	7.68	6.68
43 D 2811	104	.1	1⅝x5″	11.05	9.82	8.90	8.35	7.25

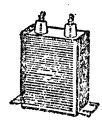
TYPE OF-200 20,000 WVDC. Av. shpg. wt., 3 lbs.

43 D 6930	102	.001	¾x3½″	8.24	7.51	6.77	6.19	5.30
43 D 6931	202	.002	13/16x3½″	8.55	7.77	7.03	6.40	5.51
43 D 6932	502	.005	1⅛x3½″	9.19	8.35	7.56	6.88	5.93
43 D 2812	103	.01	1⅛x4½″	10.92	9.92	8.92	8.19	7.03

TYPE OF-300 30,000 WVDC. Av. shpg. wt., 4 lbs.

43 D 2813	502	.005	1⅜x5″	16.80	15.22	13.44	12.60	11.02
43 D 2814	103	.01	1⅝x6½″	20.05	18.27	16.06	15.01	13.12
43 D 2815	203	.02	1⅝x9″	20.68	18.69	16.90	15.43	13.23

HIGH-VOLTAGE FILTER CAPACITORS



Smaller than comparable CP-70 style. Range: —50°C to +60°C for 10,000 hours. MIL-C-25A dielectric resistance. Tolerance: —10%, +20%. With footed brackets; nuts and solder lugs on terminals.

TYPE EP30—3000 WVDC. Shpg. wt., 4 lbs., *7 lbs.

Stock No.	Mfr's Type	μF	Size	EACH				
				1-9	10-24	25-49	50-99	100-249
43 D 2827	504	.5	2½x1 3/16x2½″	7.61	5.30	4.88	4.41	3.88
43 D 2828	105	1.0	2½x1 3/16x3¾″	8.56	5.98	5.41	4.99	4.41
43 D 2829	205*	2.0	3¾x1¼x4½″	11.34	7.93	7.14	6.61	5.81
43 D 2830	405*	4.0	3¾x2½x4¾″	17.33	11.92	10.71	9.92	8.71
43 D 2831	805*	8.0	4 9/16x3¾x4¾″	30.66	21.42	19.27	17.85	15.70

TYPE EP50—5000 WVDC. Shpg. wt., 7 lbs., *4 lbs.

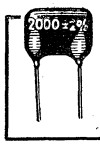
43 D 2834	504*	.50	2½x1 3/16x4″	8.14	5.81	5.22	4.83	4.25
43 D 2835	105	1.0	3¾x1¾x3¾″	12.34	8.82	7.98	7.35	6.51
43 D 2836	205	2.0	3¾x2½x4¾″	18.27	13.07	11.76	10.92	9.61
43 D 2837	405	4.0	4 9/16x3¾x4¾″	30.45	21.68	19.53	18.11	15.96

TYPE EP100—10,000 WVDC. Shpg. wt., 10 lbs.

43 D 2845	105	1.0	4 9/16x3¾x5½″	41.47	31.50	26.67	24.67	21.84
43 D 2846	205	2.0	4 9/16x3¾x10″	65.10	46.20	41.08	38.43	34.02

Elmenco Mica Capacitors

"DM" DIPPED MICA CAPACITORS



SIZE CHART (INCHES)

Dual-Marked With MIL and Commercial Type Nos.

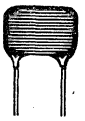
DM-10	.360x.330x.190 to .380x.380x.220	DM-19/ CMO6	.650x.520x.220 to .680x.550x.280
DM-15/ CMO5	.450x.360x.170 to .490x.420x.240	DM-30/ CMO7	.780x.870x.300 to .800x.890x.340

Special extra-tough epoxy coating resists extreme humidity and moisture. All are rated 500 WVDC, except †300 WVDC and §100 WVDC. Operate in temperatures from —55°C to +150°C without derating. Compact size of these capacitors makes them very suitable for delay lines, computers, test equipment, missiles, etc. Capacitance drift ±(.05%, +.1 pF) (Char. F). Meet or exceed MIL-C-5C and RETMA specifications for mica capacitors. Tolerance, ± 5%, except *±.5 pF. See Size Chart above for approximate dimensions. Av. shpg. wt., 2 oz. Units are dual-marked in both MIL and Commercial Type Numbers.

Equivalent Types Available, See Page 185

Stock No.	Mfr's Type	pF	EACH 1-24	25-99	100-499	500-999
43 D 2352	DM-10-030D*	3	.31	.24	.19	.140
43 D 2353	DM-10-050D*	5	.31	.24	.19	.140
43 D 2354	DM-10-100J	10	.31	.24	.19	.140
43 D 2356	DM-10-150J	15	.31	.24	.20	.143
43 D 2358	DM-10-200J	20	.22	.16	.13	.095
43 D 2359	DM-10-220J	22	.22	.16	.13	.095
43 D 2361	DM-10-270J	27	.22	.17	.13	.097
43 D 2363	DM-10-330J	33	.22	.17	.13	.097
43 D 2367	DM-10-470J	47	.23	.18	.14	.103
43 D 2368	DM-10-500J	50	.23	.18	.14	.103
43 D 2372	DM-10-680J	68	.25	.19	.15	.108
43 D 2373	DM-10-750J	75	.25	.19	.15	.108
43 D 2376	DM-10-101J	100	.26	.20	.16	.116
43 D 2378	DM-10-121J	120	.28	.21	.17	.123
43 D 2380	DM-10-151J	150	.32	.24	.19	.141
43 D 2383	DM-10-201J	200	.39	.30	.24	.174
43 D 2384	DM-10-221J	220	.40	.30	.24	.180
43 D 2386	DM-10-251J	250	.45	.34	.27	.200
43 D 2388	DM-10-301J	300†	.47	.35	.28	.207
43 D 0716	DM-15-010D*	1	.22	.17	.13	.097
43 D 0717	DM-15-020D*	2	.22	.17	.13	.097
43 D 0718	DM-15-030D*	3	.22	.17	.13	.097
43 D 0719	DM-15-050D*	5	.22	.17	.13	.097
43 D 0720	DM-15-100J	10	.22	.17	.13	.097
43 D 0721	DM-15-120J	12	.22	.17	.13	.097
43 D 0722	DM-15-150J	15	.22	.17	.13	.097
43 D 0724	DM-15-200J	20	.18	.14	.11	.079
43 D 0725	DM-15-220J	22	.18	.14	.11	.079
43 D 0727	DM-15-270J	27	.18	.14	.11	.079
43 D 0728	DM-15-300J	30	.18	.14	.11	.079
43 D 0729	DM-15-330J	33	.18	.14	.11	.079
43 D 0731	DM-15-390J	39	.18	.14	.11	.079
43 D 0733	DM-15-470J	47	.18	.14	.11	.079
43 D 0734	DM-15-500J	50	.18	.14	.11	.079
43 D 0738	DM-15-680J	68	.18	.14	.11	.081
43 D 0739	DM-15-750J	75	.18	.14	.11	.081
43 D 0740	DM-15-820J	82	.18	.14	.11	.081
43 D 0742	DM-15-101J	100	.18	.14	.11	.081
43 D 0744	DM-15-121J	120	.20	.15	.12	.086
43 D 0746	DM-15-151J	150	.21	.16	.13	.094
43 D 0748	DM-15-181J	180	.25	.19	.15	.108
43 D 0749	DM-15-201J	200	.25	.19	.15	.108
43 D 0750	DM-15-221J	220	.26	.20	.16	.116
43 D 0752	DM-15-251J	250	.28	.21	.17	.123
43 D 0753	DM-15-271J	270	.29	.22	.18	.130
43 D 0754	DM-15-301J	300	.31	.23	.19	.138
43 D 0755	DM-15-331J	330	.34	.26	.21	.152
43 D 0756	DM-15-361J	360	.36	.27	.22	.160
43 D 0757	DM-15-391J	390	.38	.28	.23	.167
43 D 0759	DM-15-471J	470	.42	.32	.25	.187
43 D 0760	DM-15-501J	500	.43	.33	.26	.195
43 D 0761	DM-15-511J	510	.45	.34	.27	.202
43 D 0762	DM-15-561J	560†	.45	.34	.27	.202
43 D 0764	DM-15-681J	680†	.53	.40	.32	.239
43 D 0765	DM-15-751J	750†	.57	.43	.34	.253
43 D 0766	DM-15-821J	820†	.62	.46	.37	.275
43 D 0768	DM-15-102J	1000§	.58	.44	.35	.261
43 D 0770	DM-19-102J	1000	.41	.31	.25	.184
43 D 0772	DM-19-122J	1200	.47	.35	.28	.209
43 D 0774	DM-19-152J	1500	.56	.42	.34	.250
43 D 0777	DM-19-202J	2000	.68	.51	.41	.303
43 D 0780	DM-19-252J	2500	.81	.61	.49	.362
43 D 2404	DM-30-502J	5000	1.15	.86	.69	.516
43 D 2407	DM-30-622J	6200	1.35	1.02	.81	.608
43 D 0822	DM-30-103J	10,000	2.12	1.59	1.27	.951

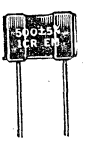
DM5 MINIATURE DUR-MICA CAPACITORS



Volumetric savings through decreased area of mica film and use of a new dip-coat material that provides improved protection with a far thinner coat than on larger mica capacitors. Approx. size less leads, 3/16x1/4x1/8". Final letter in Type No. indicates tolerance: J—±5%, K—±10%, WVDC, 300 except *100, †50. Av. wt., 1 oz.

Stock No.	Mfr's No.	pF	EACH 1-24	25-99	100-499	500-999
43 D 0201	DM5-050K	5	.38	.29	.23	.169
43 D 0202	DM5-060K	6	.39	.30	.24	.174
43 D 0203	DM5-070K	7	.39	.30	.24	.174
43 D 0204	DM5-080K	8	.39	.30	.24	.174
43 D 0205	DM5-100J	10	.39	.30	.24	.174
43 D 0206	DM5-120J	12	.40	.30	.24	.180
43 D 0210	DM5-150J	15	.40	.30	.24	.180
43 D 0212	DM5-180J	18	.42	.31	.25	.185
43 D 0216	DM5-200J	20	.28	.21	.17	.123
43 D 0222	DM5-220J	22	.29	.22	.17	.127
43 D 0224	DM5-240J	24	.29	.22	.17	.127
43 D 0226	DM5-270J	27	.29	.22	.18	.130
43 D 0228	DM5-300J	30	.29	.22	.18	.130
43 D 0229	DM5-330J	33	.30	.23	.18	.134
43 D 0231	DM5-360J	36	.31	.24	.19	.140
43 D 0232	DM5-390J	39	.31	.24	.19	.140
43 D 0236	DM5-430J	43	.32	.24	.20	.143
43 D 0239	DM5-470J	47	.33	.25	.20	.147
43 D 0240	DM5-500J	50	.33	.25	.20	.147
43 D 0241	DM5-510J	51	.35	.26	.21	.154
43 D 0242	DM5-560J	56	.37	.28	.22	.163
43 D 0243	DM5-620J	62	.39	.29	.23	.173
43 D 0245	DM5-680J	68	.40	.30	.24	.180
43 D 0247	DM5-750J	75	.42	.32	.26	.189
43 D 0248	DM5-820J	82	.46	.35	.28	.206
43 D 0249	DM5-910J	91	.50	.37	.30	.222
43 D 0252	DM5-101J	100	.52	.39	.31	.231
43 D 0254	DM5-111J	110	.56	.42	.33	.248
43 D 0256	DM5-121J*	120	.59	.45	.36	.264
43 D 0258	DM5-131J*	130	.50	.37	.30	.222
43 D 0260	DM5-151J*	150	.56	.42	.33	.248
43 D 0261	DM5-161J†	160	.58	.43	.35	.257
43 D 0262	DM5-181J†	180	.63	.48	.38	.283

SCDM THIN-COAT DIPPED MICAS



Ideal where space is at a premium. Single resin coat instead of series of dips. Meet MIL-C-5 except for case insulation (3.5.3) and moisture resistance (3.14). Operate well where not exposed to extensive periods of high humidity. 500 WVDC except *300 WVDC and †100 WVDC. Tol., ± 5%. except * ± .5 pF. Av. shpg. wt., 2 oz.

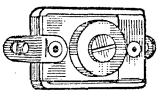
Stock No.	Type SCDM-	pF	Size (LxWxT) (Inches)	EACH 1-24	25-99	100-499	500-999
43 D 0625	10-030D*	3	.310x.230x.120	.31	.24	.19	.14
43 D 0626	10-050D*	5	.310x.230x.120	.31	.24	.19	.14
43 D 0627	10-100J	10	.310x.230x.120	.31	.24	.19	.140
43 D 0628	10-150J	15	.310x.230x.120	.31	.24	.20	.143
43 D 0629	10-200J	20	.310x.230x.120	.22	.16	.13	.095
43 D 0630	10-220J	22	.310x.230x.120	.22	.16	.13	.095
43 D 0631	10-270J	27	.310x.230x.120	.22	.17	.13	.097
43 D 0632	10-330J	33	.310x.230x.120	.22	.17	.13	.097
43 D 0633	10-390J	39	.310x.230x.120	.23	.17	.13	.101
43 D 0634	10-470J	47	.310x.230x.120	.23	.18	.14	.103
43 D 0635	10-500J	50	.310x.230x.120	.23	.18	.14	.103
43 D 0636	10-560J	56	.310x.230x.120	.24	.18	.14	.105
43 D 0637	10-680J	68	.310x.230x.120	.25	.19	.15	.108
43 D 0671	10-750J	75	.310x.230x.120	.25	.19	.15	.108
43 D 0672	10-820J	82	.310x.230x.120	.25	.19	.15	.110
43 D 0673	10-101J	100	.320x.230x.130	.26	.20	.16	.116
43 D 0674	10-121J	120	.320x.230x.130	.28	.21	.17	.123
43 D 0675	10-151J	150	.320x.230x.130	.32	.24	.19	.141
43 D 0676	10-181J	180	.330x.240x.150	.36	.27	.22	.162
43 D 0677	10-201J	200	.330x.240x.150	.39	.30	.24	.174
43 D 0678	10-221J	220	.330x.240x.150	.40	.30	.24	.180
43 D 0679	10-251J	250	.340x.250x.160	.45	.34	.27	.200
43 D 0680	10-271J	270	.340x.250x.160	.42	.32	.25	.187
43 D 0681	10-301J	300*	.340x.250x.160	.47	.35	.28	.207
43 D 0682	10-331J	330	.340x.250x.160	.44	.33	.26	.195
43 D 0683	10-361J	360	.340x.250x.160	.47	.35	.28	.207
43 D 0689	10-391J	390†	.340x.250x.160	.49	.37	.30	.220
43 D 0692	15-471J	470	.450x.310x.190	.42	.32	.25	.187
43 D 0693	15-501J	500	.450x.310x.190	.44	.33	.26	.195
43 D 0699	15-511J	510	.450x.310x.190	.45	.34	.27	.202
43 D 0700	15-561J	560*	.450x.310x.160	.45	.34	.27	.202
43 D 0701	15-681J	680*	.450x.310x.160	.53	.40	.32	.239
43 D 0705	15-751J	750*	.450x.310x.170	.57	.43	.34	.253
43 D 0706	15-821J	820*	.450x.310x.170	.62	.46	.37	.275
43 D 0707	15-102J	1000†	.450x.320x.170	.58	.44	.35	.261

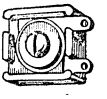
Specify Stock No., Mfr's Type and Capacitance on Capacitor Orders

Trimmers and Variable Capacitors

ELMENCO TRIMMERS AND PADDERS

High-quality capacitors feature low-cost ceramic base, clear India mica. Specially treated to assure resistance to humidity, permanence of capacity settings. Phosphor-bronze adjusting plates permit bending solder lugs without affecting capacity setting and assure permanent resilience and freedom from mechanical fatigue. Trimmers rated 350 VDC test, 175 WVDC. Padders 500 VDC test, 250 WVDC. Three turns for open to tight setting. Av. wt.; trimmers 2 oz., padders 2 oz.


TRIMMER


PADDER

TYPE 30 PADDERS, ⅞x1 5/16"

Stock No.	Mfr's Type	pF Min-Max	EACH 1-49	50-99	100-499
43 D 7093	302	15-130	.45	.41	.36
43 D 7094	303	65-340	.46	.42	.37
43 D 7095	304	115-550	.51	.46	.41
43 D 7096	305	190-760	.56	.50	.45
43 D 7097	306	275-970	.62	.56	.50
43 D 7098	307	350-1180	.64	.58	.53
43 D 7099	308	450-1390	.69	.62	.56
43 D 7100	309	550-1600	.71	.64	.58
43 D 7101	310	650-1890	.81	.74	.67
43 D 7102	311	780-2110	.85	.77	.70
43 D 7103	312	880-2330	.85	.77	.70
43 D 7106	315	1400-3055	1.05	.95	.85

TYPE 40 MIDGET TRIMMERS ⅜x9/16"

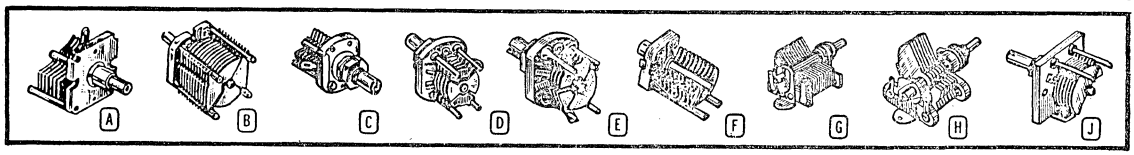
Stock No.	Mfr's Type	pF Min-Max	EACH 1-49	50-99	100-499
43 D 7087	400	.9-7	.23	.21	.19
43 D 7088	402	1.5-20	.23	.21	.19
43 D 7089	403	4-40	.26	.24	.22
43 D 7090	404	7-60	.32	.29	.26

TYPE 42 MIDGET TRIMMERS ⅜x¾"

Stock No.	Mfr's Type	pF Min-Max	EACH 1-49	50-99	100-499
43 D 7077	420	1-12	.23	.21	.19
43 D 7078	421	2-25	.23	.21	.19
43 D 7079	422	4-40	.23	.21	.19
43 D 7080	423	7-100	.26	.24	.22
43 D 7081	424	16-150	.29	.26	.23
43 D 7082	425	24-200	.33	.30	.27
43 D 7083	426	37-250	.31	.28	.25
43 D 7084	427	55-300	.43	.38	.34
43 D 7085	428	70-350	.47	.43	.38
43 D 7086	429	90-400	.51	.46	.42

TYPE 46 STANDARD TRIMMERS, ¾x⅜"

43 D 3518	460	1.5-15	.23	.21	.19
43 D 3511	461	2.7-40	.23	.21	.19
43 D 3512	462	5-80	.23	.21	.19
43 D 3513	463	9-180	.23	.21	.19
43 D 3514	464	25-280	.30	.27	.24
43 D 3515	465	50-380	.34	.31	.30
43 D 3516	466	80-480	.37	.33	.30
43 D 3517	467	110-580	.43	.38	.34
43 D 3519	468	140-680	.46	.42	.37
43 D 3520	469	170-780	.50	.45	.41



E. F. JOHNSON VARIABLE CAPACITORS

TYPE L VARIABLES

Resist shock, vibration. Split-sleeve tension bearing, silver-plated copper alloy contact for better torque, smooth action. Nickel plates spaced .030". Peak voltage, 1500. Panel space, 1⅜" square behind. Wt., 8 oz.

A SINGLE END PLATE

Stock No.	Mfr's Type	pF Max-Min	EACH 1-9	10-49	50-99
43 D 3777	167-1	10-2.2	2.05	1.90	1.71
43 D 3778	167-2	25-2.9	2.20	2.03	1.85
43 D 3779	167-3	50-4.0	2.50	2.28	2.08
43 D 3780	167-4	75-5.2	2.70	2.48	2.26

B BUTTERFLY

43 D 3781	167-21	10-2.3	2.55	2.35	2.14
43 D 3782	167-22	25-3.7	3.00	2.75	2.50
43 D 3783	167-23	50-5.9	3.75	3.43	3.13

TYPE M MINIATURE VARIABLES

Small types for compact equipment. Bridge-type stator terminal. Peak voltage 1250 V, except *850 V. Panel space ¾x⅝", up to 1¼" behind. 3/16" dia. slotted shaft, with ¼"-32 mtg. bushing. Av. wt., 2 oz.

C SINGLE SECTION

43 D 3758	160-102	5.0-1.5	.90	.83	.76
43 D 3759	160-104	8.7-1.8	.95	.88	.80
43 D 3760	160-107	14.2-2.3	1.00	.92	.85
43 D 3761	160-110	19.6-2.7	1.10	1.00	.92
43 D 3766	160-130	32.0-3*	1.20	1.11	1.02

D BUTTERFLY

43 D 3784	160-203	3.1-1.5	1.20	1.11	1.02
43 D 3763	160-205	5.1-1.8	1.30	1.20	1.10
43 D 3764	160-208	8.0-2.2	1.45	1.33	1.22
43 D 3765	160-211	10.8-2.7	1.60	1.47	1.35

E DIFFERENTIAL

43 D 3767	160-303	5.0-1.5	1.25	1.16	1.06
43 D 3768	160-305	8.7-1.8	1.45	1.34	1.23
43 D 3785	160-308	14.2-2.3	1.65	1.52	1.39
43 D 3770	160-311	19.6-2.7	1.85	1.72	1.58

F TYPE S VARIABLES

Compact and rugged. 850 V peak rating. Slotted hex-nut shaft. Panel space, 29/32x 25/32", up to 1 1/16" behind. Two 4-40 mtg. holes. Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	pF Max-Min	EACH 1-9	10-49	50-99
43 D 3771	148-1	15-2.3	1.10	1.02	.92
43 D 3772	148-2	25-2.6	1.15	1.06	.96
43 D 3773	148-3	35-2.9	1.20	1.10	1.00
43 D 3774	148-4	50-3.2	1.25	1.15	1.05
43 D 3786	148-5	75-3.9	1.35	1.24	1.13
43 D 3776	148-6	100-4.5	1.45	1.34	1.22

G TYPE R VARIABLES

Extra-heavy, rugged construction. Panel or base mtg. Panel space 1 11/16x1 5/8", up to 2⅛" behind. 1200 V peak. Av. wt., 1 lb.

43 D 3789	149-1	20-5.3	2.75	2.52	2.30
43 D 3790	149-2	35-5.6	2.85	2.62	2.38
43 D 3754	149-3	50-5.9	2.95	2.71	2.47
43 D 3791	149-4	80-6.6	3.10	2.85	2.60
43 D 3756	149-5	102-7.1	3.25	2.98	2.72
43 D 3757	149-6	140-8.0	3.25	2.85	2.93

TYPE U VARIABLES FOR PRINTED CIRCUIT MOUNTING (Not illus.)

Tiny capacitors that require only ¼" sq. panel space, and up to ¾" behind. High Q, low temperature coefficient. Metal parts silver plated. Steatite ceramic. 5/16" PC terminals. Peak voltage 650 except *500. Av. wt., 4 oz.

Stock No.	Mfr's Type	pF Max-Min	EACH 1-49	50-99	100-499
43 D 4523	189-501-5	4.2-1.2	.56	.51	.45
43 D 4524	189-502-5	6.7-1.3	.58	.52	.46
43 D 4525	189-503-5	9.2-1.4	.56	.51	.45
43 D 4526	189-504-5	11.6-1.5	.58	.52	.46
43 D 4527	189-505-5	14.1-1.7	.60	.54	.48
43 D 4528	189-506-5	16.7-1.8	.62	.56	.49
43 D 4529	189-507-5	19.3-2.0*	.64	.57	.50
43 D 4530	189-508-5	21.9-2.2*	.66	.59	.52
43 D 4531	189-509-5	24.5-2.4*	.68	.60	.53

HAMMARLUND CAPACITORS

TYPE MC

H Feature siliconized steatite base, nickel plated brass plates, silver-plated contacts. For panel or chassis mounting. *Straight-line capacity characteristic indicated by S suffix; others have mid-line capacity characteristic for nearly linear frequency divisions. Air gap: M and S types, .0245". Tested at 1000 V (60 Hz rms). Capacity increases with clockwise rotation. Space required: S type, 1 1/16" sq. M type, 2¼" sq. Depth of longest cut: S, 2⅛"; M, 3¼". ¼" shaft, with ⅜-32 bushing. 10 oz.

Stock No.	Mfr's Type	Max. pF	Min. pF	EACH
43 D 3666	*MC-20-S	20	5.5	2.40
43 D 3667	*MC-35-S	35	6.0	2.45
43 D 3663	MC-50-M	50	6.3	2.55
43 D 3668	*MC-50-S	50	6.5	2.60
43 D 3664	MC-75-M	80	7.3	2.75
43 D 3670	*MC-75-S	80	8.0	2.85
43 D 3673	MC-100-M	100	7.7	2.90
43 D 3672	*MC-100-S	100	8.3	2.95
43 D 3674	MC-140-M	140	9.0	3.00
43 D 3675	*MC-140-S	140	10.0	3.15
43 D 3676	MC-200-M	200	10.3	3.40
43 D 3677	MC-250-M	250	12.0	3.70
43 D 3678	MC-325-M	320	13.5	4.20

TYPE HF

J Single-section tuning capacitors ideally suited to high frequency applications. *Double-spaced plates, 1400 volts (60 Hz rms) test; others 600 volts. Size, 1 9/32x .15/16" up to 1½" behind panel. Air gap: 015", except suffix X Types, .045". 6 oz.

Stock No.	Mfr's Type	Max. pF	Min. pF	EACH
43 D 3590	HF-15	17.5	2.8	1.30
43 D 3591	HF-35	36	3.2	1.40
43 D 3592	HF-50	52	3.7	1.60
43 D 3593	HF-100	102	5.3	1.80
43 D 3594	HF-140	142	6.3	1.95
43 D 3595	*HF-15-X	15	3.6	1.30
43 D 3596	*HF-30-X	30	5.2	1.70

Precision Rotary Switches

QUICK INDEX TO ALLIED'S BIG SELECTION OF SWITCHES

MANUFACTURER	PAGE	OEM TO
ALCO SWITCH—Miniature Switches	212, 213	999
ARROW-HART Switches	214, 215	999
CENTRALAB—Rotary Switches		
JV-9000 Heavy Duty	220	99
PA-1000, PA-2000 Miniature	221	249
PA-3000, PA-4000 Phenolic	221	249
PA-6000, PS-100 Ceramic	220	249
1400-1431, 1450, 1451, 1488, 1489	222	249
1452-1459; 1466-1467 Lever Action	222	249
1460-1464; 1472 Small General Purpose	222	249
2500 Standard Ceramic	220	249
CONTINENTAL-WIRT—Slide Switches	219	999
CUTLER-HAMMER		
AC-DC Toggle Switches	205	999
AC Toggle Switches & Rocker Switches	207	999
MIL-S-3950A, MIL-S-3950C, MIL-S-8834, Jan-S-23 Toggle Switches	208, 209	249
MIL-S-6807 Rotary Switches	204	249
Pushbutton	210	999
AC Designer Line	206	999

MANUFACTURER	PAGE	OEM TO
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LINEMASTER—Foot Switches	227	99
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OHMITE—Power Tap Switches	224	9
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SWITCHCRAFT—Lever, Pushbutton, Remote Control Switches	216-219	499
TAPESWITCH—Controflex Road and Ribbon Switches	227	99

SHALLCROSS SWITCHES By CUTLER-HAMMER

SERIES 1, 2 AND 4 SWITCHES

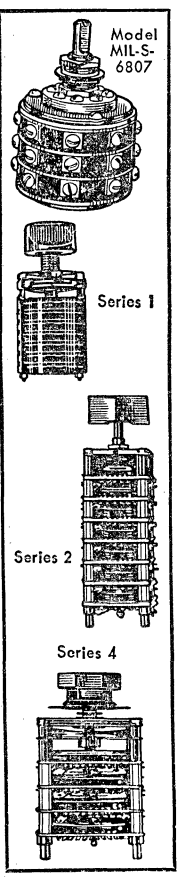
Precision-made switches meet MIL-S-3786 specifications; any modifications are readily available on special request. Series 1 is 1" in diameter; 2 is 1¾" square; 4 is 2½" square. All switches have 5/16" diameter bushing, 1" diameter shafts and fully adjustable stops. Order from tables below.

Series	Rating at 120 VAC	Life Operations	Rating at 30 VDC	Life Operations	Max. Allow. Contact Res.
1	350 mA	25,000	1000 mA	25,000	.0045 at 15 VA
2	2 A	10,000	2 A	20,000	.010 at 240 VA
4	2 A	5,000	2 A	20,000	.010 at 240 VA

MIL-S-6807 ROTARY POWER SWITCHES

Adjustable index. 5 amps at 28 VDC and 115 VAC. 8 positions non-shorting. Screw terminals. 17/32" shaft, 15/32" bushing.

Stock No.	Mfr's Type	Gov't MS No.	Deck	EACH 1-24	25-49	50-99	100-249
56 D 5677	7261K13	25002-1	1	6.44	5.94	4.95	3.96
56 D 5679	7262K12	25002-2	2	9.56	8.82	7.35	5.88
56 D 5678	7263K11	25002-3	3	12.64	11.67	9.73	7.78
56 D 5680	7264K9	25002-4	4	15.73	14.52	12.10	9.68
56 D 5681	7265K9	25002-5	5	18.82	17.37	14.48	11.58
56 D 5682	7266K5	25002-6	6	21.91	20.22	16.85	13.48



SERIES 1 PER MIL-S-3786/SR28

SHORTING TYPES Stock No.	Mfr's Type	NON-SHORTING TYPES Stock No.	Mfr's Type	No. of Poles	Pos/ Poles	No. of Decks	EACH 1-9	10-24	25-49	50-99	100-249
56 D 3372	1J04A6-1	56 D 3378	1J54A6-1	1	2-6	1	5.20	4.40	3.80	3.40	3.10
56 D 3373	1J04A6-2	56 D 3379	1J54A6-2	2	2-6	2	7.00	5.80	5.10	4.60	4.20
56 D 3374	1J04A6-3	56 D 3380	1J54A6-3	3	2-6	3	8.70	7.30	6.40	5.70	5.20
56 D 3375	1J02A12-1	56 D 3381	1J52A12-1	1	2-12	2	6.10	5.10	4.40	4.00	3.60
56 D 3376	1J02A12-2	56 D 3382	1J52A12-2	2	2-12	4	9.10	7.60	6.60	6.00	5.30
56 D 3377	1J02A12-3	56 D 3383	1J52A12-3	3	2-12	6	12.10	10.10	8.80	7.90	7.10
56 D 3384	1J00A12-1	56 D 3387	1J50A12-1	1	2-12	2	6.10	5.10	4.40	4.00	3.60
56 D 3385	1J00A12-2	56 D 3388	1J50A12-2	2	2-12	4	9.10	7.60	6.60	6.00	5.30
56 D 3386	1J00A12-3	56 D 3389	1J50A12-3	3	2-12	6	12.10	10.10	8.80	7.90	7.10

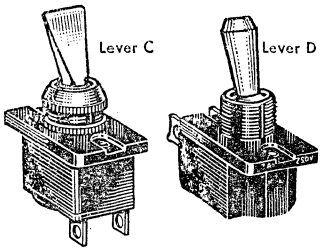
SERIES 2 PER MIL-S-3786/SR14

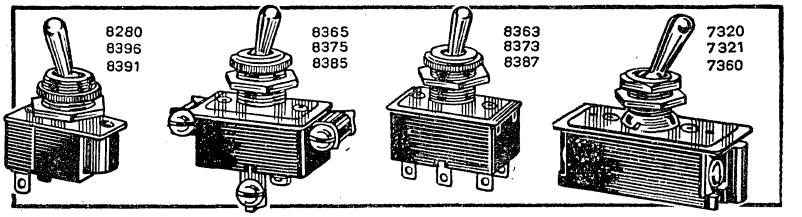
SHORTING TYPES Stock No.	Mfr's Type	Max. Pos.	NON-SHORTING TYPES Stock No.	Mfr's Type	Max. Pos.	Poles/ Deck	No. of Decks	EACH 1-9	10-24	25-49	50-99	100-249
56 D 3324	2E00A24-1	24	56 D 3300	2J50A12-1	12	1	1	12.70	10.80	9.40	8.40	7.50
56 D 3332	2E00A24-2	24	56 D 3308	2J50A12-2	12	1	2	18.70	16.00	13.90	12.40	11.10
56 D 3340	2E00A24-3	24	56 D 3316	2J50A12-3	12	1	3	24.80	21.20	18.40	16.40	14.80
56 D 3325	2E06A11-1	11	56 D 3301	2J56A6-1	6	2	1	13.00	11.10	9.60	8.60	7.70
56 D 3333	2E06A11-2	11	56 D 3309	2J56A6-2	6	2	2	19.00	16.20	14.10	12.60	11.30
56 D 3341	2E06A11-3	11	56 D 3317	2J56A6-3	6	2	3	25.10	21.40	18.60	16.60	14.90
56 D 3327	2E18A5-1	5	56 D 3303	2J68A3-1	3	4	1	13.60	11.60	10.10	9.00	8.10
56 D 3335	2E18A5-2	5	56 D 3311	2J68A3-2	3	4	2	21.50	18.40	15.90	14.20	12.80
56 D 3343	2E18A5-3	5	56 D 3319	2J68A3-3	3	4	3	29.40	25.10	21.80	19.40	17.50
56 D 3328	2C00A32-1	32	56 D 3304	2H50A16-1	16	1	1	12.70	10.80	9.40	8.40	7.50
56 D 3336	2C00A32-2	32	56 D 3312	2H50A16-2	16	1	2	18.70	16.00	14.10	12.60	11.30
56 D 3344	2C00A32-3	32	56 D 3320	2H50A16-3	16	1	3	24.80	21.20	18.40	16.40	14.80
56 D 3390	2C06A15-1	15	56 D 3392	2H56A8-1	8	2	1	13.00	11.10	9.60	8.60	7.70
56 D 3337	2C06A15-2	15	56 D 3313	2H56A8-2	8	2	2	19.00	16.20	14.10	12.60	11.30
56 D 3345	2C06A15-3	15	56 D 3321	2H56A8-3	8	2	3	25.10	21.40	18.60	16.60	14.90
56 D 3331	2C18A7-1	7	56 D 3307	2H68A4-1	4	4	1	13.60	11.60	10.10	9.00	8.10
56 D 3339	2C18A7-2	7	56 D 3315	2H68A4-2	4	4	2	21.50	18.40	15.90	14.20	12.80
56 D 3391	2C18A7-3	7	56 D 3393	2H68A4-3	4	4	3	29.40	25.10	21.80	19.40	17.50

SERIES 4 PER MIL-S-3786/SR15

56 D 3348	4A00A48-1	48	56 D 3360	4E50A24-1	24	1	1	19.50	16.60	14.40	12.90	11.60
56 D 3352	4A00A48-2	48	56 D 3364	4E50A24-2	24	1	2	27.90	23.80	20.70	18.40	16.60
56 D 3356	4A00A48-3	48	56 D 3368	4E50A24-3	24	1	3	36.20	31.00	26.90	23.90	21.60
56 D 3349	4A06A23-1	23	56 D 3361	4E56A12-1	12	2	1	19.80	16.90	14.70	13.10	11.80
56 D 3353	4A06A23-2	23	56 D 3365	4E56A12-2	12	2	2	28.60	24.50	21.20	18.90	17.10
56 D 3394	4A06A23-3	23	56 D 3397	4E56A12-3	12	2	3	37.30	31.90	27.70	24.70	22.20
56 D 3351	4A18A11-1	11	56 D 3363	4E68A6-1	6	4	1	20.40	17.40	15.10	13.50	12.20
56 D 3355	4A18A11-2	11	56 D 3367	4E68A6-2	6	4	2	31.30	26.70	23.20	20.70	18.60
56 D 3395	4A18A11-3	11	56 D 3396	4E68A6-3	6	4	3	42.30	36.10	31.30	27.90	25.20

Cutler-Hammer AC-DC Toggle Switches





AC-DC "DESIGNER LINE" SWITCHES

Precision made to assure long life and reliable operation under heavy usage. Brilliant new design concept adds "class" to any equipment. Two handle styles are available in red, white, yellow, black and green. All switches have high arc-resistant and "tease resistant" quick-make, quick-break contact mechanism enclosed in a sturdy phenolic case. Switches have 15/32" diameter, 11/32" long stem. All switches have solder lug terminals. ▪U.L. Recognized. C.S.A. Listed. Average shpg. wt., 2 oz.

SPST (3 AMPS AT 250 VOLTS, 6 AMPS AT 125 VOLTS)

Stock No.	Mfr's Type	Lever Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5725	8381K21C	White	.79	.73	.61	.55	.48
56 D 5726	8381K21D	White	.79	.73	.61	.55	.48
56 D 5727	8381K22C	Red	.79	.73	.61	.55	.48
56 D 5728	8381K22D	Red	.79	.73	.61	.55	48
56 D 5729	8381K25C	Yellow	.79	.73	.61	.55	.48
56 D 5730	8381K25D	Yellow	.79	.73	.61	.55	.48
56 D 5731	8381K27C	Black	.79	.73	.61	.55	.48
56 D 5732	8381K27D	Black	.79	.73	.61	.55	.48
56 D 5733	8381K24C	Green	.79	.73	.61	.55	.48
56 D 5734	8381K24D	Green	.79	.73	.61	.55	.48

SPDT (1 AMP AT 250 VOLTS, 3 AMPS AT 125 VOLTS)

Stock No.	Mfr's Type	Lever Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5735	8282K21C	White	.87	.80	.67	.60	.53
56 D 5736	8282K21D	White	.87	.80	.67	.60	.53
56 D 5737	8282K22C	Red	.87	.80	.67	.60	.53
56 D 5738	8282K22D	Red	.87	.80	.67	.60	.53
56 D 5739	8282K25C	Yellow	.87	.80	.67	.60	.53
56 D 5740	8282K25D	Yellow	.87	.80	.67	.60	.53
56 D 5741	8282K27C	Black	.87	.80	.67	.60	.53
56 D 5742	8282K27D	Black	.87	.80	.67	.60	.53
56 D 5743	8282K24C	Green	.87	.80	.67	.60	.53
56 D 5744	8282K24D	Green	.87	.80	.67	.60	.53

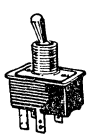
DPST (3 AMPS AT 250 VOLTS, 6 AMPS AT 125 VOLTS)

Stock No.	Mfr's Type	Lever Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5745	8370K21C	White	1.26	1.16	.97	.87	77
56 D 5746	8370K21D	White	1.26	1.16	.97	.87	.77
56 D 5747	8370K22C	Red	1.26	1.16	.97	.87	.77
56 D 5748	8370K22D	Red	1.26	1.16	.97	.87	.77
56 D 5749	8370K25C	Yellow	1.26	1.16	.97	.87	.77
56 D 5750	8370K25D	Yellow	1.26	1.16	.97	.87	.77
56 D 5751	8370K27C	Black	1.26	1.16	.97	.87	.77
56 D 5752	8370K27D	Black	1.26	1.16	.97	.87	.77
56 D 5753	8370K24C	Green	1.26	1.16	.97	.87	.77
56 D 5754	8370K24D	Green	1.26	1.16	.97	.87	.77

DPDT (3 AMPS AT 250 VOLTS, 6 AMPS AT 125 VOLTS)

Stock No.	Mfr's Type	Lever Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5755	8373K21C	White	1.43	1.32	1.10	.99	.88
56 D 5756	8373K21D	White	1.43	1.32	1.10	.99	.88
56 D 5757	8373K22C	Red	1.43	1.32	1.10	.99	.88
56 D 5758	8373K22D	Red	1.43	1.32	1.10	.99	.88
56 D 5759	8373K25C	Yellow	1.43	1.32	1.10	.99	.88
56 D 5760	8373K25D	Yellow	1.43	1.32	1.10	.99	.88
56 D 5761	8373K27C	Black	1.43	1.32	1.10	.99	.88
56 D 5762	8373K27D	Black	1.43	1.32	1.10	.99	.88
56 D 5763	8373K24C	Green	1.43	1.32	1.10	.99	.88
56 D 5764	8373K24D	Green	1.43	1.32	1.10	.99	.88

DRY-CIRCUIT AC-DC SWITCHES



Rugged dry-circuit switches for a variety of industrial uses. They have C-H quick-make, quick-break self-cleaning contacts to assure long and dependable service. Low resistance contacts are *silver or gold. Quick connecting terminals are .110". Switches are rated 5 amps at 125 volts or 3 amps at 250 volts. All switches have 15/32" diameter bushings. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5713	*8376K1	DPST	1.63	1.51	1.26	1.13	1.00
56 D 5714	*8376K2	DPDT	1.87	1.73	1.44	1.30	1.15
56 D 5715	8377K1	DPST	2.20	2.03	1.70	1.53	1.36
56 D 5716	8377K2	DPDT	2.44	2.26	1.88	1.69	1.50

SELECTION OF AC-DC UTILITY AND HEAVY DUTY SWITCHES

High-performance utility heavy-duty switches are ideal for tools, appliances and a variety of other industrial uses. Precision made to assure long life and reliable operation. They have arc resistant and "tease resistant" quick-make, quick-break contact mechanism enclosed in a durable phenolic case. Self-cleaning contacts assure circuit continuity every time switches are thrown. Supplied with all necessary hardware for one hole mounting. ‡SP-2 circuit. 15/32" dia. stem. ▪U.L. Recognized. C.S.A. Listed. Av. shpg. wt., 2 oz.

SPST

Stock No.	Mfr's Type	A @ 125 V	A @ 250 V	Bushing L	Terminal	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4527	8280K14	3	3	1/4"	Solder	.70	.64	.54	.48	.43
56 D 4749	8280K15	3	3	11/32"	Solder	.70	.64	.54	.48	.43
56 D 4500	8280K16	3	3	15/32"	Solder	.70	.64	.54	.48	.43
56 D 4783	8290K15	3	3	11/32"	Wire	.84	.77	.65	.58	.52
56 D 4784	8290K16	3	3	15/32"	Wire	.84	.77	.65	.58	.52
56 D 4785	8295K7	3	3	11/32"	Screw	.84	.77	.65	.58	.52
56 D 4786	8295K8	3	3	15/32"	Screw	.84	.77	.65	.58	.52
56 D 4787	8381K7	6	3	11/32"	Solder	.80	.74	.62	.55	.49
56 D 4508	8381K8	6	3	15/32"	Solder	.80	.74	.62	.55	.49
56 D 4788	8391K7	6	3	11/32"	Wire	.94	.87	.73	.65	.58
56 D 4789	8391K8	6	3	15/32"	Wire	.94	.87	.73	.65	.58
56 D 4790	8396K7	6	3	11/32"	Screw	.94	.87	.73	.65	.58
56 D 4791	8396K8	6	3	15/32"	Screw	.94	.87	.73	.65	.58
56 D 4408	7321K2	16	8	11/32"	Screw	1.50	1.39	1.16	1.04	.92
56 D 4520	7321K3	16	8	15/32"	Screw	1.50	1.39	1.16	1.04	.92
56 D 4714	7361K5	20	10	15/32"	Screw	2.52	2.33	1.94	1.75	1.55
56 D 3805	7403K2	20	20	15/32"	Screw	3.35	3.09	2.58	2.32	2.06

SPDT

Stock No.	Mfr's Type	A @ 125 V	A @ 250 V	Bushing L	Terminal	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4528	8282K12	3	1	1/4"	Solder	.88	.81	.68	.61	.54
56 D 5939	8282K13	3	1	11/32"	Solder	.88	.81	.68	.61	.54
56 D 4501	8282K14	3	1	15/32"	Solder	.88	.81	.68	.61	.54
56 D 5940	‡8284K14	3	1	15/32"	Solder	.92	.85	.71	.64	.57

DPST

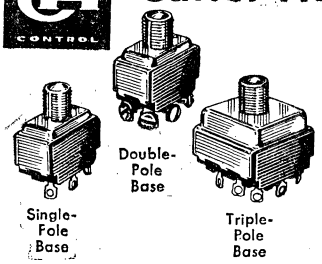
Stock No.	Mfr's Type	A @ 125 V	A @ 250 V	Bushing L	Terminal	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4529	8360K6	3	3	1/4"	Solder	1.25	1.16	.97	.87	.77
56 D 5941	8360K8	3	3	11/32"	Solder	1.25	1.16	.97	.87	.77
56 D 4502	8360K7	3	3	15/32"	Solder	1.25	1.16	.97	.87	.77
56 D 5944	8370K8	6	3	11/32"	Solder	1.35	1.24	1.04	.93	.83
56 D 4792	8370K7	6	3	15/32"	Solder	1.35	1.24	1.04	.93	.83
56 D 4793	8372K7	6	3	15/32"	Screw	1.64	1.52	1.27	1.14	1.01
56 D 5546	7320K2	16	8	11/32"	Screw	1.40	1.29	1.08	.97	.86
56 D 4545	7320K3	16	8	15/32"	Screw	1.40	1.29	1.08	.97	.86
56 D 4718	7360K7	20	10	11/32"	Screw	2.41	2.23	1.86	1.67	1.48
56 D 4516	7360K8	20	10	15/32"	Screw	2.41	2.23	1.86	1.67	1.48
56 D 4719	7402K3	20	20	11/32"	Screw	3.24	2.99	2.50	2.25	2.00
56 D 4517	7402K4	20	20	15/32"	Screw	3.24	2.99	2.50	2.25	2.00

DPDT

Stock No.	Mfr's Type	A @ 125 V	A @ 250 V	Bushing L	Terminal	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4530	8363K6	3	3	1/4"	Solder	1.44	1.33	1.11	1.00	.89
56 D 5942	8363K8	3	3	11/32"	Solder	1.44	1.33	1.11	1.00	.89
56 D 4503	8363K7	3	3	15/32"	Solder	1.44	1.33	1.11	1.00	.89
56 D 5943	8365K7	3	3	15/32"	Screw	1.90	1.75	1.46	1.31	1.17
56 D 4794	8373K8	6	3	11/32"	Solder	1.55	1.43	1.19	1.07	.95
56 D 4632	8373K7	6	3	15/32"	Solder	1.55	1.43	1.19	1.07	.95
56 D 4795	8375K7	6	3	15/32"	Screw	1.99	1.84	1.53	1.38	1.22
56 D 4717	8680K1	5	5	11/32"	Screw	4.17	3.85	3.21	2.89	2.57
56 D 5669	8680K2	5	5	15/32"	Screw	4.17	3.85	3.21	2.89	2.57
56 D 5670	8690K1	15	10	11/32"	Screw	5.05	4.66	3.89	3.50	3.11
56 D 4715	8690K2	15	10	15/32"	Screw	5.05	4.66	3.89	3.50	3.11

▪Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Cutler-Hammer "Designer Line" Switches



AC DESIGNER LINE

Select Switch Type From Tables Below, Then Select Handle, Shape and Color

Color Suffix No. Select One

Suffix	Color
21	White
22	Red
23	Gray
24	Green
25	Yellow
26	Blue
27	Black

ORDERING INFORMATION

7590K73 (BASIC SWITCH) — A (LEVER STYLE) — 21 (COLOR)

For Complete Ordering Number Also Include Stock Number.

EXAMPLE:

Stock No.	Complete Type No.
56 D 7011 AC	7590K73A21

"Designer Line" AC switches utilize nylon toggles in 7 styles and colors for use where "eye-appeal" is a design factor. Switches have 15/32"x 32 threads, 1 1/32" bushing. Types with suffix K53, K73 in tables below have screw terminals. Suffixes K54 and K74 have solder lug terminals. To order, select switch type below, then add suffix made up of lever shape (above, left) and color (above, right). Av. shpg. wt., 2 oz.

SINGLE-POLE SCREW TERMINALS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7011 AC	7590K73	6	3	I	1.11	1.03	.86	.77	.68
56 D 7012 AC	7591K73	6	3	II	1.30	1.20	1.00	.90	.80
56 D 7013 AC	7592K73	6	3	III	1.30	1.20	1.00	.90	.80
56 D 7014 AC	7597K73	15	10	V	1.67	1.54	1.29	1.16	1.03
56 D 7015 AC	7560K73	15	10	I	1.30	1.20	1.00	.90	.80
56 D 7016 AC	7562K73	15	10	II	1.58	1.46	1.22	1.09	.97
56 D 7017 AC	7564K73	15	10	III	1.58	1.46	1.22	1.09	.97

SINGLE-POLE SOLDER LUGS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7018 AC	7590K74	6	3	I	.92	.85	.71	.64	.57
56 D 7019 AC	7591K74	6	3	II	1.02	.94	.79	.69	.63
56 D 7020 AC	7592K74	6	3	III	1.02	.94	.79	.69	.63
56 D 7021 AC	7597K74	6	3	V	1.44	1.33	1.11	1.00	.89
56 D 7000 AC	7561K74	15	10	I	1.11	1.03	.86	.77	.68
56 D 7001 AC	7563K74	15	10	II	1.30	1.20	1.00	.90	.80
56 D 7002 AC	7565K74	15	10	III	1.30	1.20	1.00	.90	.80

DOUBLE-POLE SCREW TERMINALS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7003 AC	7590K53	6	3	I	1.34	1.24	1.03	.93	.82
56 D 7004 AC	7591K53	6	3	II	1.53	1.41	1.18	1.06	.94
56 D 7005 AC	7592K53	6	3	III	1.53	1.41	1.18	1.06	.94
56 D 7006 AC	7569K53	15	10	V	2.26	2.08	1.74	1.56	1.39
56 D 7007 AC	7560K53	15	10	I	1.53	1.41	1.18	1.06	.94
56 D 7008 AC	7562K53	15	10	II	1.81	1.67	1.39	1.25	1.11
56 D 7009 AC	7564K53	15	10	III	1.81	1.67	1.39	1.25	1.11

DOUBLE-POLE SOLDER LUGS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7010 AC	7590K54	6	3	I	1.15	1.06	.89	.80	.71
56 D 7022 AC	7591K54	6	3	II	1.25	1.15	.96	.86	.77
56 D 7023 AC	7592K54	6	3	III	1.25	1.15	.96	.86	.77
56 D 7024 AC	7569K54	6	3	V	1.96	1.81	1.51	1.36	1.21
56 D 7025 AC	7561K54	15	10	I	1.34	1.24	1.03	.93	.82
56 D 7026 AC	7563K54	15	10	II	1.53	1.41	1.17	1.06	.94
56 D 7027 AC	7565K54	15	10	III	1.53	1.41	1.17	1.06	.94

THREE-POLE SCREW TERMINALS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7028 AC	7690K73	15	10	I	3.67	3.39	2.83	2.34	2.26
56 D 7029 AC	7692K73	15	10	II	3.97	3.66	3.05	2.75	2.44
56 D 7030 AC	7694K73	15	10	III	4.03	3.72	3.10	2.79	2.48

FOUR-POLE SCREW TERMINALS

Stock No.	Basic Switch Type	Amperes 125V	Amperes 250V	Code	EACH 1-24	25-49	50-99	100-499	500-999
56 D 7031 AC	7692K53	15	10	II	4.78	4.41	3.68	3.31	2.94
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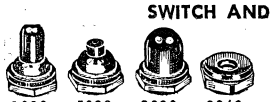
SWITCH AND PANEL SEALS

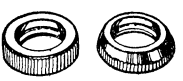


1030 5032 3030 9060

Military types perform three functions: vibration resistant mounting nut; seal mounting hole; seal switch lever to 15 psi. RFI types conform to MIL-B-5423. Commercial types are made of black neoprene, have removable round nuts. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Threads	MIL-B-5432/	Type and Style	EACH 1-99	100-499	500-999	1000-2499
56 D 3569	SWI-AN1030	15/32-32	1	A1	.69	.54	.49	.44
56 D 3570	SWI-BN1030	15/32-32	2	A3	.69	.54	.49	.44
56 D 3571	SWI-LN5030	1/4-40	5	A71	.99	.84	.72	.65
56 D 3572	SWI-BN5032	1/4-40	11	A8	.99	.84	.72	.65
56 D 3573	SWI-AN3030	15/32-32-5/16	7	B21	.59	.47	.43	.40
56 D 3574	SWI-NC3030	15/32-32-7/16	7	B22	.59	.47	.43	.40
56 D 3575	SWI-AN9060-14	15/32-32	9	C6	1.15	.92	.81	.71
56 D 3576	SWI-AN9030-14	3/8-32	9	C2	.55	.43	.39	.36
56 D 3577	SWI-AN9040-18	1/4-32	9	C4	.59	.47	.43	.40
56 D 3578	SWI-RN1030-2	15/32-32	RFI		2.49	2.24	1.94	1.69
56 D 3579	SWI-RC3030-1	15/32-32	RFI		1.69	1.51	1.31	1.14
56 D 3580	SWI-RN9030-14	3/8-32	RFI		1.29	1.15	1.00	.87
56 D 3581	SWI-AN1111-4	15/32-32	Commercial		.46	.26	.26	.22
56 D 3582	SWI-AN1211-5	3/8-32	Commercial		.46	.26	.26	.22
56 D 3583	SWI-AN1312-7	3/8-32	Commercial		.46	.26	.26	.22

"DESIGNER LINE" FACENUTS



1048 1049

Designed to further enhance equipment appearance. Made of anodized aluminum, have knurled edge (1048) or beveled (1049), fit switches above. 15/32"-32 threads. 1 oz.

Stock No.	Mfr's Type	Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3584	15-1048-3	Black	.13	.12	.10	.09	.08
56 D 3585	15-1048-7	Clear Aluminum	.13	.12	.10	.09	.08
56 D 3586	15-1048-12	Bronze	.13	.12	.10	.09	.08
56 D 3587	15-1048-22	Avocado	.13	.12	.10	.09	.08
56 D 3588	15-1049-3	Black	.13	.12	.10	.09	.08
56 D 3589	15-1049-7	Clear Aluminum	.13	.12	.10	.09	.08
56 D 3590	15-1049-12	Bronze	.13	.12	.10	.09	.08
56 D 3591	15-1049-22	Avocado	.13	.12	.10	.09	.08

FULL-RANGE SPEED CONTROL

For stepless control of fractional hp motors. Rated 4 amps at 125 VAC. Lead #1 is connected to line, lead #2 is connected to load and 250K variable resistor, lead #3 to same variable resistor. Shpg. wt., 6 oz.

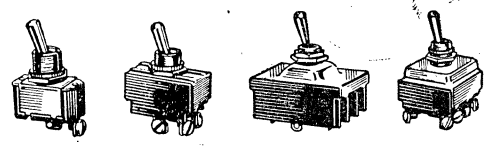
Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
56 D 3592	8349K2	5.19	4.79	3.99	3.59	3.19

All Items on This Page are U.L. Component Program Recognized

Cutler-Hammer AC Switches

COMMERCIAL ONE-HOLE-MOUNTING SWITCHES

For use in appliances, heater units, radios, many other commercial applications. Feature a special slow make and slow break type rocker mechanism. Reduced arcing in AC circuits eliminates the need for complicated DC mechanisms, thereby reducing costs. †in table below indicates sealed lever; §On-On-On circuit; *reversing circuit. See lever-travel chart at bottom of right-hand column for explanation of code numbers. Av. shpg. wt., 2 oz.



SINGLE-POLE SINGLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5605	7580K5	6	3	I	11/32	Screw	.73	.68	.57	.51	.45
56 D 4640	7580K4	6	3	I	15/32	Screw	.73	.68	.57	.51	.45
56 D 5604	7580K7	6	3	I	11/32	Solder	.63	.58	.49	.44	.39
56 D 4641	7580K6	6	3	I	15/32	Solder	.63	.58	.49	.44	.39
56 D 4556	7580K8	6	3	I	15/32	Spade	.63	.58	.49	.44	.39
56 D 5617	7506K4	....	10	VI	15/32	Screw	1.10	1.01	.85	.76	.68
56 D 5616	7506K3	....	10	VI	15/32	Solder	.99	.92	.77	.69	.61
56 D 5932	7500K13	15	10	I	11/32	Screw	.84	.77	.65	.58	.52
56 D 4591	7500K14	15	10	I	15/32	Screw	.84	.77	.65	.58	.52
56 D 5933	7501K12	15	10	I	11/32	Solder	.73	.68	.57	.51	.45
56 D 4534	7501K13	15	10	I	15/32	Solder	.73	.68	.57	.51	.45
56 D 3469	7501K15	15	10	I	15/32	Spade	.73	.68	.57	.51	.45
56 D 3462	7500K20	15	10	†I	15/32	Spade	1.00	.92	.77	.69	.62

SINGLE-THROW DOUBLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4642	7581K4	6	3	II	15/32	Screw	.84	.77	.65	.58	.52
56 D 5602	7581K7	6	3	II	11/32	Solder	.68	.63	.53	.47	.42
56 D 4643	7581K6	6	3	II	15/32	Solder	.68	.63	.53	.47	.42
56 D 4644	7582K4	6	3	III	15/32	Screw	.84	.77	.65	.58	.52
56 D 4645	7582K6	6	3	III	15/32	Solder	.68	.63	.53	.47	.42
56 D 3463	7509K5	....	10	V	15/32	Screw	1.28	1.18	.99	.89	.79
56 D 5945	7502K12	15	10	II	11/32	Screw	.99	.91	.76	.68	.61
56 D 4592	7502K13	15	10	II	15/32	Screw	.99	.91	.76	.68	.61
56 D 5948	7503K12	15	10	II	11/32	Solder	.84	.77	.65	.58	.52
56 D 4796	7503K13	15	10	II	15/32	Solder	.84	.77	.65	.58	.52
56 D 4575	7503K14	15	10	II	11/32	Spade	.84	.77	.65	.58	.52
56 D 5949	7504K3	15	10	III	11/32	Screw	.99	.91	.76	.68	.61
56 D 4593	7504K4	15	10	III	15/32	Screw	.99	.91	.76	.68	.61
56 D 5950	7505K3	15	10	III	11/32	Solder	.84	.77	.65	.58	.52
56 D 4536	7505K4	15	10	III	15/32	Solder	.84	.77	.65	.58	.52
56 D 3464	7505K6	15	10	III	15/32	Spade	.84	.77	.65	.58	.52
56 D 3465	7552K1	15	10	§	15/32	Screw	1.84	1.10	1.42	1.27	1.13

DOUBLE-POLE SINGLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4646	7590K4	6	3	I	15/32	Screw	1.04	.96	.80	.72	.64
56 D 5607	7590K7	6	3	I	11/32	Solder	.91	.84	.70	.63	.56
56 D 4647	7590K6	6	3	I	15/32	Solder	.91	.84	.70	.63	.56
56 D 4565	7590K9	6	3	I	11/32	Spade	.91	.84	.70	.63	.56
56 D 5951	7560K6	15	10	I	11/32	Screw	1.33	1.22	1.02	.42	.82
56 D 5934	7561K5	15	10	I	11/32	Solder	1.12	1.03	.86	.77	.69
56 D 4594	7560K5	15	10	I	15/32	Screw	1.33	1.22	1.02	.92	.82
56 D 4537	7561K4	15	10	I	15/32	Solder	1.12	1.03	.86	.77	.69
56 D 4579	7561K6	15	10	I	15/32	Spade	1.12	1.03	.86	.77	.69
56 D 3466	7569K1	....	10	IV	15/32	Solder	1.81	1.67	1.39	1.25	1.11

DOUBLE-POLE DOUBLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4648	7591K4	6	3	II	15/32	Screw	1.33	1.22	1.02	.92	.82
56 D 5609	7591K7	6	3	II	11/32	Solder	1.02	.94	.79	.71	.63
56 D 4649	7591K6	6	3	II	15/32	Solder	1.02	.94	.79	.71	.63
56 D 4689	7592K4	6	3	III	15/32	Screw	1.33	1.22	1.02	.92	.82
56 D 5611	7592K7	6	3	III	11/32	Solder	1.02	.94	.79	.71	.63
56 D 4690	7592K6	6	3	III	15/32	Solder	1.02	.94	.79	.71	.63
56 D 4570	7592K8	6	3	III	15/32	Spade	1.02	.94	.79	.71	.63
56 D 5952	7562K5	15	10	II	11/32	Screw	1.63	1.51	1.26	1.13	1.00
56 D 4596	7562K4	15	10	II	15/32	Screw	1.63	1.51	1.26	1.13	1.00
56 D 3467	7562K23	15	10	*II	15/32	Screw	1.75	1.61	1.35	1.21	1.08
56 D 5953	7563K5	15	10	II	11/32	Spade	1.33	1.22	1.02	.92	.82
56 D 4539	7563K4	15	10	II	15/32	Solder	1.33	1.22	1.02	.92	.82
56 D 3446	7563K6	15	10	II	15/32	Spade	1.33	1.22	1.02	.92	.82
56 D 5954	7564K7	15	10	III	11/32	Screw	1.63	1.51	1.26	1.13	1.00
56 D 4595	7564K6	15	10	III	15/32	Screw	1.63	1.51	1.26	1.13	1.00
56 D 3468	7564K23	15	10	*III	15/32	Screw	1.75	1.61	1.35	1.21	1.08
56 D 5955	7565K6	15	10	III	11/32	Solder	1.33	1.22	1.02	.92	.82
56 D 4538	7565K5	15	10	III	15/32	Solder	1.33	1.22	1.02	.92	.82
56 D 3447	7565K7	15	10	III	15/32	Spade	1.33	1.22	1.02	.92	.82

THREE-POLE SINGLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5956	7600K3	15	10	I	Flush	Screw	2.54	2.35	1.96	1.76	1.56
56 D 4597	7610K2	15	10	I	15/32	Screw	2.54	2.35	1.96	1.76	1.56
56 D 4543	7611K2	15	10	I	15/32	Solder	2.18	2.01	1.68	1.51	1.34
56 D 4588	7611K4	15	10	I	15/32	Spade	2.18	2.01	1.68	1.51	1.34
56 D 5958	8320K1	....	20	I	15/32	Screw	4.64	4.28	3.57	3.21	2.86

THREE-POLE DOUBLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5957	7602K2	15	10	II	Flush	Screw	3.22	2.97	2.48	2.23	1.98
56 D 4598	7612K2	15	10	II	15/32	Screw	3.22	2.97	2.48	2.23	1.98
56 D 4523	7613K2	15	10	II	15/32	Solder	2.68	2.48	2.07	1.86	1.65
56 D 3448	7613K4	15	10	II	15/32	Spade	2.68	2.48	2.07	1.86	1.65
56 D 4799	7614K2	15	10	III	15/32	Screw	3.22	2.97	2.48	2.23	1.98
56 D 4798	7615K2	15	10	III	15/32	Solder	2.68	2.48	2.07	1.86	1.65
56 D 4797	7615K4	15	10	III	15/32	Spade	2.68	2.48	2.07	1.86	1.65

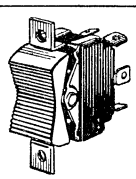
FOUR-POLE SINGLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3449	7690K8	15	10	I	15/32	Screw	3.65	3.37	2.81	2.53	2.25
56 D 3450	7691K14	15	10	I	15/32	Spade	3.29	3.04	2.53	2.28	2.02

FOUR-POLE SINGLE-THROW

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	Code	Bush. Lgth. (In.)	Terms	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3451	7692K13	15	10	II	15/32	Screw	4.54	4.19	3.50	3.15	2.80
56 D 3452	7693K2	15	10	II	15/32	Spade	4.01	3.70	3.09	2.78	2.47
56 D 3453	7694K4	15	10	III	15/32	Screw	4.54	4.19	3.50	3.15	2.80
56 D 3454	7695K5	15	10	III	15/32	Spade	4.01	3.70	3.09	2.78	2.47

"ROCKETTE" AC SWITCHES



For use where modern design and dependable operation are important. Feature white nylon rocker (other colors available on special request). .250" spade terminals, except *screw terminals. Rated at 15 amps, 125 VAC; 10 amps, 250 VAC. See lever-travel chart at right for explanation of code Column in Table. Av. shpg. wt., 2 oz.

SINGLE-POLE

Stock No.	Mfr's Type	Code	Style Frame	Style Rocker	No. of Rockers	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5339	8144K21A1M50*	I	A	1	1	.78	.75	.63	.56	.50
56 D 5699	8144K21A1M52	I	A	1	1	.74	.68	.57	.51	.45
56 D 5704	8144K20A1M52	II	A	1	1	.83	.76	.64	.57	.51
56 D 3470	8144K22A1M52	III	A	1	1	.83	.76	.64	.57	.51
56 D 3471	8146K20A1M52	V	A	1	1	.98	.83	.75	.68	.60

DOUBLE-POLE

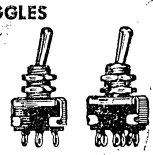
Stock No.	Mfr's Type	Code	Style Frame	Style Rocker	No. of Rockers	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5540	8142K21E6M50*	I	E	6	1	1.29	1.19	.99	.89	.79
56 D 5718	8142K21E6M52	I	E	6	1	1.13	1.04	.87	.78	.70
56 D 5712	8142K20E6M52	II	E	6	1	1.38	1.27	1.06	.95	.85
56 D 3457	8142K22E6M52	III	E	6	1	1.38	1.27	1.06	.95	.85
56 D 3458	8148K20E6M52	V	E	6	1	1.61	1.48	1.24	1.11	.99

FOUR-POLE

Stock No.	Mfr's Type	Code	Style Frame	Style Rocker	No. of Rockers	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3459	8140K21H14M52	I	H	14	2	2.11	1.95	1.63	1.46	1.30
56 D 3460	8141K21H16M52	I	H	16	3	2.27	2.09	1.75	1.57	1.40
56 D 3461	8140K20H14M52	II	H	14	2	2.47	2.28	1.90	1.71	1.52
56 D 3558	8141K20H16M52	II	H	16	3	2.61	2.41	2.01	1.80	1.61

MINIATURE COMMERCIAL TOGGLES

Commercial toggle switches for a variety of uses where compact size is an important design factor. Features massive current carrying parts to provide up to 50% longer life. Rated 5A at 125 VAC and 28 VDC. Overall size: SPST and SPDT types, $1\frac{3}{16}$x$1\frac{1}{4}$x$\frac{1}{2}$". DPST and DPDT types, $1\frac{3}{16}$x$1\frac{5}{32}$x$\frac{1}{2}$". Stem length, $\frac{1}{4}$". *in table below indicates center off. Av. wt., 2 oz.



7050 7060

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5767	7055K20	SPST	3.46	3.19	2.66	2.40	2.13
56 D 5768	7050K20	SPDT*	3.68	3.40	2.83	2.54	2.26
56 D 5769	7053K20	SPDT	3.68	3.40	2.83	2.54	2.26
56 D 5770	7065K20	DPST	4.28	3.94	3.29	2.96	2.63
56 D 5771	7060K20	DPDT*	4.70	4.35	3.62	3.26	2.90
56 D 5772	7063K20	DPDT	4.70	4.35	3.62	3.26	2.90

LEVER-TRAVEL CHART

Explanation of Roman Numeral code numbers appearing in tables on this page. Keyway in down position. *Momentary contact.

Code No.	Lever Travel Up	Lever Travel Center	Lever Travel Down	Code No.	Lever Travel Up	Lever Travel Center	Lever Travel Down
I	On	None	Off	IV	On*	Off	On*
II	On	Off	On	V	On	Off	On*
III	On	None	On	VI	On*	Off	On*

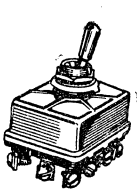
All Switches on this Page are U.L. Component Program Recognized

Cutler-Hammer Military Switches

MIL-S-8834-B POSITIVE ACTION SWITCHES

8836

8837


8838

Positive action environment sealed switches feature "tease proof" action with toggle lined directly to the movable contact member to insure positive make and break. Contact wiping action keeps contacts clean and smooth, insures satisfactory operation with high current capability. Rated at 25A @ 28 VDC and 20A @ 115 VAC resistive load. Code explanation on facing page. Av. wt., 4 oz.

SINGLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 3815	8836K1	25306-212	II	7.74	7.14	5.95	4.76
56 D 3750	8836K9	25306-222	I	7.41	6.84	5.70	4.56
56 D 5627	8836K4	25306-232	III	7.74	7.14	5.95	4.76
56 D 3816	8836K6	25306-242	IV	7.74	7.14	5.95	4.76
56 D 3751	8836K2	25306-272	V	8.29	7.65	6.38	5.10
56 D 4590	8836K11	25306-302	IX	8.29	7.65	6.38	5.10

DOUBLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5635	8837K1	25307-212	II	11.70	10.80	9.00	7.20
56 D 5634	8837K9	25307-222	I	10.89	10.05	8.38	6.70
56 D 5636	8837K4	25307-232	III	11.70	10.80	9.00	7.20
56 D 5633	8837K6	25307-242	IV	11.28	10.41	8.68	6.94
56 D 3752	8837K5	25307-262	VIII	12.68	11.70	9.75	7.80
56 D 3753	8837K2	25307-272	V	12.68	11.70	9.75	7.80
56 D 3754	8837K3	25307-312	VI	12.68	11.70	9.75	7.80
56 D 3755	8844K6	24613-E232	XIV	17.23	15.90	13.25	10.60

FOUR POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5649	8838K1	25308-212	II	25.25	23.31	19.43	15.54
56 D 3756	8838K9	25308-222	I	23.63	21.81	18.18	14.54
56 D 5650	8838K4	25308-232	III	25.25	23.31	19.43	15.54
56 D 5651	8838K5	25308-262	VIII	26.65	24.60	20.50	16.40
56 D 3759	8845K6	24614-E232	XIV	33.80	31.20	26.00	20.80

MIL-S-8834-B MINIATURE LARGE LEVER AND BUSHING

8868

8869

Positive action switches featuring miniature base with standard $15/32$-32 threaded bushings and large lever. Silicone rubber lever protects switch against environmental conditions. Toggle is linked directly to the movable contact for positive make and break. Gold-plated contacts open and close with a wiping action for good contact on dry circuits. Rated 3 amps at 117 VAC; 4 amps at 28 VDC resistive. Minimum rating, 25 μA at 5 mV or less. Code explanation on facing page. Av. shpg. wt., 2 oz.

SINGLE POLE

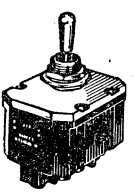
Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5683	8868K1	90310-211	II	5.14	4.74	3.95	3.16
56 D 5689	8868K7	90310-221	I	5.14	4.74	3.95	3.16
56 D 5686	8868K4	90310-231	III	5.14	4.74	3.95	3.16
56 D 5687	8868K5	90310-241	IV	5.79	5.34	4.45	3.56
56 D 3781	8868K2	90310-271	V	5.79	5.34	4.45	3.56
56 D 5688	8868K6	90310-281	XII	5.79	5.34	4.45	3.56
56 D 5685	8868K3	90310-311	VI	5.79	5.34	4.45	3.56
56 D 5690	8868K8	90310-321	XI	6.11	5.64	4.70	3.76

DOUBLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5691	8869K1	90311-211	II	6.40	5.91	4.93	3.94
56 D 5697	8869K7	90311-221	I	6.40	5.91	4.93	3.94
56 D 5694	8869K4	90311-231	III	6.40	5.91	4.93	3.94
56 D 5695	8869K5	90311-241	IV	7.45	6.88	5.73	4.58
56 D 5692	8869K2	90311-271	V	7.45	6.88	5.73	4.58
56 D 3782	8869K6	90311-281	XII	7.45	6.88	5.73	4.58
56 D 5693	8869K3	90311-311	VI	7.45	6.88	5.73	4.58
56 D 5698	8869K8	90311-321	XI	7.77	7.17	5.98	4.78

MIL-S-3950-C LEVER LOCK SWITCHES

8500


8502

8504

Environmentally Sealed With All Mounting Hardware

Environmentally sealed switches meet or exceed MIL-S-3950-C. Features a patented sealing process for protection against environmental conditions. Offers greater safety, positive detent feel, improved dielectric capability, simplified wiring. Rated at 20A @ 28 VDC; 15A @ 117 VAC resistive load. Code explanation on facing page. Av. shpg. wt., 6 oz.

SINGLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-4	5-19	20-49	50-249
56 D 3760	8500K1	24523-21	II	4.40	3.61	3.21	2.95
56 D 3761	8500K9	24523-22	I	4.40	3.61	3.21	2.95
56 D 3762	8500K4	24523-23	III	4.40	3.61	3.21	2.95
56 D 3763	8500K7	24523-28	XI	5.10	4.18	3.72	3.42
56 D 3764	8500K2	24523-27	V	4.40	3.61	3.21	2.95
56 D 3765	8500K11	24523-30	IX	4.40	3.61	3.21	2.95

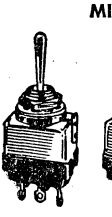
DOUBLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-4	5-19	20-49	50-249
56 D 3766	8501K1	24524-21	II	7.20	5.90	5.26	4.82
56 D 3767	8501K9	24524-22	I	7.20	5.90	5.26	4.82
56 D 3768	8501K4	24524-23	III	7.20	5.90	5.26	4.82
56 D 3769	8501K11	24524-30	IX	7.20	5.90	5.26	4.82
56 D 3770	8501K5	24524-26	VIII	7.20	5.90	5.26	4.82
56 D 3771	8501K2	24524-27	V	7.20	5.90	5.26	4.82
56 D 3772	8501K3	24524-31	VI	7.20	5.90	5.26	4.82
56 D 3773	8504K6	24659-23D	XIV	11.20	9.18	8.18	7.50

FOUR POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-4	5-19	20-49	50-249
56 D 3774	8502K1	24525-21	II	11.45	9.39	8.36	7.67
56 D 3775	8502K9	24525-22	I	11.45	9.39	8.36	7.67
56 D 3776	8502K4	24525-23	III	11.45	9.39	8.36	7.67
56 D 3777	8502K5	24525-26	VIII	11.45	9.39	8.36	7.67
56 D 3778	8502K2	24525-27	V	11.45	9.39	8.36	7.67
56 D 3779	8502K3	24525-31	VI	11.45	9.39	8.36	7.67
56 D 3780	8505K6	24660-23D	XIV	11.45	9.39	8.36	7.67

MIL-S-8834-B MINIATURE SMALL LEVER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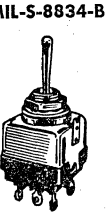

8867

Miniature base switches have $1/4$-40 threaded bushing and .440" long toggle lever. Single-pole base, .749x.562x.354"; double-pole base, .706x.562x.546". Direct-linked toggle for positive operation. Gold-plated contacts with wiping action. Positive detent action provides excellent operator feel. Switches come with "O" ring panel seal furnished. Rated 3 amps at 117 VAC; 4 amps at 28 VDC resistive. Minimum rating, 25 μA at 5 mV or less. See Lever Travel Chart on facing page for codes. 6 oz.

SINGLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5528	8866K1	24655-211	II	5.04	4.65	3.88	3.10
56 D 5532	8866K7	24655-221	I	5.04	4.65	3.88	3.10
56 D 5529	8866K4	24655-231	III	5.04	4.65	3.88	3.10
56 D 5530	8866K5	24655-241	IV	5.69	5.25	4.38	3.50
56 D 5624	8866K2	24655-271	V	5.69	5.25	4.38	3.50
56 D 5531	8866K6	24655-281	XII	5.69	5.25	4.38	3.50
56 D 5625	8866K3	24655-311	VI	5.69	5.25	4.38	3.50
56 D 5623	8866K8	None	XI	6.01	5.55	4.63	3.70

DOUBLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 5533	8867K1	24656-211	II	6.31	5.82	4.85	3.88
56 D 5537	8867K7	24656-221	I	6.31	5.82	4.85	3.88
56 D 5534	8867K4	24656-231	III	6.31	5.82	4.85	3.88
56 D 5535	8867K5	24656-241	IV	7.35	6.78	5.65	4.52
56 D 5621	8867K2	24656-271	V	7.35	6.78	5.65	4.52
56 D 5536	8867K6	24656-281	XII	7.35	6.78	5.65	4.52
56 D 5622	8867K3	24656-311	VI	7.35	6.78	5.65	4.52
56 D 5620	8867K8	None	XI	7.67	7.08	5.90	4.72

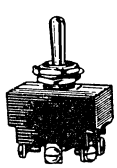
All Switches on These Two Pages U.L. Component Program-Recognized

Cutler-Hammer Military Switches

MIL-S-3950-C SEALED-LEVER TOGGLE SWITCH

One-hole mounting switches with rocker-type contact mechanism. Sealed levers protect against sand, dust, water. Screw terminals are hot-tin dipped to facilitate soldering. *Locking levers. Code explanation below. Av. shpg. wt., 2 oz.

8800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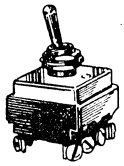
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SINGLE POLE

Stock No.	Mfr's Type	Gov't MS No.	Code	EACH 1-24	25-49	50-99	100-249
56 D 3817	8800K16	35058-21	II	1.85	1.71	1.43	1.14
56 D 3818	8801K22	35058-22	I	1.56	1.44	1.20	.96
56 D 3820	8810K15	35058-23	III	1.85	1.71	1.43	1.11
56 D 5972	8801K23	35058-24	IV	1.56	1.44	1.20	.96
56 D 3821	8812K14	35058-27	V	2.02	1.86	1.55	1.24
56 D 5976	8811K17	35058-30	IX	1.69	1.56	1.30	1.04
56 D 5629	8857K39*	25125-A1	XIII	4.39	4.05	3.38	2.70
56 D 3472	8857K44*	25125-E3	XIV	4.39	4.05	3.38	2.70

DOUBLE POLE

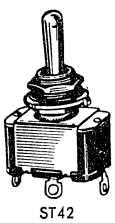
56 D 3823	8820K16	B5059-21	II	2.37	2.19	1.83	1.46
56 D 3824	8822K20	B5059-22	I	2.02	1.86	1.55	1.24
56 D 3825	8824K14	B5059-23	III	2.37	2.19	1.83	1.46
56 D 5977	8822K21	B5059-24	IV	2.08	1.92	1.60	1.28
56 D 4509	8830K13	B5059-26	VIII	2.93	2.70	2.25	1.80
56 D 3827	8834K5	B5059-27	V	2.80	2.58	2.15	1.72
56 D 4506	8828K13	B5059-29	X	2.73	2.52	2.10	1.68
56 D 3826	8832K6	B5059-31	VI	2.80	2.58	2.15	1.72
56 D 5638	8858K39*	25126-A1	XIII	5.04	4.65	3.88	3.10
56 D 5641	8858K44*	25126-E3	XIV	5.04	4.65	3.88	3.10

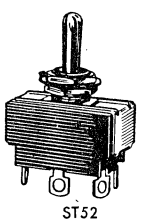
FOUR POLE

56 D 5980	7662K7	25068-21	II	5.42	5.00	4.17	3.34
56 D 5981	7664K5	25068-23	III	5.42	5.00	4.17	3.34
56 D 5982	7660K13	25068-24	IV	4.36	4.02	3.35	2.68
56 D 5648	7674K5	25068-26	VIII	6.83	6.30	5.25	4.20
56 D 5647	7672K5	25068-27	V	6.83	6.30	5.25	4.20
56 D 3473	8859K44	25127-E3	XIV	8.19	7.56	6.30	5.04

JAN-S-23 SWITCHES

This is an original switch specification. Latest specification is MIL-S-3950C which should be used when possible, as shown in Cross Ref. to MS-3950C column. Switches have solder lug terminals, $15/32$" bushing length. Rated 10 amps at 117 VAC; 20 amps at 28 VDC. *Lever seal. Av. wt., 2 oz.


ST42


ST52

Stock No.	Mfr's Type	Former JAN Type Desigation	Code	Cross Ref. to MS 3950C	EACH 1-24	25-49	50-99	100-249
56 D 4551	8803K6	ST42A	I	35058-22	1.40	1.29	1.08	.86
56 D 4415	8803K10*	ST42A	I	35058-22	1.46	1.35	1.13	.90
56 D 4696	8819K5	ST42B	X	35058-29	1.43	1.32	1.10	.88
56 D 5960	8817K5	ST42C	IX	35058-30	1.46	1.35	1.13	.90
56 D 4552	8816K5	ST42D	III	35058-23	1.43	1.32	1.10	.88
56 D 4416	8816K9*	ST42D	III	35058-23	1.72	1.59	1.33	1.06
56 D 4553	8802K6	ST42E	II	35058-21	1.43	1.32	1.10	.88
56 D 5963	8805K9*	ST42F	VIII	35058-26	1.89	1.74	1.45	1.16
56 D 4695	8818K5	ST42G	V	35058-27	1.56	1.44	1.20	.96
56 D 5965	8818K9*	ST42G	V	35058-27	1.85	1.71	1.43	1.14
56 D 4693	8815K6	ST42H	VI	35058-31	1.56	1.44	1.20	.96

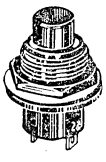
DOUBLE POLE

56 D 4554	8823K5	ST52K	I	35059-22	1.63	1.50	1.25	1.00
56 D 4418	8823K6*	ST52K	I	35059-22	1.89	1.74	1.45	1.16
56 D 4555	8825K5	ST52N	III	35059-23	1.79	1.65	1.38	1.10
56 D 4419	8825K6*	ST52N	III	35059-23	2.15	1.98	1.65	1.32
56 D 5069	8821K5	ST52P	II	35059-21	1.79	1.65	1.38	1.10
56 D 4417	8821K6*	ST52P	II	35059-21	2.15	1.98	1.65	1.32
56 D 4699	8831K5	ST52R	VIII	35059-26	2.24	2.07	1.73	1.38
56 D 4713	8835K3	ST52S	V	35059-27	2.24	2.07	1.73	1.38
56 D 5970	8835K4*	ST52S	V	35059-27	2.63	2.43	2.03	1.62
56 D 4712	8833K3	ST52T	VI	35059-31	2.24	2.07	1.73	1.38

MIL-S-8805/3B PUSHBUTTON SWITCHES

suffix C

suffix A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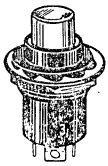
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Snap-Action Type Switches

Momentary pushbutton snap-action switches have wiping contacts with .012" overtravel. Mechanical life, 250,000 operations. Rated at 10 amps at 125 VAC; 10 amps at 28 VDC resistive. Temperature range, −55°C to +85°C. 4 lbs. operating force. Dust-tight case. "B" at end of mfr's type no. indicates black button; "R" indicates red button. See table below for explanation of circuit configuration codes. Average shpg. wt., 3 oz.

Stock No.	Mfr's Type No.	MS-25089-	Code	EACH 1-24	25-49	50-99	100-249
56 D 3783	SA401CB2	1C	SPNO	4.88	4.34	3.80	3.42
56 D 3784	SA401CR2	1CR	SPNO	4.88	4.34	3.80	3.42
56 D 3785	SA403CB2	3C	2 CKT	4.91	4.36	3.82	3.43
56 D 3786	SA403CR2	3CR	2 CKT	4.91	4.36	3.82	3.43
56 D 3787	SA403FB2	3F	2 CKT	4.91	4.36	3.82	3.43
56 D 3788	SA403FR2	3FR	2 CKT	4.91	4.36	3.82	3.43
56 D 3789	SA403GB2	3G	2 CKT	4.91	4.36	3.82	3.43
56 D 3790	SA403GR2	3GR	2 CKT	4.91	4.36	3.82	3.43
56 D 3791	SA404AB2	4A	SPNO3	4.91	4.36	3.82	3.43
56 D 3792	SA404CB2	4C	SPNO3	4.91	4.36	3.82	3.43
56 D 3793	SA404CR2	4CR	SPNO3	4.91	4.36	3.82	3.43
56 D 3794	SA404FB2	4F	SPNO3	4.91	4.36	3.82	3.43
56 D 3795	SA404FR2	4FR	SPNO3	4.91	4.36	3.82	3.43
56 D 3796	SA404GB2	4G	SPNO3	4.91	4.36	3.82	3.43
56 D 3797	SA404GR2	4GR	SPNO3	4.91	4.36	3.87	3.43
56 D 3798	SA405CB2	5C	SPNC3	4.91	4.36	3.82	3.43
56 D 3799	SA405GB2	5G	SPNC3	4.91	4.36	3.82	3.43
56 D 3800	SA405GR2	5GR	SPNC3	4.91	4.36	3.82	3.43

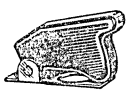
CODE

2 CKT Indicates

SPNO3 Indicates

AIRCRAFT SWITCH GUARDS

Type 8492K1 for one hole mounting switches utilizes a locking pin through the two holes off center in the guard to lock single-throw switches in position; double-throw switches can be moved from the first position to center, but not to the extreme position. Type 8497K1 for single-throw switches allows operation only when the guard is up. In the down position the lever is forced to the off position. Av. shpg. wt., 2 oz.


8497

8492

Stock No.	Mfr's Type No.	Gov't MS No.	EACH 1-24	25-49	50-99	100-249
56 D 3803	8492K1	MS 24417-1	1.07	.99	.83	.66
56 D 3804	8497K1	MS 25224-1	1.79	1.65	1.38	1.10

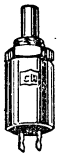
LEVER TRAVEL CHART

Explanation of Roman Numeral code numbers used in tables on these pages, to determine lever travel. *Indicates momentary contact. Arrow (→) indicates direction in which lever is locked.

Code No.	Lever Travel: Up Position	Center Position	Down (Keyway) Position
I	On	None	Off
II	On	Off	On
III	On	None	On
IV	On	Off	None
V	On*	Off	On*
VI	On	Off	On*
VII	On*	Off	On
VIII	On	None	On*
IX	Off	Nont	On*
X	On	None	Off*
XI	None	On	On*
XII	None	Off	On*
XIII	On→	←Off→	←On
XIV	On→	None	←On

Cutler-Hammer and George Risk Industries Switches

CUTLER-HAMMER SWITCHES



ULTRAMINIATURE PUSHBUTTON SWITCHES

Rated ½-amp N.O.; ¼-amp N.C. at 125 VAC resistive. Actuating force, 8 oz. Life expectancy, 50,000 operations. Gold-plated solder terminals and contacts with wiping action. 11/64″ mounting hole. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Ckt.	Button Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3560	SAIRV20	N.O.	Red	.94	.87	.73	.65	.58
56 D 3561	SAIBV20	N.O.	Black	.94	.87	.73	.65	.58
56 D 3562	SAIRW20	N.C.	Red	.94	.87	.73	.65	.58
56 D 3563	SAIRW20	N.C.	Black	.94	.87	.73	.65	.58

ACCESSORY BUTTON CAPS

56 D 3564	SW53AA1	.....	Red	.13	.12	.10	.09	.08
56 D 3565	SW53AA2	.....	Black	.13	.12	.10	.09	.08
56 D 3566	SW53AA3	.....	Blue	.13	.12	.10	.09	.08
56 D 3567	SW53AA5	.....	Green	.13	.12	.10	.09	.08
56 D 3568	SW53AA9	.....	White	.13	.12	.10	.09	.08
56 D 3593	SW53AA10	.....	Yellow	.13	.12	.10	.09	.08

PUSHBUTTON SWITCHES

7196

8442

8440

8448

Momentary contact, except ##push-push. SPST; §DPDT, #SPDT, **DPST. Norm. open; †norm. closed, ‡N.O.-N.C. Screw terminals; *solder lugs. Av. wt., 2 oz.

AC-DC PUSHBUTTON

Stock No.	Mfr's Type	Rated Amps @ 125 V	Rated Amps @ 250 V	Bush. Lgth.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5988	8411K7†	¾	½	15/32″	.40	.37	.31	.27	.24
56 D 4547	8411K8†*	¾	½	15/32″	.34	.32	.27	.24	.21
56 D 5987	8411K12	¾	½	15/32″	.53	.49	.41	.37	.33
56 D 4548	8411K11*	¾	½	15/32″	.47	.44	.37	.33	.29
56 D 4631	8411K13*	¾	½	¼″	.47	.44	.37	.33	.29
56 D 4691	7196K1	6	3	½″	1.55	1.43	1.20	1.08	.96
56 D 4515	7190K1*	6	3	½″	1.40	1.30	1.08	.97	.86
56 D 4519	7208K4##	6	3	11/16″	1.20	1.10	.92	.83	.74
56 D 4518	7199K2‡§*	6	3	½″	2.52	2.33	1.94	1.75	1.55

AC PUSHBUTTON

56 D 4541	8440K3	3	.....	15/32″	1.11	1.03	.86	.77	.68
56 D 4549	8440K2*	3	.....	15/32″	.96	.89	.74	.67	.59
56 D 3828	8442K4	6	3	11/32″	1.06	.98	.82	.73	.65
56 D 5989	8444K3	15	10	11/16″	1.14	1.05	.88	.79	.70
56 D 3829	8444K4	15	10	11/32″	1.14	1.05	.88	.79	.70
56 D 4513	8446K2‡#	15/10	10/5	11/16″	1.30	1.20	1.00	.90	.80
56 D 5538	8448K2**	15	10	11/32″	1.63	1.51	1.26	1.13	1.00

ROTARY SWITCHES

7011
7012

8122
8123

7241

Types 7011 and 7012 rated 5A @ 125 V, 2A @ 250 V AC-DC; screw terminals.

Types 8122 and 8123 rated 3A @ 125 VAC; screw terminals.

Type 7241 rated 15A @ 250 VAC, 1 hp; spade terminals.

All have ⅜″ bushing. Av. wt., 2 oz.

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-99	100-499	500-999
56 D 5658	7011K1	2 on, 1 off	1.63	1.50	1.25	1.13	1.00
56 D 5659	7012K4	3 on, 1 off	1.67	1.54	1.29	1.16	1.03
56 D 5660	8122K4	2 on, 1 off	.59	.55	.46	.41	.36
56 D 5661	8123K4	3 on, 1 off	.64	.59	.49	.44	.39
56 D 5662	7241K2	DPDT	1.73	1.60	1.34	1.20	1.07

POWEREED SWITCH

Meets MIL-S-55433. 15 A max. inrush, break 3A @ 125 VAC; 10 A max. inrush, break 2A @ 250 VAC. N.O.

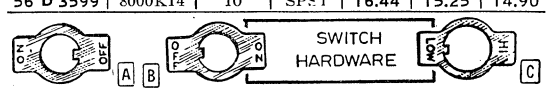
Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-499	500-999
56 D 3594	SH400AA3	7.76	5.75	5.48	4.28	3.45

INCANDESCENT DIMMERS

Stock No.	Mfr's Type	Watts @ 120 VAC	Action	EACH 1-4	5-24	25-99
56 D 3595	8011K4	600	SPST	5.86	4.72	4.42
56 D 3596	8012K2	600	3-way	6.87	5.90	5.62
56 D 3597	8013K4	1000	SPST	21.75	19.97	18.57

FAN BLOWER (Adjustable Speed Control)

Stock No.	Mfr's Type	Amps	Action	EACH 1-4	5-24	25-99
56 D 3598	8000K10	3	SPST	6.46	5.40	5.25
56 D 3599	8000K14	10	SPST	16.44	15.25	14.90



Switch plates. ½″ hole dia. Shpg. wt. per 100, 8 oz.

Stock No.	Mfr's Type	Fig.	PKG. OF 10 1-4	5-9	10-49	50-99
56 D 5671	827-228F3	A	.70	.60	.50	.40
56 D 5672	827-228F13	B	.70	.60	.50	.40
56 D 4589	827-228F16	C	.70	.60	.50	.40

56 D 5703. Type 29-761-3 Locking Rings. Pkg. of 100. 8 oz.
1-4 pkgs.....Per Pkg. 1.80 5-10 pkgs.....Per Pkg. 1.60

56 D 5708. Type 16-886 Lockwashers. Pkg. of 100, 8 oz.
1-4 pkgs.....Per Pkg. 1.35 5-10 pkgs.....Per Pkg. 1.20

HERMETICALLY SEALED SWITCHES BY GEORGE RISK INDUSTRIES, INC.

D SERIES D SWITCHES

Dielectric Strength: 500 VAC. Insulation Res.: 100 meg. All series have inert gas atmosphere. .850x.312″ dia. Wt., 2 oz.

Part No.	Switch Forms	Amps	Operational Force 8-Oz. Stock No.	17-Gram Stock No.	EACH 1-9	10-99	100-249
DC-HA/FA	SPST-N.O.	.5	56 D 6437	56 D 6440	6.66	5.35	4.35
DB-HC/FC	SPDT-B-M	.250	56 D 6439	56 D 6442	10.12	8.15	6.70

E SERIES T SWITCHES

Dielectric Strength: 500 VAC. Insulation Res.: 100 meg. Life Expectancy: Form A and B; 20 million, full load, 50 million, half load. Form C: 10 million, full load, 20 million, half load. 1.75x.890″ dia.

TI-HA4/FA4	4PST-N.O.	3	56 D 6443	.....	17.44	13.95	11.35
TB-HC2/FC2	2PDT-B-M	.250	56 D 6457	.....	12.32	9.85	8.00

F SERIES R SWITCHES

Dielectric Strength: 500 VAC. Insulation Resistance: 100 meg. Life Expectancy: 10 million, full load. .625x.375″ dia. 2 oz.

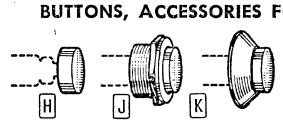
RB-HA	SPST-N.O.	.250	56 D 6473	.....	7.28	5.80	4.73
RB-HB	SPST-N.C.	.250	56 D 6474	.....	7.28	5.80	4.73
RB-HC	SPDT-B-M	.250	56 D 6475	.....	10.14	8.10	6.60

G SERIES G SWITCHES

Dielectric: 500 VAC. Ins. Res.: 100 meg. .975x.625″ dia. 2 oz.

Part No.	Switch Forms	Amps	Operational Force 8-Oz. Stock No.	17-Gram Stock No.	EACH 1-9	10-99	100-249
GC-HA2/FA2	DPST-N.O.	.5	56 D 6480	.....	8.82	7.05	5.75
GC-HA/FA	SPST-N.O.	.5	56 D 6482	.....	6.58	5.25	4.30
GB-HC	SPDT-B-M	.250	56 D 6485	.....	10.04	8.05	6.55

BUTTONS, ACCESSORIES FOR MAGNETIC SWITCHES



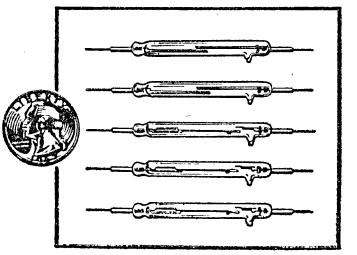
Low-cost buttons and decorative button rings for Series G, W, and T switches. Made of Delrin and aluminum. Specify Part No. When Ordering. Shpg. wt., 2 oz.

Stock No.	Fig.	Part No.	Color	For Series	EACH 1-9	10-99	100-249
56 D 6509	H	E	White	G and W	.35	.32	.30
56 D 6513	J	A	Dec. mtg. ring		1.27	1.19	1.10
56 D 6514	K	C	Dec. mtg. ring		.81	.75	.70
56 D 6506	K	C	Dec. mtg. ring		.72	.67	.63

Hamlin Reed Switches and James Coils

HAMLIN MAGNETIC REED SWITCHES

Dry reed and mercury-wetted switches for reliable operation under all conditions. Hermetically sealed for safe, dependable use in any atmosphere, even under explosive conditions. Unaffected by high or low temperature extremes or pressure. Compact size, high sensitivity, and rapid cycling rate make these switches ideal for applications in position indicators, counting instruments, limiting switches, flow meters, commutating instruments and reed relays. Actuating time: 1 millisecond or less. Dry reed switches have life expectancy of 10 million operations; mercury-wetted, 1 billion operations. Contacts: Form A (SPST-N.O.) or C (SPDT). May be actuated by permanent or electro magnets. Permanent magnets below. Av. wt., 1 oz.



MAGNETS FOR SWITCHES BELOW

Stock No.	Mfr's Type	Size	EACH
56 D 6618	H-31-604	1/16x1/16x1/2"	.30
56 D 6619	H-32-605	3/16x3/16x1"	.35
56 D 6620	H-33-606	1/8x1/8x3/4"	.30
56 D 6621	H-34-607	1/4x1/4x1"	.40

STANDARD DRY REED SWITCHES

Stock No.	Mfr's Type	Form	Size, Dia. x Lgth.	Max. DC Contact Watts	Max. Amps	Max. DC Volts	Actuating Magnet	EACH 1-24	EACH 25-99	EACH 100-999
56 D 6603	MRR-2-185	A	.130x.800"	10	.5	200	H-33	1.15	.83	.66
56 D 6605	MSRR-2-185	A	.090x.800"	10	.5	200	H-33	1.15	.83	.66
56 D 6606	MTRR-2-185	A	.092x.562"	10	.250	100	H-33	1.32	.95	.75
56 D 6607	MRG-DT-175	C	.130x.610"	0.3	.250	28	H-33	4.20	3.00	2.40
56 D 6608	MMRR-2-185	A	.090x.375"	1	.010	28	H-31	1.84	1.31	1.05
56 D 6609	DRG-2-425	A	.210x1.950"	15	1.0	250	H-34	.79	.56	.45
56 D 6610	DRR-1-425	A	.210x1.950"	15	1.0	400	H-34	.89	.64	.51
56 D 6611	DRT-5-425	A	.210x1.950"	50	3.0	1000	H-34	2.10	1.50	1.20
56 D 6612	SRR-2-425	A	.195x1.425"	15	1.0	400	H-32	.89	.64	.51
56 D 6613	DRG-DTH-445	C	.218x1.562"	10	.5	250	H-32	2.63	1.88	1.50

HIGH-VOLTAGE DRY REED SWITCH

Stock No.	Mfr's Type	Form	Size, Dia. x Lgth.	Max. DC Contact Watts	Max. Amps	Max. DC Volts	Actuating Magnet	EACH 1-24	EACH 25-99	EACH 100-999
56 D 6614	DRVT-10-658	A	.218x1.950"	50	3.0	7500	H-34	4.20	3.00	2.40

MERCURY-WETTED REED SWITCHES

56 D 6616	HRC-1-535	A	.218x1.950"	50	3.0	400	H-34	2.10	1.50	1.20
56 D 6617	MRC-3-387	A	.130x.710"	28	1.0	100	H-33	4.20	3.00	2.90

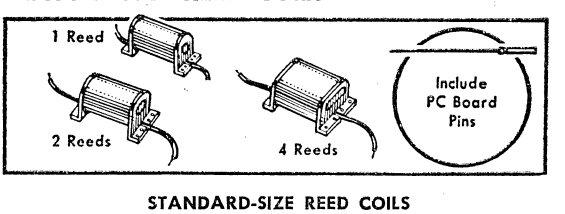
ULTRAHIGH-VOLTAGE DRY REED SWITCHES

High-voltage reed switches consisting of a series of five form V magnetic reed switches. Offer ultra-high voltage reed switching never before possible. A near perfect vacuum permits switching up to 20,000 VDC, high frequency switching, or fast rise pulse generating without preionization of conventional reed switch atmosphere. Current rating is .005 amp maximum, with initial contact resistance down to .100 ohm. Life expectancy is 1 million operations at full load, almost infinite at lower voltage levels. Standard size, with overall length of 3.195". May be actuated by permanent or electro magnets. Order permanent magnets above. Shpg. wt., ½ oz.

Stock No.	Mfr's Type	Maximum Switching Volts DC	Minimum Breakdown Volts DC	Max. Glass Size, Dia. x Length	EACH 1-24	EACH 25-99	EACH 100-999
56 D 6663	DRVT-5	3500	5000	.218x1.950"	3.15	2.50	2.25
56 D 6664	DRVT-15	12,500	15,000	.218x1.950"	8.40	7.25	6.80
56 D 6665	DRVT-20	17,500	20,000	.218x1.950"	12.60	11.00	10.20
56 D 6666	DRVT-25	20,000	25,000	.218x1.950"	16.80	14.50	13.60

JAMES STANDARD AND MINIATURE-SIZE REED COILS

Reed coils provide new flexibility in reed switching for the instrument and systems engineer, giving him the freedom to establish his own electrical characteristics and layout. Accept up to 4 reed switches for combination switching and logic systems—control relays can be assembled with desired switching of "A," "B" or "C" circuits. Have pins for PC board mounting, or can be mounted directly to chassis. Readily adaptable to volume production—at big savings to the user. Sizes: miniature coils: *1.131x.500x.562"; †1.31x.729x.562"; ‡1.131x.884x.562". Standard coils: §2.318x.500x .562"; **2.318x.720x.562"; ††2.318x1.160x.562". Shpg. wt., 2 oz.



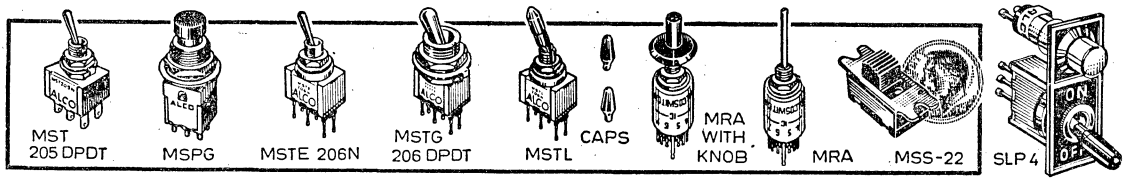
MINIATURE-SIZE REED COILS

Stock No.	Mfr's Type	Capsule Capacity	DC V	Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-499	EACH 500-Up
56 D 6638	7859	1*	6	250	1.35	1.15	1.01	.88	.74
56 D 6639	7860	1*	12	1040	1.70	1.44	1.27	1.10	.93
56 D 6640	7861	1*	24	3500	2.01	1.71	1.51	1.31	1.11
56 D 6641	7862	1*	48	14,200	2.57	2.18	1.93	1.67	1.41
56 D 6642	7863	2†	6	142	1.42	1.21	1.06	.92	.78
56 D 6643	7864	2†	12	575	1.80	1.53	1.35	1.17	.99
56 D 6644	7865	2†	24	2100	2.07	1.76	1.55	1.35	1.14
56 D 6645	7866	2†	48	8400	2.42	2.06	1.81	1.57	1.33
56 D 6646	7867	4‡	6	38	1.42	1.21	1.06	.92	.78
56 D 6647	7868	4‡	12	167	1.80	1.53	1.35	1.17	.99
56 D 6648	7869	4‡	24	650	2.07	1.76	1.55	1.35	1.14
56 D 6649	7870	4‡	48	2600	2.42	2.06	1.81	1.57	1.33

STANDARD-SIZE REED COILS

Stock No.	Mfr's Type	Capsule Capacity	DC V	Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-499	EACH 500-Up
56 D 6650	7884	1§	6	222	1.44	1.22	1.08	.94	.79
56 D 6651	7885	1§	12	860	1.81	1.54	1.35	1.18	1.00
56 D 6652	7886	1§	24	3400	2.00	1.70	1.50	1.30	1.10
56 D 6653	7887	1§	48	13,600	2.35	2.00	1.76	1.53	1.28
56 D 6654	7888	2**	6	97	1.83	1.56	1.37	1.19	1.01
56 D 6655	7889	2**	12	355	1.88	1.60	1.41	1.22	1.03
56 D 6656	7890	2**	24	1520	2.05	1.74	1.54	1.33	1.13
56 D 6657	7891	2**	48	6100	2.40	2.04	1.80	1.56	1.32
56 D 6658	7892	4††	6	29	1.83	1.56	1.37	1.19	1.01
56 D 6659	7893	4††	12	120	1.88	1.60	1.41	1.22	1.03
56 D 6660	7894	4††	24	510	2.05	1.74	1.54	1.33	1.13
56 D 6661	7895	4††	48	2000	2.40	2.04	1.80	1.56	1.32

ALCOSWITCH Miniature Switches and Accessories



MST TOGGLE SWITCH—SLIM BAT HANDLE—30° THROW

Ideal for aircraft and other high-density applications. Feature high current capacity and long life. Rated at 5 amps @ 115 VAC. 1000 megs @ 500 VDC insulation tests. 1000 V @ 60 Hz breakdown. DPDT switches are only ½-inch square. All have silver contacts. ¼-inch bushing. *Momentary contact. †Special switch with 3 "on" positions. Av. shpg. wt., 1 oz.

Stock No.	Type MST-	Action	EACH			
			1-24	25-99	100-499	500-999
56 D 3205	105D	SPDT On-None-On	1.65	1.12	.99	.83
56 D 3206	105E	SPDT On-Off-On	1.95	1.33	1.17	.97
56 D 3207	105F	SPDT None-On-On*	1.95	1.33	1.17	.97
56 D 3208	105G	SPDT On*-Off-On*	1.95	1.33	1.17	.97
56 D 3209	105H	SPDT On-Off-On*	1.95	1.33	1.17	.97
56 D 3210	205N	DPDT On-None-On	2.15	1.43	1.29	1.08
56 D 3211	205P	DPDT On-Off-On	2.55	1.72	1.53	1.28
56 D 3212	205R	DPDT On-None-On*	2.55	1.72	1.53	1.28
56 D 3213	205S	DPDT On*-Off-On*	2.55	1.72	1.53	1.28
56 D 3214	205T	DPDT On-Off-On*	2.55	1.72	1.53	1.28
56 D 3217	205PA	†DP3T On-On-On	2.85	1.90	1.71	1.42
56 D 3267	205SA	†DP3T On*-On-On*	3.15	2.14	1.89	1.58
56 D 3238	205TA	†DP3T On-On-On*	3.15	2.14	1.89	1.58
56 D 3215	305D	3PDT On-None-On	3.85	2.57	2.31	1.92
56 D 3235	305E	3PDT On-Off-On	4.15	2.82	2.49	2.08
56 D 3268	305F	3PDT None-On-On*	4.15	2.82	2.49	2.08
56 D 3236	305H	3PDT On-Off-On*	4.15	2.82	2.49	2.08
56 D 3216	405N	4PDT On-None-On	4.85	3.29	2.91	2.43
56 D 6408	405P	4PDT On-Off-On	5.35	3.64	3.21	2.68

MSTA MINIATURE 6-AMP TOGGLE SWITCHES

Reliable miniature switch. Plastic case withstands high impact. Low loss, high temperature coefficient. Bonded solid-silver contacts rated 6 amps 125 VAC. ¼"-40 bushing. Av. wt., 1 oz.

Stock No.	Mfr's Type	Contacts	Description	EACH			
				1-24	25-99	100-499	500-999
56 D 6901	MSTA-106D	SPDT	On-None-On	1.80	1.23	1.08	.90
56 D 6902	MSTA-106E	SPDT	On-Off-On	2.25	1.53	1.35	1.13
56 D 6903	MSTA-206N	DPDT	On-None-On	2.35	1.60	1.41	1.18
56 D 6904	MSTA-206P	DPDT	On-Off-On	2.85	1.90	1.71	1.42
56 D 3269	MSTA-206PA	DP3T	On-On-On	3.15	2.14	1.89	1.58
56 D 6905	MSTA-306D	3PDT	On-None-On	4.05	2.75	2.43	2.03
56 D 6906	MSTA-306E	3PDT	On-Off-On	4.45	3.03	2.67	2.23
56 D 6907	MSTA-406N	4PDT	On-None-On	5.10	3.47	3.06	2.55
56 D 6908	MSTA-406P	4PDT	On-Off-On	5.65	3.84	3.39	2.83
56 D 6909	MSTA-406PA	4P3T	On-On-On	6.15	4.18	3.69	3.08

MSTE SERIES WATERPROOF TOGGLE SWITCHES

New case design with high voltage barriers, low loss, high impact materials. Turret terminals. Bonded silver contacts rated 6 amp @ 115 VAC. All types listed have "O" rings, permanently sealed terminals. Shpg. wt., 1 oz.

Stock No.	Type MSTE-	Action	EACH			
			1-24	25-99	100-499	500-999
56 D 6391	106D	SPDT On-None-On	1.95	1.33	1.17	.98
56 D 6392	106E	SPDT On-Off-On	2.55	1.72	1.53	1.28
56 D 6393	206N	DPDT On-None-On	2.55	1.72	1.53	1.28
56 D 6394	206P	DPDT On-Off-On	3.15	2.14	1.89	1.58
56 D 6395	206PA	DP3T On-On-On	3.45	2.35	2.07	1.73
56 D 6396	306D	3PDT On-None-On	4.25	2.89	2.55	2.13
56 D 6397	306E	3PDT On-Off-On	4.75	3.23	2.85	2.38
56 D 6398	406N	4PDT On-None-On	5.35	3.64	3.21	2.68
56 D 6399	406P	4PDT On-Off-On	5.95	4.05	3.57	2.98

MSTG "MUSTANG" SERIES SWITCHES

Features a standard 15/32" hole mounting, but with a rear space requirement of a miniature switch. Case construction of low loss, high impact and temperature materials, with turret terminals and silver contacts. Rated 6 amp @ 115 VAC. Av. wt., 1 oz.

Stock No.	Type MSTG-	Action	EACH			
			1-24	25-99	100-499	500-999
56 D 6384	206N	DPDT On-None-On	2.75	1.87	1.65	1.38
56 D 6385	206P	DPDT On-Off-On	3.35	2.28	2.01	1.68
56 D 6386	206PA	DP3T On-On-On	3.65	2.48	2.19	1.83
56 D 6387	306D	3PDT On-None-On	4.45	3.03	2.67	2.23
56 D 6388	306E	3PDT On-Off-On	4.95	3.37	2.97	2.48
56 D 6389	406N	4PDT On-None-On	5.55	3.77	3.33	2.78
56 D 6390	406P	4PDT On-Off-On	6.15	4.18	3.69	3.08

MSTL MINIATURE LEVER-LOCKING SWITCHES

Spring-loaded lever pulls forward, snaps back into accident-proof detent. Have high-voltage barriers with high impact, low-loss, high temperature cases, turret terminals, bonded silver contacts. Rated 6 amps, 125 VAC. Bushing, ¼"-40 by 0.316". Depth behind panel, 0.661". Overall, 1.645x.394". Av. wt., 1 oz.

Stock No.	Type MSTL-	Action	EACH			
			1-24	25-99	100-499	500-999
56 D 6579	106D	SPDT On-None-On	3.15	2.14	1.89	1.58
56 D 6580	106E	SPDT On-Off-On	3.85	2.57	2.31	1.93
56 D 6581	206N	DPDT On-None-On	3.85	2.57	2.31	1.93
56 D 6582	206P	DPDT On-Off-On	4.45	3.03	2.67	2.23
56 D 3270	206PA	DP3T On-On-On	4.75	3.23	2.85	2.38
56 D 3271	306D	3PDT On-None-On	5.65	3.84	3.39	2.83
56 D 3272	406N	4PDT On-None-On	6.95	4.73	4.17	3.48

MRA ADJUSTABLE-STOP MINIATURE ROTARY SWITCH

Non-shorting. 36° spacing. ½" dia. *With knob (5/32" dia. shaft). †Without knob (⅛" shaft). ‡Poles on single deck. 1 oz.

Stock No.	Mfr's Type	‡	Positions	EACH			
				1-24	25-99	100-499	500-999
56 D 3219	MRA-1-10*	1	2-10	3.95	2.65	2.37	1.96
56 D 3220	MRA-2-5*	2	2-5	3.95	2.65	2.37	1.96
56 D 3221	MRA-3-3*	3	2-3	3.95	2.65	2.37	1.96
56 D 3222	MSRA-4-2*	4	2 (fixed)	3.95	2.65	2.37	1.96
56 D 3223	MRA-1-10S†	1	2-10	3.85	2.57	2.31	1.92
56 D 3224	MRA-2-5S†	2	2-5	3.85	2.57	2.31	1.92
56 D 3225	MRA-3-3S†	3	2-3	3.85	2.57	2.31	1.92

MSS MINIATURE SLIDE SNAP SWITCHES

Compact switches ideal for printed circuit uses. Only .500x.770x .305". Feature "snap" indexing for positive control. Gold-plated terminals and contacts. Rated 2 amperes at 120 VAC, ½ ampere at 120 VDC. Maximum contact resistance, .01 ohm. Available in SPDT, 2-circuit, N.O., N.C. or DPDT. Base and side block made of long-lasting phenolic. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Description	EACH			
			1-24	25-99	100-499	500-999
56 D 6516	MSS-22	SPDT, 2-Circuit	1.75	1.17	.88	.73
56 D 3273	MSS-44	DPDT	3.15	2.11	1.58	1.31

SWITCH ACCESSORIES

Stock No.	Mfr's Type	Description	PER PKG. OF 25		
			1-3	4-19	20-39
56 D 6401	N-1A	¼"-20 Perfect Fit Nut	.90	.83	.75
56 D 6402	N-1B	15/32" Perfect Fit Nut	1.25	1.10	1.00
56 D 6403	N-1C	3/8"-32 Perfect Fit Nut	1.25	1.10	1.00
56 D 6404	N-2	¼"-40 Hex Nut	.50	.45	.40
56 D 3266	N-3	¼"-40 Decorative Nut	.90	.83	.75

COLORED CAPS FOR MST, MSTA, MSTE SWITCHES

Plastic. Specify color: Red, White, Black, Blue, Gray, Green, Yellow or Pink. Shpg. wt., per pkg., 2 oz.

Stock No.	Mfr's Type	Description	PER PKG. OF 25		
			1-3	4-19	20-39
56 D 3237 C	C-10	Plastic Cap	.63	.55	.50
56 D 6900 C	C-17	Flat Top Cap	.63	.55	.50

C15 COLORED CAPS FOR MUSTANG SERIES SWITCHES

For switches at left. 25 caps per pkg. Specify Color: Red, White, Black, Blue or Green. Shpg. wt., 2 oz.

56 D 3250 C. 1-3 Pkgs. ..... Each 1.00
4-19 Pkgs. ..... Each .90 20-39 Pkgs. ..... Each .83

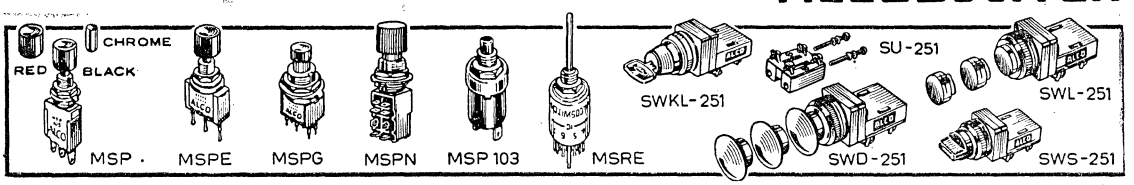
BLACK ANODIZED ALUMINUM SWITCH PLATES

SLP-4 is 1 9/32x5/8", has hole for 3/8" pilot light; SP-3 and SP-4, 1x3/8"; no hole for pilot light. Specify Marking: ON-ON, ON-OFF or PWR-OFF. Av. shpg. wt., 1 oz. per package.

For ¼" Bushing		For 15/32" Bushing		PER PKG. OF 5		
Stock No.	Type	Stock No.	Type	1-24	25-99	100-999
56 D 6578 C	SLP-4	.....	.....	.90	.65	.61
56 D 6576 C	SP-3	56 D 6577 C	SP-4	.75	.64	.51

SEE PAGE 353 FOR TYPE MRA SWITCH KNOBS

Pushbutton Switches — ALCOSWITCH



MSP PUSHBUTTON SWITCHES (Less Buttons)

Usable normally open or normally closed, 5 amps @ 115 VAC. Solid silver contacts. ½x½x¾". *SPDT. †DPDT. Av. wt., 1 oz.

Stock No.	Type MSP-	Action	EACH 1-24	25-99	100-499	500-999
56 D 3248	105F	*-Momentary	1.95	1.33	1.17	.98
56 D 3296	105D	*-Push on/off	1.95	1.33	1.17	.98
56 D 3249	205R	†-Momentary	2.85	1.90	1.71	1.42
56 D 3297	205N	†-Push on/off	2.85	1.90	1.71	1.42

MSPE WATERPROOF PUSHBUTTON SWITCHES (Less Buttons)

Rated 6 amps resistive and 2 amps inductive at 125 VAC. Double "O" waterseals, low-loss MSTE series case with turret terminals. *SPDT, †DPDT, ‡4PDT. Av. shpg. wt., 1 oz.

Stock No.	Type MSPE-	Action	EACH 1-24	25-99	100-499	500-999
56 D 3285	106D	*Push on/off	2.55	1.72	1.53	1.28
56 D 3286	106F	*Momentary	2.55	1.72	1.53	1.28
56 D 3287	206N	†Push on/off	3.45	2.35	2.07	1.73
56 D 3288	206R	†Momentary	3.45	2.35	2.07	1.73
56 D 3289	406N	‡Push on/off	5.95	4.05	3.57	2.98
56 D 3290	406R	‡Momentary	5.95	4.05	3.57	2.98

BUTTONS FOR ABOVE SWITCHES (*Specify Red, Green, Black)

Stock No.	Mfr's Type	Description	PER PKG. OF 25 1-3	4-19	20-39
56 D 3228 C	C-12	*Plastic Button	.90	.80	.75
56 D 3229 C	C-13	*Large Button	1.50	1.35	1.25
56 D 3259	C-14L	Chrome Button	1.50	1.35	1.25

MSPG "MUSTANG" PUSHBUTTON SWITCHES

DPDT switches rated 6 amps at 125 VAC. (same specs as Mustang toggle switches). 15/32" bushings. Av. shpg. wt., 1 oz.

Stock No.	Type MSPG-	Action	Cap Color	EACH 1-24	25-99	100-499	500-999
56 D 3190	206N-B	Push on/off	Black	3.15	2.14	1.89	1.58
56 D 3191	206N-R	Push on/off	Red	3.15	2.14	1.89	1.58
56 D 3192	206R-B	Momentary	Black	3.15	2.14	1.89	1.58
56 D 3193	206R-R	Momentary	Red	3.15	2.14	1.89	1.58

MSPN ILLUMINATED PUSHBUTTON SWITCHES

Snap-action DPDT switches. Side terminals. Current rating 6, amps at 125 VAC, 3 amps at 250 VAC. Life: Over 20,000 operations. Black phenolic resin case. Solid-silver contacts. Mount in standard 15/32" hole. Order caps and lamps from tables below. *Transparent caps available in Red, Yellow, Green, Amber, Blue, Clear. Specify Color when ordering. Av. wt., shpg. 1 oz.

Stock No.	Mfr's Type	Action	EACH 1-24	25-99	100-499	500-999
56 D 3294	MSPN-206R	Momentary	4.80	3.26	2.88	2.40
56 D 3295	MSPN-206N	Push on/off	4.80	3.36	2.88	2.40

Stock No.	Mfr's Type	Description	PER PKG. OF 25 1-3	4-19	20-39
56 D 3253 C	RS	½" Round Cap*	1.70	1.50	1.25
56 D 3254 C	RM	⅝" Round Cap*	2.05	1.80	1.50
56 D 3252 C	RL	¾" Round Cap*	2.55	2.25	1.88
56 D 3258 C	SS	½" Square Cap*	1.70	1.50	1.25
56 D 3256 C	SM	⅝" Square Cap*	2.05	1.80	1.50
56 D 3257 C	SL	¾" Square Cap*	2.55	2.25	1.88

(LAMPS SOLD PER PKG. OF 10)

60 D 7553	379	Lamp: 6.3 V, 0.2 A 1-9. Ea. 7.90 10-49. Ea. 6.40
60 D 6745	386	Lamp: 14 V, .08 A 1-9. Ea. 10.00 10-49. Ea. 8.10
60 D 6747	388	Lamp: 28 V, .04 A 1-9. Ea. 10.10 10-49. Ea. 8.20

MSP-103 ECONOMY PUSHBUTTON SWITCHES

Rated 3 amps at 125 VAC. Silver-plated low pressure contacts and terminals. Plastic button plunger travels .098" overall. Less than ¾" deep behind panel. ¼"-40 bushing. *Red button, †Black button. Shpg. wt., 1 oz.

Stock No.	Type MSP-	Description	EACH 1-24	25-99	100-499	500-999
56 D 3360	103B†	SPST N.C.	.65	.44	.39	.33
56 D 3361	103C*	SPST N.O.	.65	.44	.39	.33

SEE PAGE 353 FOR TYPE MSRE SWITCH KNOBS

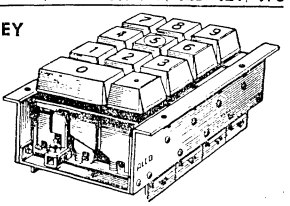
SW SERIES 6-AMP MINIATURE POWER SWITCHES

Oiltight pushbutton switches suitable for use in normal atmospheres or where oil, water, coolants, or other contaminants are present. Double-break solid silver contacts are rated 6 amps at 230 VAC. Control circuits independently or with optional contactors and starters. Closer mounting provision results in 40-60% panel space and cost saving. Mount in 1" diameter holes. Supplied with single (N. O.-N. C.) block. Extra blocks below. *Red, green, black, snap-on buttons included. †Black only. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999
56 D 6917	SW-251*	Standard Button Switch	2.95	1.97	1.77	1.48
56 D 6918	SW-251D*	Mushroom Head Switch	3.35	2.23	2.01	1.68
56 D 6919	SW-251L*	Long Button Switch	3.10	2.07	1.86	1.56
56 D 6920	SW-251S†	Knob-type Switch	3.35	2.23	2.01	1.68
56 D 3262	SWKL-1	Key/Lock Switch	7.95	5.30	4.77	3.98
56 D 6921	SU-251	Extra (N. O.-N. C.) Block	1.85	1.23	1.11	.93
56 D 6922	C-251-00	On-Off Buttons (Pairs Only)	.35	.23	.21	.18
56 D 6923	C-251-SS	Start-Stop But. (Prs. Only)	.35	.23	.21	.18

SERIES SB REED-OPERATED KEY BOARD SWITCH ASSEMBLIES

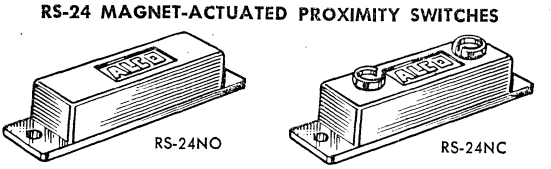
- "Positive Lockout" Between Sections and Rows
- Single-Pole, Open-Circuit Reed Switches
- Short-Stroke Operation



Reliable keyboard switch assemblies for schools, research labs and manufacturers. Single-pole, open-circuit reed switches have a life expectancy of over two million operations. Short-stroke design permits smooth operation. Square gray buttons (19/32"). Available in standard 0-9 markings with "decimal" button or triple "0" bar, or 1-12 numeral markings. Contacts rated 100 mA at 48 VDC. Operating force, 5 oz. Requires 1⅝" mounting depth. Overall size, 3⅝x2⅞x2¼". Av. shpg. wt., 10½ oz.

Stock No.	Mfr's Type	Description	EACH
56 D 3263	SB-032	Interlock 0-9 ("O" triple bar)	28.50
56 D 6924	SB-033	Interlock 0-9 and "decimal"	28.50
56 D 3264	SB-034	Interlock 1-12 numerals	29.95
56 D 3265	SB-035	Momentary 1-12 numerals	28.50

RS-24 MAGNET-ACTUATED PROXIMITY SWITCHES



Reed switches for use in interlocks, counters, burglar aarm s, other uses where fast, reliable (500 Hz max.) operations are needed. Encased Alnico 5 permanent magnet provides the force for actuation of switch assembly. Rated at 500 mA, 300 VDC. Life expectancy of 18 million operations at 100 mA, 48 VDC. 1¾" mtg. centers. Price includes switch and magnet. Av. shpg. wt., 2 oz.

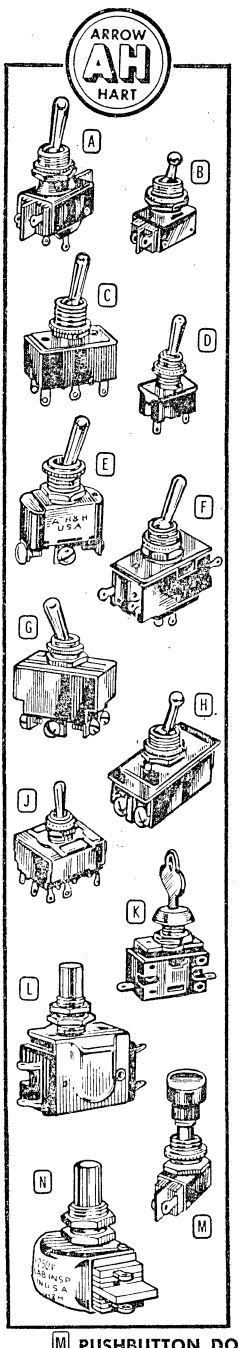
Stock No.	Mfr's Type	Descrip-tion	EACH 1-24	25-99	100-499	500-999
56 D 6925	RS24-NO	N. O. Unmagnetized	2.85	1.90	1.71	1.42
56 D 6926	RS24-NC	N. C. Unmagnetized	3.15	2.14	1.89	1.58

MSRE WATERPROOF ROTARY SWITCHES

Miniature non-adjustable switches. Similar to MRA Series but feature both internal and external "O" rings. One-piece metal case. Epoxy sealed terminals. ⅛" dia. shaft. Contacts rated 500 mA at 125 VAC. Poles on single deck. Av. shpg. wt., 1 oz.

Stock No.	Type MSRE-	No. Poles	No. Poles	EACH 1-24	25-99	100-499	500-999
56 D 3277	1-10	1	10	4.85	3.29	2.91	2.43
56 D 3278	2-5	2	5	4.85	3.29	2.91	2.43
56 D 3279	3-3	3	3	4.85	3.29	2.91	2.43
56 D 3280	4-2	4	2	4.85	3.29	2.91	2.43

Arrow-Hart Switches



Small laminated canopy, intermediate molded, heavy-duty power, and midget switches. Fig. E and G AC-only with high capacity in small unit. All: 15/32" shank, except ‡13/32". Shank dia. 15/32" except §3/4". †Fine silver buttons. Solder terminals except # screw. With 2 mtg. nuts. ■U.L. Recog. 4 oz.

SPST (2-POSITION—ON-OFF) *Momentary

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3542	20994LH	A	.....	3	....	No	No	No	.69	.64	.53	.48	.42
56 D 4100	‡20994BF	B	.....	3	....	No	No	No	.69	.64	.53	.48	.42
56 D 4138	20994CS	B	.....	3	....	No	No	No	.69	.64	.53	.48	.42
56 D 3869	81015AW	C	6	3	....	Yes	Yes	No	.91	.84	.70	.63	.56
56 D 3505	*81045FB	C	6	3	....	Yes	Yes	No	1.44	1.33	1.11	1.00	.89
56 D 3862	83050	D	3	1	....	Yes	Yes	Yes	.91	.84	.70	.63	.56
56 D 3832	83001	E	6	3	1/6	No	Yes	No	.62	.58	.48	.43	.38
56 D 3854	#82600	E	15	10	3/4	No	Yes†	No	.83	.76	.64	.57	.51
56 D 3837	82601	E	15	10	3/4	No	Yes†	No	.72	.67	.56	.50	.44

SPDT (2-POSITION—ON-ON) *Momentary

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3543	21350EH	A	3	1	....	No	No	No	.87	.80	.67	.60	.54
56 D 3538	21350BF	B	3	1	....	No	No	No	.87	.80	.67	.60	.54
56 D 3501	81021AV	C	6	1	....	Yes	Yes	No	1.09	1.00	.84	.75	.67
56 D 3507	*81051G	C	6	1	....	Yes	Yes	No	1.57	1.45	1.21	1.09	.97
56 D 3864	83052	D	3	1	....	Yes	Yes	Yes	1.09	1.00	.84	.75	.67
56 D 3834	83007	E	6	3	1/6	No	Yes	No	.67	.62	.52	.46	.41
56 D 3855	#82604	E	15	10	3/4	No	Yes†	No	.99	.91	.76	.68	.61
56 D 3839	82605	E	15	10	3/4	No	Yes†	No	.83	.76	.64	.57	.51

SPDT (3-POSITION—ON-OFF-ON)

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3509	82022HD	F	6	3	....	Yes	Yes	No	1.76	1.62	1.35	1.22	1.08
56 D 3833	83004	E	6	3	1/6	No	Yes	No	.67	.62	.52	.46	.41
56 D 3856	#82602	E	15	10	3/4	No	Yes†	No	.99	.91	.76	.68	.61
56 D 3838	82603	E	15	10	3/4	No	Yes†	No	.83	.76	.64	.57	.51

DPST (2-POSITION—ON-OFF) *Momentary N.O.

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3544	20902CX	A	3	1	....	No	No	No	1.26	1.16	.97	.87	.77
56 D 4133	20902N	B	3	1	....	No	No	No	1.25	1.16	.97	.87	.77
56 D 3868	81024GB	C	6	3	....	Yes	Yes	No	1.35	1.24	1.04	.93	.83
56 D 3506	*81054H	C	6	3	....	Yes	Yes	No	1.89	1.74	1.45	1.31	1.16
56 D 3865	83053	D	3	1	....	Yes	Yes	Yes	1.35	1.24	1.04	.93	.83
56 D 3541	#80600B	H	16	8	1	Yes	Yes	Yes	1.39	1.28	1.07	.96	.85
56 D 3871	#80602C	H	20	10	1 1/2	Yes	Yes	Yes	2.41	2.23	1.86	1.67	1.48
56 D 3849	#80421	H	.....	20	1 1/2	Yes	Yes	Yes	3.24	2.99	2.49	2.24	1.99
56 D 3835	83025	G	6	3	1/6	No	Yes	No	.91	.84	.70	.63	.56
56 D 3872	#82606	G	15	10	3/4	No	Yes†	No	1.33	1.22	1.02	.92	.82
56 D 3840	82607	G	15	10	3/4	No	Yes†	No	1.12	1.03	.86	.77	.69

DPDT (2-POSITION—ON-ON) *Momentary

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3545	20905FR	A	3	1	....	No	No	No	1.44	1.33	1.11	1.00	.88
56 D 3537	20905BX	B	3	1	....	No	No	No	1.44	1.33	1.11	1.00	.88
56 D 3867	81027CE	C	6	3	....	Yes	Yes	No	1.55	1.43	1.19	1.07	.95
56 D 3508	*81057N	C	6	3	....	Yes	Yes	No	2.28	2.10	1.75	1.58	1.40
56 D 3866	83054	D	3	1	....	Yes	Yes	Yes	1.55	1.43	1.19	1.07	.95
56 D 3520	83031	G	6	3	1/6	No	Yes	No	1.01	.94	.78	.70	.62
56 D 3873	#82610	G	15	10	3/4	No	Yes†	No	1.63	1.51	1.26	1.13	1.00
56 D 3531	82611	G	15	10	3/4	No	Yes†	No	1.33	1.22	1.02	.92	.82

DPDT (3-POSITION—ON-OFF-ON)

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4103	82024HD	F	6	3	....	Yes	Yes	No	2.16	2.00	1.67	1.50	1.33
56 D 3836	83028	G	6	3	1/6	No	Yes	No	1.01	.94	.78	.70	.62
56 D 3874	#82608	G	15	10	3/4	No	Yes†	No	1.63	1.51	1.26	1.13	1.00
56 D 3841	82609	G	15	10	3/4	No	Yes†	No	1.33	1.22	1.02	.92	.82

DPDT (3-POSITION—ON-POSITIVE OFF-ON) Cannot move through center position without stopping.

Stock No.	Mfr's Type	Fig.	Amperes 125V	Amperes 250V	hp	Wiping Action	Silver-Plated Contacts	Silver-Plated Terms.	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4107	#80638D§‡	....	10	5	3/4	Yes	Yes	No	4.42	4.08	3.40	3.06	2.72

3 AND 4-POLE—AC ONLY (Fig. J except 82612, not illus.)

Stock No.	Mfr's Type	Action	Amperes	hp	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3875	82612	3PST (On-Off)	10@250V, 15@125V	1@1-3ph,125V	2.53	2.33	1.95	1.75	1.56
56 D 3858	82615	3PDT (On-Off-On)	10@250V, 15@125V	1@1-3ph,125V	2.68	2.48	2.07	1.86	1.65
56 D 3860	82617	3PDT (On-None-On)	10@250V, 15@125V	1@1-3ph,125V	2.68	2.48	2.07	1.86	1.65
56 D 3861	†82636	4PDT (On-None-On)	10@250V	½@115-230V	4.01	3.70	3.09	2.78	2.47

M PUSHBUTTON DOUBLE-ACTION SPST SWITCHES

Require two pushes to operate. 3A @ 250 V, 6A @ 125 V AC-DC. *DPST, 8A @ 250 V, 16A @ 125 V. Av. wt.3 oz.

Stock No.	Mfr's Type	Button Color	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4160	86710	Nickel	1.24	1.14	.95	.86	.76
56 D 4161	86710-CR	Red	1.46	1.35	1.13	1.01	.90
56 D 4162	86710-C	Black	1.46	1.35	1.13	1.01	.90
56 D 4163	*80863-R	Nickel	2.14	1.97	1.65	1.48	1.32

K SPST LOCK SWITCHES

81715-L. Fits panels to 9/32". Sleeve dia., 15/32". Switch must be open to remove key. 1 3/4x27/32x21/32". 81715-LE. Same, but key removable in open or closed position. Keys listed below right. 4 oz.

Stock No.	Mfr's Type	Amperes 125V	Amperes 250V	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4156	81715-L	6	3	2.13	1.97	1.64	1.48	1.31
56 D 4158	81715-LE	6	3	2.13	1.97	1.64	1.48	1.31

ROTARY POWER SWITCHES

Ideal for instrument, control panel, appliance uses, plus a wide variety of other power applications. Rated: †1 amp @ 250 V—3 amp @ 125 V; §3 amp @ 250 V; #3 amp @ 250 V—6 amp @ 125 V. Have shanks 11/32" dia., 3/8" long with solder lugs. ■U.L. Recog. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Action	EACH 1-24	25-49	50-99	100-499	500-999
56 D 3850	1561-B	N	§SPST	.94	.86	.72	.65	.58
56 D 3852	1575	N	†DPDT	1.78	1.64	1.37	1.23	1.10
56 D 4141	81715	L	#SPST	1.67	1.54	1.29	1.16	1.03
56 D 4144	81727	L	#DPDT	2.44	2.25	1.88	1.69	1.50

KEYS FOR LOCK SWITCHES

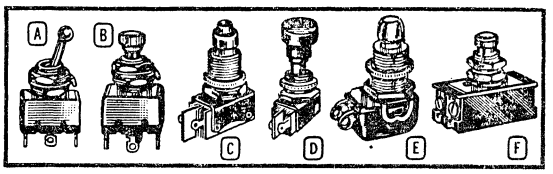
56 D 4128. For 81715-L. 1-24.....Each .20 25-49....Each .19
50-99.....Each .16 100-499.....Each .15 500-999..Each .12

56 D 3876. For 81715-LE. 1-24.....Each .20 25-49....Each .19
50-99.....Each .16 100-499.....Each .14 500-999..Each .12

■Recognized Under Component Program of Underwriter's Laboratories, Inc.

Military, T-Bar and Subminiature Switches

ARROW-HART SUBMINIATURE SWITCHES



SUBMINIATURE SWITCHES

Gold-plated silver contacts; gold plated brass terminals; diallyl phthalate bases. Toggle types (Fig. A) 5A res. @ 29 VDC/115 VAC; meet MIL-S-3950. MS-75028, SPDT; MS-75029, DPDT. Pushbutton types (Fig. B), 2A res. @ 29 VDC/1A @ 115 VAC. Fig. A except PM-3 thru PM-7 which are Fig. B. *Momentary action. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Gov't Mil Spec No.	Action	EACH
56 D 4167	TC-3M	75028-21	On-Off-On	3.20
56 D 4168	TS-3M	75028-23	On-None-On	3.20
56 D 4170	TG-3M	75028-27	On*-Off-On*	3.40
56 D 4171	TE-3M	75028-31	On*-Off-On	3.40
56 D 4172	TC-6M	75029-21	On-Off-On	4.10
56 D 4173	TS-6M	75029-23	On-None-On	4.10
56 D 4149	PM-3	.....	SPDT	2.86
56 D 4150	PM-6	.....	DPDT	3.51
56 D 4177	PM-7	.....	3PST-N.O.	3.31

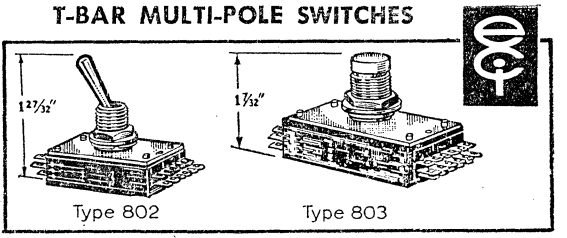
MOMENTARY PUSH SWITCHES

AC only except 80630 and 3594 are AC-DC. ‡Midget size, molded phenolic; §canopy size, phenolic sections. 3 amp @ 125 VAC, 1-10 hp @ 125 V except *8 amp @ 250 V, 16 amp @ 125 V, 1 HP; †1 amp @ 125 V, #1A @ 250 V, 3A @ 125 V, AC-DC. 15/32" dia. shanks. ■U.L. Recog. ††Button: B, black; R, red, N, nickel. 3 oz.

Stock No.	Mfr's Type	Fig.	Action	††	EACH 1-24	25-49	50-99	100-499	500-999
56 D 4159	§3391-GL	D†	SPST-N.O.	B	.98	.90	.75	.68	.60
56 D 3830	§3391-GL	D†	SPST-N.O.	R	.98	.90	.75	.68	.60
56 D 4181	§3391-GJ	D†	SPST-N.C.	R	.98	.90	.75	.68	.60
56 D 4182	§3391-GJ	D†	SPST-N.C.	B	.98	.90	.75	.68	.60
56 D 4119	§3392	C†	SP2-N.C.	N	.96	.88	.74	.66	.59
56 D 4124	§3392-AE	D†	SP2-N.C.	B	1.19	1.10	.92	.82	.73
56 D 4129	§3392-AE	D†	SP2-N.C.	R	1.19	1.10	.92	.82	.73
56 D 4183	#3594-Q	D	DPST-N.O.	R	2.09	1.93	1.61	1.45	1.28
56 D 4184	#3594-Q	D	DPST-N.O.	B	2.09	1.93	1.61	1.45	1.28
56 D 4185	#3594-PA	D	DPST-N.C.	R	2.09	1.93	1.61	1.45	1.28
56 D 4186	#3594-PA	D	DPST-N.C.	B	2.09	1.93	1.61	1.45	1.28
56 D 4187	#3599-GF	D	DPDT-N.C.	R	2.41	2.23	1.86	1.67	1.48
56 D 4188	#3599-GF	D	DPDT-N.C.	B	2.41	2.23	1.86	1.67	1.48
56 D 3842	‡80511	E	SPST-N.C.	N	.51	.47	.40	.36	.32
56 D 3843	‡80511-E	E	SPST-N.O.	N	.51	.47	.40	.36	.32
56 D 3845	‡80541-R	E	SPST-N.C.	R	.98	.90	.75	.68	.60
56 D 3846	‡80541-E	E	SPST-N.O.	B	.98	.90	.75	.68	.60
56 D 3847	‡80541-ER	E	SPST-N.O.	R	.98	.90	.75	.68	.60
56 D 4152	*80630	F	DPST-N.O.	N	2.05	1.90	1.58	1.42	1.26

ELECTRONIC CONTROLS, INC.

T-BAR MULTI-POLE SWITCHES



Reliable high density, multiple-pole, double-throw bat-handle toggle and momentary pushbutton switches. Unique design allows you to switch more circuits in less space. Control up to 108 circuits Protected from dust, damage and humidity by tight plastic case separated from the actuator assembly. Withstands MIL STD-202, method 106B moisture-resistance test. Gold-bonded fine silver contacts providing many years of service are rated: non-inductive, 150 watts, 3 amps make-or-break; 500 watts, 5 amps carry. Contact Life: (Mechanical) Type 802, 50,000 cycles, Type 803, 500,000 cycles; (Electrical) 50,000 cycles at 5 amps. 28 VDC or 115 VAC, resistive. Dielectric strength: (terminal to case) 1000 VAC at sea level. Temperature Range: −55°C to +85°C. Operate and release times: Less than 30 milliseconds. Av. shpg. wt., 6 oz.

SERIES 802 BAT-HANDLE TOGGLE SWITCHES

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-74	75-99
56 D 6623	802-8C	8PDT	11.44	10.87	10.33	9.84
56 D 6624	802-12C	12PDT	12.68	12.05	11.44	10.91
56 D 6625	802-24C	24PDT	24.86	23.62	22.44	21.38
56 D 6626	802-36C	36PDT	34.40	32.68	31.05	29.58
56 D 6627	802-48C	48PDT	56.29	50.66	45.59	41.09
56 D 6629	802-72C	72PDT	84.80	76.32	68.69	61.90

SERIES 803 MOMENTARY PUSHBUTTON SWITCHES

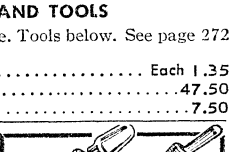
Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-74	75-99
56 D 6633	803-4C	4PDT	7.13	6.77	6.43	6.13
56 D 6634	803-8C	8PDT	9.54	9.06	8.61	8.20
56 D 6635	803-12C	12PDT	10.77	10.23	9.72	9.26
56 D 6636	803-24C	24PDT	22.96	21.81	20.72	19.75
56 D 6637	803-36C	36PDT	32.50	30.88	29.33	27.95

T-BAR CONNECTOR AND TOOLS

88601 Connector. Snap-in terms. for wire. Tools below. See page 272 for illustration and description.

41 D 5524. ..... Each 1.35
41 D 5522. 8601-51 Crimping Tool. 47.50
41 D 5523. 8601-61 Extraction Tool. 7.50

J-B-T JMT SERIES SUBMINIATURE SWITCHES



For manual control, solid-state devices and miniature circuits. Single pole type are ¼" thin, double pole less than ½"-sq., 3-4 pole also small. Single hole mtg. ¼" threaded bushing. Nom. rating 5A, 125 VAC; 24 VDC; initial cont. res., 5 milliohms; insulation res, 10,000 meg. Life under load 100,000 make/break cycles. Bat handles, 30° throw, Silver contacts. Mtg. hdwe. *Momentary pos. Wt., 1 oz.

SPDT—3 TERMINALS

Stock No.	Mfr's Type	Action	EACH 1-24	25-99	100-499	500-999
56 D 6718	JMT-121	On-Off-On	1.95	1.30	1.17	1.09
56 D 6719	JMT-123	On-None-On	1.65	1.10	.99	.93
56 D 6720	JMT-126	On-None-On*	1.95	1.30	1.17	1.09
56 D 6721	JMT-127	On*-Off-On*	2.10	1.40	1.26	1.18
56 D 6722	JMT-131	On-Off-On*	2.10	1.40	1.26	1.18
56 D 6723	JMT-134	None-On-On*	1.95	1.30	1.17	1.09

DPDT—6 TERMINALS

Stock No.	Mfr's Type	Action	EACH 1-24	25-99	100-499	500-999
56 D 6724	JMT-221	On-Off-On	2.55	1.70	1.53	1.43
56 D 6725	JMT-223	On-None-On	2.15	1.43	1.28	1.20
56 D 6726	JMT-226	On-None-On*	2.55	1.70	1.53	1.43
56 D 6727	JMT-227	On*-Off-On*	2.70	1.80	1.62	1.51
56 D 6728	JMT-231	On-Off-On*	2.70	1.80	1.62	1.51
56 D 6729	JMT-232	On-On-On	2.85	1.90	1.71	1.60
56 D 6730	JMT-233	On-On-On*	3.15	2.10	1.89	1.76
56 D 6731	JMT-234	None-On-On*	2.55	1.70	1.53	1.43
56 D 6732	JMT-235	On*-On-On*	3.10	2.05	1.87	1.74

3-POLE DT—9 TERMINALS

Stock No.	Type No.	Action	EACH 1-24	25-99	100-499	500-999
56 D 6733	JMT-321	On-Off-On	4.25	2.84	2.54	2.37
56 D 6734	JMT-323	On-None-On	3.85	2.57	2.32	2.16
56 D 6735	JMT-327	On*-Off-On*	4.40	2.93	2.63	2.46
56 D 6736	JMT-331	On-Off-On*	4.40	2.93	2.63	2.46
56 D 6737	JMT-334	None-On-On*	4.50	3.00	2.70	2.62

4-POLE DT—12 TERMINALS

Stock No.	Type No.	Action	EACH 1-24	25-99	100-499	500-999
56 D 6738	JMT-421	On-Off-On	5.45	3.64	3.26	3.05
56 D 6739	JMT-423	On-None-On	4.85	3.24	2.90	2.71
56 D 6740	JMT-427	On*-Off-On*	5.60	3.74	3.35	3.13
56 D 6741	JMT-431	On-Off-On*	5.60	3.74	3.35	3.13
56 D 6742	JMT-432	On-On-On	6.00	4.00	3.60	3.36
56 D 6743	JMT-433	On-On-On*	6.25	4.15	3.76	3.51
56 D 6744	JMT-434	None-On-On*	5.90	3.93	3.53	3.30
56 D 6745	JMT-435	On*-On-On*	6.40	4.28	3.83	3.57

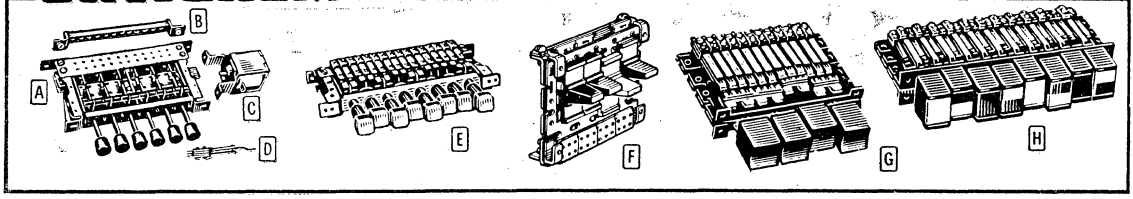
COLOR CODED CAPS FOR JMT SERIES

White, blue, red, black, brown, orange, yellow, green, violet or gray—specify color when ordering.

56 D 6746 C. Pkg. of 10 per color. 1-3 Pkgs. ..... Each .28
4-19 Pkgs. ..... Each .25 20-39 Pkgs. ..... Each .22

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

SWITCHCRAFT® INC. Pushbutton Multi-Switches



ALLIED FACTORY-APPROVED "MULTI-SWITCH" SWITCH ASSEMBLY PROGRAM

Allied makes switch assemblies for you from standard, in-stock components. Switchcraft's "Multi-Switch" is the ultimate in dependability, simplicity and versatility. It offers you unlimited latitude in the switching functions of your equipment designs. Virtually unlimited combinations of illuminated and non-illuminated switches, functions, switch contact configurations—complete custom built assemblies by Allied at factory prices. Our personnel have been factory-trained by the engineers who design and produce these switches. They are ready to aid you in design and engineering of "Multi-Switches."

A SERIES 7000, 8000 NON-ILLUMINATED FRAMES

Mounts on panels up to ⅜" thick, 3 5/16" depth behind panel. Round brown button for each station, red for release on all lock frame on ⅝" centers (7000). Up to four stacks can be operated by each button. Interlock, non-lock, all-lock, or any combination function available. Long switch springs with no forms at point of flexing result in long switch life. Latching mechanism has roller design with case hardened steel components for smoother action and long life. Multiple ganged assemblies. Heavy-gauge steel, rugged welded end mounting brackets. 7000 Series available to 37 stations. 8000 Series on ¾" centers available to 31 stations. Plunger will also accept "Glow-Buttons" listed below. Average shpg. wt. per station, 2 oz.

E SERIES 21000, 22000 ILLUMINATED FRAMES

Illuminated with all the advantages of the 7000 Series listed above. Knurled collar holds lamp in socket, assures quick and easy lamp replacement. Choice of colored diffusers and jewels provides wide range of lighting effects. Front of panel lamp replacement. Lighting available in any button position. ⅝" centers (21000) available to 37 stations. ¾" centers (22000) available to 31 stations. Supplied less lamps. Average shpg. wt. per station, 2 oz.

G SERIES 35000 NON-ILLUMINATED FRAMES

Non-illuminated frames similar to 7000 Series but compact low silhouette design offering 6PDT switching in ⅝". Only ¾" height; 2 1/16" depth behind panel. Plungers on ⅝" centers. Interlock, non-lock, all-lock and push-to-lock, push-to-release functions available. Dry film lubricant prevents dirt or grease pick-up. Frames furnished with modern square black buttons for all stations. Available from 1 to 18 stations in a row. Ganged and coupled matrixes. Average shpg. wt. per station, 1 oz.

H SERIES 36000, 37000, 38000 FRAMES

All operating functions described above are available in these series. All utilize the same basic frame. Available to 18 stations. Series 400 pushbuttons offer a wide range of color and legend coded selectivity. Series 36000 is a non-illuminated frame which can be converted to illuminated 37000 with T-10 skt or illuminated 38000 with T-11 skt. Series 37000 offers a single lamp skt. at each station. 38000 provides two lamp skts. Lighting in "IN", "OUT" or "IN" & "OUT" positions may be accomplished by direct wiring to lamp socket or by use of "H" lighting stacks which allows rear of frame wiring. Av. shpg. wt. per station, 1 oz.

F SERIES 39000 MULTI-SLIDE FRAMES

Compact, versatile multi-slide switches eliminate much of the operating confusion inherent in the constant manipulation of push-button matrixes. Available in a single row assembly of 1 to 18 stations with interlock or non-lock functions. Available up to 12 stations with all-lock function. 3PDT circuitry per station. Requires a maximum of only ¾" depth behind panel. Color coding accomplished by pressure sensitive legend tabs that are easily inserted to the recessed portions of each slidebutton.

HOW TO ORDER

A specification sheet must be enclosed with each order. These sheets insure proper assembly and pricing. Below is a composite list of the basic information needed. Each series has a different sheet depending on what is available for that series. These sheets and any information desired may be obtained from your nearest Allied facility which will also assist in the placement and processing of an order. An Allied part no. is given to each unit assembly so that future orders for the same unit may be entered by part no. only without enclosing the specification sheet. These switches are assembled from standard in-stock components at Allied Electronics.

1. Frame Series
2. No. Stations
3. Function
4. Lock-Out
5. Elect. Lock-Up
6. Solenoid Release
7. Plunger Length
8. Switch Stacks
   - A. Location
   - B. Type Contact
9. Buttons
   - A. Color Inserts
   - B. Color Button
   - C. Engraving
   - D. Type Button

B LOCK-OUT BAR

Prevents operation of more than one button at a time. Mounts on back of Series 7000, 21000 frame. Available from 2 to 37 stations. Specify lockout when ordering.

C SOLENOID RELEASE

For all series. Automatic remote release of depressed stations. For 115 VAC, 60 Hz. Complete with mounting bracket and screws. Shpg. wt., 4 oz.

D STACK SWITCHES

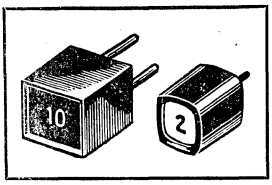
Highly reliable interchangeable switch stacks for Series 7000 and 21000. Series 70 silver contacts for power circuits; Series 70P welded cross-bar palladium contacts for low level circuits. Both rated 3 amps, 300 watts max., AC non-inductive load. Series 70W silver contacts for 120 VAC power circuits; rated up to 5 amps, non-inductive load. Series 700 same as above but for use on push-to-lock, push-to-release. Switch stacks for series 3500 thru 3900. Series 80P cross-bar welded palladium contacts rated at 3 amps, 300 watts max., AC non-inductive load. Type H-83P same as 80P, but with lighting convenience blade for rear of frame wiring. Series 800 same as above but for use on push-to-lock, push-to-release. All stacks can be easily mounted on the removable switch stack bracket furnished with all standard Littel "Multi-Switch" frames.

LAMPS FOR FRAMES

Series 21000 and 37000 accept both 327 and 328 lamps while 38000 accepts only 718 lamp. In order to use the 718 lamp with its longer life on the 21000 and 37000, use T-1 adapter. Lamps are not furnished with the frame and must be ordered separately.

60 D 7510. Ind. No. 718. 6-V.....Each 3.53 Pkg. of 10, 22.10
60 D 7343. Ind. No. 328. 6-V.....Each .55 Pkg. of 10, 3.30
60 D 7342. Ind. No. 327. 6-V.....Each .71 Pkg. of 10, 4.20

"GLOW-BUTTON"—SERIES X AND Y

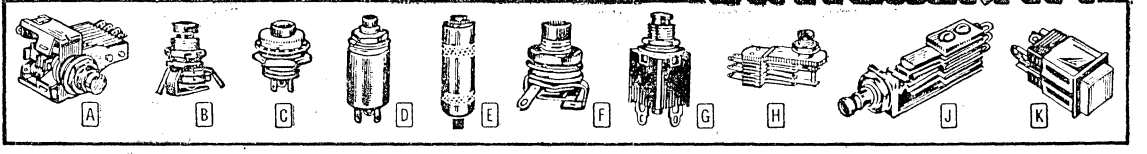


Illuminates switch pushbutton without electrical power. Invaluable when lamp illumination is inconvenient or impossible. Ideal for use on computers, instruments, control panels and any other equipment requiring illuminated pushbutton switching. Type No. 21248 has a black opaque screen; No. 51248, a white opaque screen. Both provide orange-red illumination. Mount on standard .050x.187" plungers having a max. of 1/16" fallback action, like those in the Switchcraft Series 7000, 8000 "Multi-Switches," Series 35000 Littel "Multi-Switches," and other switches having similar plunger action. **Legends available: 0-50, A-Z, ON, and OFF. Specify exact legend when ordering.** Average shpg. wt., ½ oz.

Stock No.	Mfr's Type	Screen Size	EACH 1-9	10-24	25-49	50-99
56 D 5795 C	X21248	½" sq.	1.00	.75	.69	.63
56 D 5796 C	Y21248	⅝x¾"	1.20	.90	.83	.75
56 D 5797 C	X51248	½" sq.	1.00	.75	.69	.63
56 D 5798 C	Y51248	⅝x¾"	1.20	.90	.83	.75

Pushbutton Switches

SWITCHCRAFT® INC.



A ILLUMINATED "NF-LITE" PUSHBUTTON SWITCHES

Illuminated pushbutton switches indicate switching and circuit functions at a glance. Lighting circuit is independent of switching circuit. Fine-silver contacts rated 3 amps, 300 watts maximum, AC noninductive. Come with four color chips (red, amber, green, yellow) for changing color of pushbutton. Require 1 1/16" minimum, 1 5/16" maximum behind panel; mount in 3/8" hole in panels up to 1/4" thick. Less 6-volt or 28-volt lamp, lower right. 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4613	4106	DPDT	2-C	1.56	1.45	1.30	1.04
56 D 4614	4109	3PDT	3-C	2.01	1.84	1.68	1.34

B "LITTEL" PUSHBUTTON SWITCHES

Designed for limited-space applications. Have one-piece button and shaft. Integral spring contacts are of nickel-silver, insulated from mounting bushing with high-grade phenolic. Button color: *black, †red. Mount in single hole with 3/8" threaded brass bushing. Recommended for low-level circuits only. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4944	†101	SPST	1-A	.60	.55	.50	.40
56 D 4945	†102	SPST	1-B	.60	.55	.50	.40
56 D 4946	†103	SPDT	1-C	.69	.63	.58	.46
56 D 4947	*201	SPST	1-A	.60	.55	.50	.40
56 D 4948	*202	SPST	1-B	.60	.55	.50	.40
56 D 4949	*203	SPDT	1-C	.69	.63	.58	.46

B ILLUMINATED "LITTEL-LITE" PUSHBUTTON SWITCHES

Same as above, but illuminated pushbutton. Clear plastic button and shaft illuminated by a single 6 or 28 V lamp (less lamp, lower right). Rated at 3 amps, at 300 W maximum noninductive load. With four color chips (red, amber, green, yellow). Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4607	211S	SPST	1-A	1.26	1.16	1.05	.84
56 D 4609	213S	SPDT	1-C	1.50	1.38	1.25	1.00

C D "BUTTON SWITCHES"

Small momentary-action pushbutton switches. Enclosed in metal housing; black or red plastic button. Types 903 and 913 (Figure C) are 7/8" long; for behind-panel mounting in panels up to 19/64" thick; fit 15/32" hole. Types 923 and 933 (Figure D) are 1 1/4" long; mount in front of panels up to 5/32" thick; fit 1/4" hole. All are rated 250 mA, 30 watts maximum, AC noninductive. Wt., 3 oz.

Red Button Stock No.	Mfr's Type	Black Button Stock No.	Mfr's Type	Action	Contact Form	EACH 1-24	25-49	50-99	100-249
56 D 5414	903	56 D 5418	913	SPDT	1-C	.87	.80	.73	.58
56 D 5416	923	56 D 5420	933	SPDT	1-C	.93	.85	.78	.62

E CORD PUSHBUTTON SWITCH

Precision switch for remote control of recorders, lights, etc. Hole at one end for 2-conductor line; other end has nonlocking, spring-return pushbutton switch. Rated 250 mA, noninductive load, 30 watts max. Nickel-plated sleeve 1 1/16" dia. 2 3/16" long. 4 oz.

Stock No.	Mfr's Type	Color	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 5422	E903	Red	1-C	1.41	1.29	1.18	.94
56 D 5424	E913	Black	1-C	1.41	1.29	1.18	.94

F PUSHBUTTON "TINY SWITCHES"

Subminiature pushbutton switches for limited space applications. For use in microphones, radio and automotive test instruments. Nickel-plated brass frame and bushing. With mounting hardware. 1/4" threaded shank; 13/64" long. For use with low-level currents only. Require 5/16" behind panels up to 3/32" thick. Wt., 3 oz.

Red Button Stock No.	Mfr's Type	Black Button Stock No.	Mfr's Type	Action	Contact Form	EACH 1-24	25-49	50-99	100-249
56 D 4831	951	56 D 4834	961	SPST	1-A	.60	.55	.50	.40
56 D 4832	952	56 D 4835	962	SPST	1-B	.60	.55	.50	.40
56 D 4833	953	56 D 4836	963	SPDT	1-C	.69	.63	.58	.46

G "HI-D" PUSHBUTTON SWITCHES

High-density, momentary-action switches for limited-space applications. Switch is enclosed in well-insulated housing. One-piece pushbutton and shaft. Integral silver-plated springs rated at 1 amp, 100 watts maximum, AC noninductive load. Button color: *red, †black. Mount in 3/8" hole in panels up to 5/32" thick on 5/8" centers. Require 1 3/32" behind panel. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4448	*H-101	SPST	1-A	.66	.61	.55	.44
56 D 4449	*H-102	SPST	1-B	.66	.61	.55	.44
56 D 4450	*H-103	SPDT	1-C	.75	.69	.63	.50
56 D 4451	†H-201	SPST	1-A	.66	.61	.55	.44
56 D 4452	†H-202	SPST	1-B	.66	.61	.55	.44
56 D 4453	†H-203	SPDT	1-C	.75	.69	.63	.50

H "FF" PUSHBUTTON SWITCHES

Rugged flat-frame switches provide a simple, direct-acting momentary pushbutton contact. Fine-silver contacts rated 3 amps, 300 watts maximum, AC noninductive load. Insulated springs are form-free at flex point to assure long life. One-piece black button and shaft. Threaded mounting shank is 3/8" in diameter and 3/8" long. Comes with locknut and washer. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4994	1001	SPST n.o.	1-A	.78	.72	.65	.52
56 D 4996	1003	SPDT	1-C	.87	.80	.73	.50
56 D 4997	1004	DPST n.o.	2-A	.96	.88	.80	.64
56 D 4999	1006	DPDT	2-C	1.11	1.02	.93	.74
56 D 4969	1009	3PDT	3-C	1.59	1.46	1.33	1.06

J MINIATURE "TF" PUSHBUTTON SWITCHES

Tiny-frame momentary-action pushbutton switches occupy minimum space. Each has cadmium-plated steel frame, phenolic insulation, nickel-silver springs, integral contacts. Recommended for low-level circuits where contact resistance is unimportant. Mount in 1/4" hole and require 1 19/32" behind panel which can be up to 3/32" thick. All are 3/8" wide. Stack height, 19/32" min. 3 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 5992	976	DPDT	2-C	.96	.88	.80	.64

K "UNISWITCH" ILLUMINATED/NON-ILLUMINATED SWITCHES

Low-cost momentary action pushbutton switches for computers, data processing equipment, test and measuring devices, telephones and telephone apparatus. *Illuminated (solder lug lighter terminals) or †non-illuminated. Only 1 1/16" square—mount in single panel cutout from panel front. Require 1 3/64 to 1 15/16" behind panel. "Adjusto-Clip" for instant "snap-lock" installation—may be set in any position for panels 3/64-1 7/64" thick. Bronze, silver-plated terminals. Phosphor bronze, silver-plated contactor. 250 mA., 30 W max., AC noninductive. White. 2 oz. Lamp, 6V Bi-Pin, 2 oz.

Stock No.	Mfr's Type	Action	Contacts	EACH 1-24	25-49	50-99	100-249
56 D 4855	*LUS-05-1	SPST n.o.	1A	1.08	.99	.90	.72
56 D 4856	†US-05-1	SPST n.o.	1A	.84	.77	.70	.56
56 D 4857	PE-2290	Lamp for *		.90	.83	.75	.60

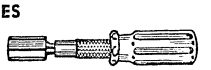
LAMPS FOR ILLUMINATED SWITCHES

For all Switchcraft illuminated switches, including: "Little-Lite," "NF-Lite," "Lever-Lite." All take 6 or 28 V lamp. 2 oz. See page, 421 for illustrations.

Stock No.	Type	Volts	EACH	PKG. OF 10
60 D 7359	1768	6	.92	5.50
60 D 7126	335	28	1.54	9.30

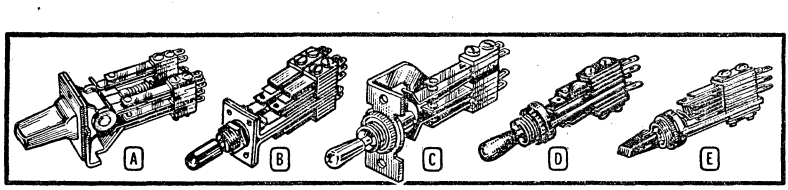
SWITCH WRENCHES

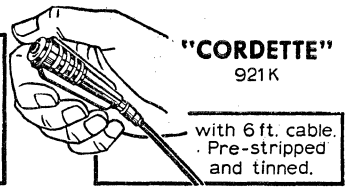
Fit knurled or milled-edge locknuts with toggle, lever and button switches and jacks. Adjustable sleeve. Wt., 10 oz.



Stock No.	Mfr's Type	Nut Size	EACH 1-24	25-49	50-99	100-249
56 D 4605	A-1070	15/32"-32	4.50	4.13	3.75	3.00
56 D 4606	A-1071	1/4"-32	4.50	4.13	3.75	3.00

SWITCHCRAFT® INC. Lever and Remote Switches





[A] MULTICOLOR-ILLUMINATED "LEVER-LITE" SWITCHES

Switch indicates each position in different illuminated colors. Nickel-silver springs. Fine-silver contacts rated 3 amps, 300 watts maximum, AC noninductive. Supplied with 6-volt lamp (28-volt lamp available on facing page). Mount in panels up to 3/32" thick. All are 2-position types, except *3-position types which have same contact form for both sections on each side. Series 25000 includes six color chips (red, green, amber, yellow, blue, white) replaceable in the field. Behind-panel size, 1 7/32"x3 9/64"x2 1/4". Mount on 5/8" centers. Series 27000 has larger contoured lever and larger factory-installed color filters. On 2-position types, amber lights in "neutral" position, green lights in "down." On 3-position types, red lights in "up" position, amber in "neutral," green in "down." Behind-panel size, 1 7/32"x3/4"x2 3/16". Mount on 3/4" centers. †N.O., center position "off." Contact forms on facing page. Shpg. wt., 3 oz.

SERIES 25000

Mfr's Type	Stock No. Locking Type	Stock No. Nonlocking Type	Action	Contact Form	EACH 1-24	25-49	50-99	100-249
25201	56 D 6280	.....	SPST	1-A	2.76	2.53	2.30	1.84
25206	56 D 6282	56 D 6274	DPDT	2-C	3.45	3.16	2.88	2.30
25209	56 D 6283	56 D 6275	3PDT	3-C	3.96	3.63	3.30	2.64
*25304	56 D 6284	.....	SPST	1-A	3.12	2.86	2.60	2.08
*25306	56 D 6285	56 D 6277	SPDT	1-C	3.45	3.16	2.88	2.30
*25308	56 D 6286	56 D 6278	DPST	2-A	3.81	3.49	3.18	2.54
*25312	56 D 6287	56 D 6279	DPDT	2-C	4.14	3.80	3.45	2.76

SERIES 27000

27206	56 D 4651	56 D 4656	DPDT	2-C	4.50	4.13	3.75	3.00
27212	56 D 4652	56 D 4657	4PDT	4-C	5.52	5.06	4.60	3.68
*27306	56 D 4653	.....	SPDT	1-C	4.50	4.13	3.75	3.00
*27307	56 D 4654	56 D 4659	SPDT	1-C†	4.59	4.21	3.83	3.06
*27312	56 D 4655	56 D 4660	DPDT	2-C	5.52	5.06	4.60	3.68
532	56 D 4661	Escutcheon Plate			.18	.17	.15	.12

[B] "TELEVER" SWITCHES

Rugged telephone-type switches with "T-Beam" steel frame construction. Nylon rollers actuate nickel-silver springs, provide smooth switching action. Extra-long springs punched from special alloy ensure long, dependable life. Welded cross-bar palladium contacts rated 3 amps, 120 V AC noninductive, up to 3 amps, 300 watts maximum. All have tinned solder-lug terminals. Series 6000 is tapped for 3-48 mounting screws; standard telephone mounting centers, 1 7/32"x1 3/16". Series 16000 has 15/32"-32 threaded mounting bushing. All have insulated black knob. 3-position types have same contact form for both sections on each side. Shpg. wt., 3 oz.

SERIES 6000 TWO-POSITION TYPES

6006	56 D 4734	.....	DPDT	2-C	3.15	2.89	2.63	2.10
60012	56 D 4737	56 D 4729	4PDT	4-C	4.23	3.88	3.53	2.82

SERIES 6000 THREE-POSITION TYPES

60312	56 D 4744	56 D 4740	DPDT	2-C	4.77	4.37	3.98	3.18
60324	56 D 4745	56 D 4741	4PDT	4-C	6.45	5.91	5.38	4.30
530	56 D 4486	Escutcheon Plate			.60	.55	.50	.40

SERIES 16000 TWO-POSITION TYPES

16006	56 D 4854	56 D 4853	DPDT	2-C	3.30	3.03	2.75	2.20
160012	56 D 5462	56 D 5460	4PDT	4-C	4.50	4.13	3.75	3.00
160024	56 D 4860	56 D 4859	8PDT	8-C	6.60	6.05	5.50	4.40

SERIES 16000 THREE-POSITION TYPES

16038	56 D 5463	56 D 5461	SPDT	2-A	3.69	3.38	3.08	2.46
160312	56 D 4866	56 D 4865	DPDT	2-C	4.50	4.13	3.75	3.00
160324	56 D 4881	56 D 4869	4PDT	4-C	6.60	6.05	5.50	4.40

[C] "FEATHER-LEVER" SWITCHES

Miniature "Tini-Stack" switch stack of special nickel-silver springs with fine-silver contacts. 2 amps, 200 watts max., AC noninductive. Insulated black knob. Mount on 7/16" centers in 5/16" hole, or in panels up to 1/8" thick. *3-position types have same contact form for both sections on each side. †N.O., center position "off." 3 oz.

29203	56 D 4625	.....	SPDT	1-C	1.50	1.38	1.25	1.00
*29304	.....	56 D 4664	SPST	1-A	1.65	1.51	1.38	1.10
*29306	56 D 4628	.....	SPDT	1-C	1.92	1.76	1.60	1.28
*29307	56 D 4629	56 D 4666	SPDT	1-C†	1.95	1.79	1.63	1.30

[D] "LEV-R" SWITCHES

Require half the space normally needed for lever switches. Frame bushing and shaft of nickel-plated brass. Fine-silver contacts rated 3 amps, 300 watts maximum, AC noninductive. Nonlocking types have spring return. All are 5/8" wide; require 2 19/64" behind panel, and 15/32" mounting hole. With locknut and screw-on black knob. 3-position switches have same contact form for both sections on each side. †N.O., center position "off." Types 3033 and 13033 are 3-position switches with one form C only. Series 3000 has 13/64" mounting bushing; mounts in panels up to 3/32" thick. Series 13000 has 3/8" mtg. bushing; for panels up to 1/4" thick. See forms, facing page. 3 oz.

SERIES 3000 TWO-POSITION TYPES

Mfr's Type	Stock No. Locking Type	Stock No. Nonlocking Type	Action	Contact Form	EACH 1-24	25-49	50-99	100-249
3001	56 D 4471	56 D 4465	SPST	1-A	1.35	1.24	1.13	.90
3003	56 D 4472	56 D 4466	SPDT	1-C	1.62	1.49	1.35	1.08
3004	56 D 4473	56 D 4467	DPST	2-A	1.77	1.62	1.48	1.18
3006	56 D 4474	56 D 4468	DPDT	2-C	1.95	1.79	1.63	1.30
3009	56 D 4484	56 D 4485	3PDT	3-C	2.52	2.31	2.10	1.68

SERIES 3000 THREE-POSITION TYPES

3033	56 D 4475	56 D 4469	SPDT	1-C†	1.77	1.62	1.48	1.18
3034	56 D 4459	56 D 4458	SPST	1-A	1.83	1.68	1.53	1.22
3036	56 D 4479	56 D 4478	SPDT	1-C	2.04	1.87	1.70	1.36
3037	56 D 4476	56 D 4470	SPDT	1-C†	2.10	1.93	1.75	1.40

SERIES 13000 TWO-POSITION TYPES

13001	56 D 5551	56 D 5550	SPST	1-A	1.47	1.35	1.23	.98
13003	56 D 5555	56 D 5554	SPDT	1-C	1.71	1.57	1.43	1.14
13006	56 D 5561	56 D 5560	DPDT	2-C	2.04	1.87	1.70	1.36
13009	56 D 5563	56 D 5562	3PDT	3-C	2.73	2.50	2.28	1.82

SERIES 13000 THREE-POSITION TYPES

13033	56 D 5565	56 D 5564	SPDT	1-C†	1.86	1.71	1.55	1.24
13036	56 D 5571	56 D 5570	SPDT	1-C	2.25	2.06	1.88	1.50
13037	56 D 5573	56 D 5572	SPDT	1-C†	2.25	2.06	1.88	1.50

[E] "LEV-R" SWITCHES WITH MOLDED-ON KNOBS

As above, but permanently molded-on black knob. All 2-position except *3-position types which have same contact form for both sections on each side. Nylon roller for smoother action. With locknut and nonturn ring to keep switch from turning. Mount on 5/8" centers in panels to 3/32" thick. Require 15/32" hole (1/8" for nonturn ring) and 2 17/64" behind panel. †Normally open, center position "off." Shpg. wt., 3 oz.

Mfr's Type	Stock No. Locking Type	Stock No. Nonlocking Type	Action	Contact Form	EACH 1-24	25-49	50-99	100-249
28203	56 D 4671	56 D 4677	SPDT	1-C	2.16	1.98	1.80	1.44
28204	56 D 4672	56 D 4678	DPST	2-A	2.10	1.93	1.75	1.40
28206	56 D 4673	56 D 4679	DPDT	2-C	1.89	1.73	1.58	1.26
*28304	56 D 4674	56 D 4680	SPST	1-A	2.37	2.17	1.98	1.58
*28306	56 D 4675	56 D 4681	SPDT	1-C	2.58	2.37	2.15	1.72
*28307	56 D 4676	56 D 4682	SPDT	1-C†	2.64	2.42	2.20	1.76

"CORDETTE" REMOTE CONTROL SWITCHES

Type 921-K. Momentary-action pendant switch. Provides remote switching of industrial and commercial instrumentation, control devices, nurse-call systems, X-ray equipment in hospitals, projectors, cameras. Fits comfortably in the hand, yet is rugged enough for critical applications. High-strength molded plastic one-piece body is enclosed to protect switching contacts. Molded plastic construction guards against contamination. Has SPST switch circuit with integral brass, hard-gold-plated 500-mA contacts, 50 watts max., AC noninductive load. 6-ft. gray, 2-conductor unshielded cable, stripped and tinned. 1 3/16" wide, 2 15/16" long. Shpg. wt., 4 oz. Type 921. Has Switchcraft Phono-Jax output molded direct to body. Standard jack accepts most phono plugs. Wt., 1 oz. Both types for low-voltage circuits.

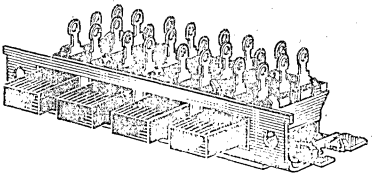
Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249
56 D 5800	921-K	3.00	2.75	2.50	2.00
56 D 5799	921	2.55	2.34	2.13	1.70

Specify Stock No., Mfr's Type and Locking or Nonlocking Operation When Ordering

Switchcraft and Continental-Wirt Switches

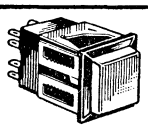
SWITCHCRAFT SERIES 65000, DW "MULTI-SWITCH"™

Multiple-station pushbutton switch for majority of switch applications: computers; analyzers; transmitters; any appliances or control panel applications where cost and reliability are of prime importance. Switch utilizes specially designed 2-C (DPDT) switch module that consists of a switch housing; integral black pushbutton nylon actuator; terminal board assembly; "U"-shaped double-wipe bifurcated silver-plated brass contacts rated 3A, AC; 0.5A, DC; 125 V, non-inductive load. Solderlug type silver-plated brass terminals. Requires 1 1/16" depth behind panel. 3/4" length plus 5/8" for each station. 27/32", ht. Mount with #6 screws, or notched frame accepts Tinnerman #7888-632-1 speed nuts and 6-32 machine screws. Choice of interlock with lock-out, non-lock and all-lock functions. Av. shpg. wt., 4 oz.

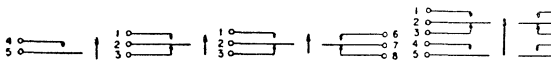


Stock No.	Mfr's Type	Function	Stations	EACH 1-9	10-24	25-49	50-99	100-249	250-499
56 D 6700	65021K-206	Interlock	2	2.24	1.68	1.54	1.40	1.12	1.06
56 D 6701	65022-206	Non-Lock	2	2.12	1.59	1.46	1.33	1.06	1.01
56 D 6702	65023-206	All-Lock	2	2.24	1.68	1.54	1.40	1.12	1.06
56 D 6703	65041K-206	Interlock	4	4.00	3.00	2.75	2.50	2.00	1.90
56 D 6704	65042-206	Non-Lock	4	3.88	2.91	2.67	2.43	1.94	1.84
56 D 6705	65043-206	All-Lock	4	4.00	3.00	2.75	2.50	2.00	1.90
56 D 6706	65061K-206	Interlock	6	5.76	4.32	3.96	3.60	2.88	2.74
56 D 6707	65062-206	Non-Lock	6	5.60	4.20	3.85	3.50	2.80	2.66
56 D 6708	65063-206	All-Lock	6	5.76	4.32	3.96	3.60	2.88	2.74
56 D 6709	65081K-206	Interlock	8	7.52	5.64	5.17	4.70	3.76	3.57
56 D 6710	65082-206	Non-Lock	8	7.36	5.52	5.06	4.60	3.68	3.50
56 D 6711	65083-206	All-Lock	8	7.52	5.64	5.17	4.70	3.76	3.57
56 D 6712	65101K-206	Interlock	10	9.24	6.93	6.35	5.78	4.62	4.39
56 D 6713	65102-206	Non-Lock	10	9.04	6.78	6.22	5.65	4.52	4.29
56 D 6714	65103-206	All-Lock	10	9.24	6.93	6.35	5.78	4.62	4.39
56 D 6715	65121K-206	Interlock	12	11.00	8.25	7.56	6.88	5.50	5.23
56 D 6716	65122-206	Non-Lock	12	10.80	8.10	7.43	6.75	5.40	5.13
56 D 6717	65123-206	All-Lock	12	11.00	8.25	7.56	6.88	5.50	5.23

SWITCHCRAFT SWITCHES



These Functional Diagrams Refer To Both Switches Below



SERIES BX BOX SWITCHES

Tiny flush-mounted, momentary-action pushbutton switches provide up to 4 poles of switching. Only 1 1/16" square—mount in .615" square hole from front of panel. Take little panel space, yet have broad switching capability. Rated to 250 mA, 30 watts maximum, AC non-inductive load. Protected from dirt and damage by molded-plastic case. Easy snap-in mounting saves assembly time and allows adjacent-mounting on matrix configurations. Special "Adjusto-Clips" mount switch in 3/64 to 17/64" thick panels, and lock it in reliably to resist vibration and shock conditions. Attractive low-silhouette bezel frames pushbutton and serves as escutcheon. Integral silver-plated brass contacts. Solder lugs are spaced and identified for quick, easy wiring. Contact assemblies listed in table below are diagramed in illustration above. **Specify White, Black, Red, or Green Pushbutton.** Av. shpg. wt., 1/2 oz.

Stock No.	Mfr's Type	Contact Assembly	EACH 1-24	25-49	50-99	100-249
56 D 5791 C	BX-1	1-A	1.95	1.79	1.63	1.30
56 D 5792 C	BX-3	1-C	2.04	1.87	1.70	1.36
56 D 5793 C	BX-6	2-C	2.25	2.06	1.88	1.50
56 D 5794 C	BX-10	2-C & 2-A	2.55	2.34	2.13	1.70

SERIES 41000 "LT" MINIATURE LEVER SWITCHES

Telephone-type. Detent guide prevents accidental actuator bypass of switch position. Contacts rated 3A, 200 W max, AC non-ind. load. Long life nickel-silver springs. Damping block minimizes leaf-spring travel. Ground term. on frame. Mount in 15/32" hole, std. hardware; 23/32" mtg. centers. 2 1/16" behind panel. 5/8x3/4x3 3/4". *Pos. 1 and 2, identical contact assemblies. 1 lb.

TWO-POSITION SWITCHES

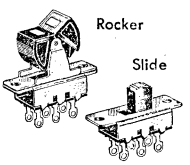
Mfr's Type	Stock No. Locking Type	Stock No. Non-Locking Type	Contact Assem.	EACH 1-24	25-49	50-99	100-249
41203	56 D 5775	56 D 5776	1-C	2.52	2.31	2.10	1.68
41206	56 D 5777	56 D 5778	2-C	3.15	2.89	2.63	2.10
41208	56 D 5779	56 D 5780	4-A	3.48	3.19	2.90	2.32
41212	56 D 5781	56 D 5782	4-C	4.26	3.91	3.55	2.84

THREE-POSITION SWITCHES

41306	56 D 5783	56 D 5784	1-C*	3.15	2.89	2.63	2.10
41308	56 D 5785	56 D 5786	2-A*	3.48	3.19	2.90	2.32
41312	56 D 5787	56 D 5788	2-C*	4.26	3.91	3.55	2.84
41324	56 D 5789	56 D 5790	4-C*	6.30	5.78	5.25	4.20

PHASE II SLIDE SWITCHES

Exclusive double-wipe action prevents oxidation, ensures good electrical contact. Positive-action detent tab holds slide at position. Terminals: silver-plated brass. Contacts: silver-plated brass alloy. 1 3/8" long, 17/32" wide, 1 1/2" mounting centers. Rated 0.5 amp DC; 3 amps AC, 125 volts noninductive load. Av. wt., 4 oz.



TWO-POSITION SLIDE SWITCHES

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-99	100-249
56 D 5810	46201MR	SPST N.O. Locking	.24	.22	.20	.16
56 D 5811	46202LR	SPST N.C. Locking	.21	.19	.18	.14
56 D 5818	46202MR	SPST N.C. Momentary	.24	.22	.20	.16
56 D 5812	46203LR	SPDT Locking	.24	.22	.20	.16
56 D 5813	46203MR	SPDT Momentary	.27	.25	.23	.18
56 D 5814	46204LR	DPST Locking	.27	.25	.23	.18
56 D 5815	46206LR	DPDT Locking	.30	.28	.25	.20
56 D 5816	46206MR	DPDT Momentary	.36	.33	.30	.24
56 D 5817	46256LFR	DPDT Locking	.42	.39	.35	.28

THREE-POSITION SLIDE SWITCHES (Center Locking)

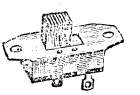
56 D 5819	46311LDR	SPTT Lock/Lock	.36	.33	.30	.24
56 D 5820	46311TDR	SPTT Lock/Momentary	.39	.36	.33	.26
56 D 5821	46313LDR	DPTT Lock/Lock	.39	.36	.33	.26
56 D 5822	56313TDR	DPTT Lock/Momentary	.42	.39	.35	.28

TWO-POSITION ROCKER SWITCHES

56 D 5823	51202LR	SPST N.C. Locking	.42	.39	.35	.28
56 D 5824	51203LR	SPDT Locking	.45	.41	.38	.30
56 D 5825	51206LR	DPDT Locking	.51	.47	.43	.34

CONTINENTAL-WIRT ECONOMY SLIDE SWITCHES

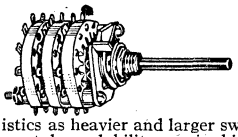
Low-cost AC-DC switches for many applications. Cadmium-plated steel housings. Solder lug terminals. Size, 35/64x1 13/32". Types G124, G126, G128L, 1x1 13/32". Recognized Under the Component Program of Underwriter's Laboratories, Inc. Av. shpg. wt., 3 oz.



Stock No.	Mfr's Type	Action	Amps @ 125 V	EACH 1-99	100-249	250-499	500-999
56 D 5916	G111	SPDT	0.5	1.25	.78	.52	.26
56 D 5034	G124	SPDT	0.5	.50	.32	.22	.15
56 D 4424	G126	DPDT	0.5	.75	.42	.28	.19
56 D 5035	G128L	DP3T	0.5	.75	.48	.32	.21
56 D 5917	G141	DP4T	0.5	1.00	.66	.44	.33
56 D 5023	GF323	SPST	3.0	.50	.20	.13	.09
56 D 5025	GF324	SPDT	3.0	.50	.20	.13	.09
56 D 5920	GF325	DPST	3.0	.50	.24	.16	.11
56 D 5921	GF326	DPDT	3.0	.50	.24	.16	.11
56 D 5039	GH328	DP3T	3.0	.50	.33	.22	.17
56 D 5032	G338L	DP4T	3.0	1.00	.66	.44	.33
56 D 5918	GF361	3PDT	3.0	1.00	.51	.34	.26
56 D 5036	GF342	4PDT	3.0	1.00	.66	.44	.33
56 D 5026	GF623	SPST	6.0	.50	.21	.13	.09
56 D 5027	GF624	SPDT	6.0	.50	.21	.13	.09
56 D 5033	GF625	DPST	6.0	.50	.29	.19	.15
56 D 5084	GF626	DPDT	6.0	.50	.27	.18	.14
56 D 5022	GF1123	SPST	11	.50	.32	.21	.15
56 D 5913	GG350	DPDT	3.0	.50	.30	.20	.15
56 D 5915	GH360	4PTT	3.0	1.50	.78	.52	.39
56 D 5914	GH368	3PTT	3.0	1.00	.63	.42	.32

Centralab Switches and Assemblies

SERIES PS-100 SUBMINIATURE CERAMIC ROTARY SWITCHES



Ultra-small; weigh less than 1 ounce, yet have same electrical characteristics as heavier and larger switches. For utmost dependability required in band switching, transistor circuits, aircraft instruments, guided missiles, etc. 1″ dia. Bushing, ¼″ dia. by ¼″ long. Shaft, ⅛″ dia. by 1″ long. Silver-plated clips, contacts. Positive 30° indexing. Fixed stop. .550 mA @ 28 VDC or 170 mA at 115 VAC. With knob, nut, lockwasher. Av. shpg. wt., 4 oz.

Shorting Stock No.	Shorting Type PS-	Non-Shorting Stock No.	Non-Shorting Type PS-	Total Poles	No. of Pos.	Poles per Sec.	No. of Sec.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 5362	100	56 D 5350	101	1	11	1	1	5.04	4.20	3.78	3.60	3.36	3.02
56 D 5363	102	56 D 5300	103	2	11	1	2	6.30	5.25	4.72	4.50	4.20	3.77
56 D 5364	104	56 D 5352	105	2	5	2	1	5.04	4.20	3.78	3.60	3.36	3.02
56 D 5306	106	56 D 5301	107	3	11	1	3	7.56	6.30	5.67	5.41	5.04	4.52
56 D 5366	108	56 D 5354	109	3	3	3	1	5.04	4.20	3.78	3.60	3.36	3.02
56 D 5308	110	56 D 5355	111	4	5	2	2	6.30	5.25	4.72	4.50	4.20	3.77
56 D 5368	112	56 D 5356	113	4	2	4	1	5.04	4.20	3.78	3.60	3.36	3.02
.....	.....	56 D 5302	115	6	5	2	3	7.56	6.30	5.67	5.41	5.04	4.52
56 D 5310	116	56 D 5358	117	6	3	3	2	6.30	5.25	4.72	4.50	4.20	3.77
.....	.....	56 D 5303	119	8	2	4	2	7.56	6.30	5.67	5.41	5.04	4.52
.....	.....	56 D 5304	121	9	3	3	3	7.56	6.30	5.67	5.41	5.04	4.52

SERIES PS-20 CERAMIC SECTIONS FOR ABOVE

For fixed-stop indexing and switching not supplied in PS-100 series subminiature switches above. Use with index and shaft assemblies P-501 through P-510 at right to produce custom switches to meet special requirements. Av. shpg. wt., 2 oz.

Shorting Stock No.	Shorting Type	Non-Shorting Stock No.	Non-Shorting Type	Total Poles	No. Pos.
56 D 5426	PS-20	56 D 5427	PS-21	1	2-11
56 D 5428	PS-22	56 D 5429	PS-23	2	2-5
.....	.....	56 D 5431	PS-25	3	2-3

1-4.....Each 2.20 5-9.....Each 1.83 10-24.....Each 1.65
25-49.....Each 1.57 50-99.....Each 1.47 100-249...Each 1.32

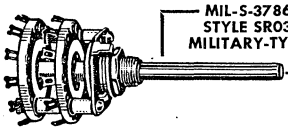
SERIES P-500 INDEX AND SHAFT ASSEMBLIES FOR ABOVE

Hardware for subminiature switches with up to 3 sections. Includes: P-106 pointer knob; six 3/32″ spacers; two 1/16″ spacers; two ⅛″ spacers; two 3/16″ spacers; two 1⅛″ tie bolts, nuts, lockwashers; 16 plastic spacer washers, 30° indexing; fixed stop. 2 oz.

Stock No.	Mfr's Type	No. of Pos.	Stock No.	Mfr's Type	No. of Pos.
56 D 5434	P-501	2	56 D 5438	P-505	6
56 D 5435	P-502	3	56 D 5321	P-507	8
56 D 5436	P-503	4	56 D 5329	P-509	10
56 D 5437	P-504	5	56 D 5330	P-510	11

1-4.....Each 1.95 5-9.....Each 1.63 10-24.....Each 1.47
25-49.....Each 1.40 50-99.....Each 1.30 100-249...Each 1.17

SERIES PA-6000 MINIATURE CERAMIC ROTARY SWITCHES



1 31/32″ dia. Pos. 30° indexing. Adjustable stop, except *fixed stop. 450 mA @ 115 VAC; 8 amps @ 6 VDC; 5½ amps @ 12 VDC. Knob, lockwasher. Av. shpg. wt., 4 oz.

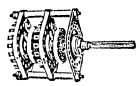
SHORTING TYPES

Stock No.	Type PA-	Total Poles	No. of Pos.	No. of Sec.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 6111	6000	1	2-11	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6113	6002	2	2-5	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6115	6004	2	2-11	2	5.46	4.55	4.10	3.90	3.64	3.27
56 D 6117	6006	3	2-3	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6119	6010*	4	2	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 5331	6012	4	2-5	2	5.46	4.55	4.10	3.90	3.64	3.27
56 D 5336	6024*	8	2	2	5.46	4.55	4.10	3.90	3.64	3.27

NON-SHORTING TYPES

56 D 6112	6001	1	2-11	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6114	6003	2	2-5	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6116	6005	2	2-11	2	5.46	4.55	4.10	3.90	3.64	3.27
56 D 6118	6007	3	2-3	1	3.58	2.98	2.68	2.56	2.39	2.14
56 D 6121	6013	4	2-5	2	5.46	4.55	4.10	3.90	3.64	3.27
56 D 6122	6019	6	2-3	2	5.46	4.55	4.10	3.90	3.64	3.27
56 D 5337	6025*	8	2	2	5.46	4.55	4.10	3.90	3.64	3.27

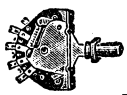
JV-9000 HEAVY-DUTY ROTARY POWER SWITCHES



Silicone-treated ceramic switches for transmitters, industrial and commercial controls, and test gear. Rated 9 A at 110 VAC (resistive); 30 A at 5 VDC; .015 A at 2500 VAC rms. Breakdown, 3000 V rms. 20° positive index; adjustable stop. All metal parts except clips, contacts and index spring are cadmium plated. Coin silver contacts. Nonshorting, except †shorting. Bushing, 3/8″x32 thread, 3/8″ long. Flattened shaft, ¼x21/4″ from mtg. surface. ⅛″ thick ceramic sections; 1″ between sections. Wafer size, 2x2 13/16″. Av. shpg. wt., 4 oz.

Stock No.	Type JV-	Sec.	Total Poles	No. Pos.	EACH 1-4	5-9	10-24	25-49	50-99
56 D 5115	9001	1	1	2-17	11.56	9.63	8.67	8.27	7.71
56 D 5116	9033	1	2	2-8	11.56	9.63	8.67	8.27	7.71
56 D 5117	9005	2	2	2-17	19.14	15.95	14.36	13.65	12.76
56 D 5118	9003	1	3	2-5	11.56	9.63	8.67	8.27	7.71
56 D 5119	9009	3	3	2-17	26.74	22.28	20.06	19.07	17.82
56 D 5120	9035	2	4	2-8	19.14	15.95	14.36	13.65	12.76
56 D 5121	9013	4	4	2-17	34.32	28.60	25.75	24.48	22.88
56 D 5123	9007	2	6	2-5	19.14	15.95	14.36	13.65	12.76
56 D 5124	9037	3	6	2-8	26.74	22.28	20.06	19.07	17.82
56 D 5125	9021	6	6	2-17	49.84	41.53	37.40	35.55	33.22
56 D 5126	9039	4	8	2-8	34.32	28.60	25.75	24.48	22.88
56 D 5128	9015	4	12	2-5	34.32	28.60	25.75	24.48	22.88
56 D 5129	9019	5	15	2-5	41.92	34.93	31.45	29.90	27.95
56 D 5100	9000	1†	1	2-17	11.56	9.63	8.67	8.27	7.71
56 D 5102	9004	2†	2	2-17	19.14	15.95	14.36	13.65	12.76
56 D 5103	9002	1†	3	2-5	11.56	9.63	8.67	8.27	7.71

LOW-COST LEVER-ACTION PHENOLIC SWITCHES



Dependable switches for new and replacement use in test equipment, intercoms, PA equipment, speaker selectors, and other applications. Feature nylon rotor and silver-plated brass clips and contacts. All have 30° indexing. Voltage breakdown of 1000 VAC rms. Contacts rated 1.5 amps at 28 VDC; 230 mA at 115 VAC rms. Contact resistance .0035 ohm. Minimum rotational life is 25,000 cycles. Mounting bracket has two 6-32 tapped holes on 1⅝″ centers. Laminated phenolic insulation. 1⅞x7/16″ (1¼″ behind panel). Complete with knob and necessary mounting hardware. Av. shpg. wt., 4 oz.

Shorting Stock No.	Shorting Mfr's Type	Non-Shorting Stock No.	Non-Shorting Mfr's Type	Total Poles	No. of Pos.	Type of Indexing	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 4021	1452	56 D 4026	1454	2	3	Positive	1.60	1.33	1.20	1.14	1.07	.96
.....	.....	56 D 4027	1455	2	3	Spring Return	1.60	1.33	1.20	1.14	1.07	.96
56 D 4023	1466	56 D 4028	1467	2	3	Pos. & Sp. Ret.	1.60	1.33	1.20	1.14	1.07	.96
56 D 4025	1456	56 D 4030	1457	4	2	Spring Return	1.78	1.48	1.34	1.27	1.19	1.07
56 D 4024	1459	56 D 4029	1458	4	2	Positive	1.78	1.48	1.34	1.27	1.19	1.07

SMALL GENERAL-PURPOSE SWITCHES

Step-type switches rated 1.5 amps at 28 VDC; 230 mA at 115 VAC. Shaft, ¼″ dia., 1⅞″ long. All have non-shorting contacts, except *shorting. Widely used in radio-phono combinations; PA channel selectors; meter reversers and selectors; intercom talk-listen, dual speaker and stereo speaker applications; momentary line or remote speaker returns on intercoms; and many other applications. Type 1472 is for use in FM-AM-phonos. Type 1463 and 1464 are for intercoms. Av. wt., 5 oz.

Stock No.	Mfr's Type	Description
56 D 4080	1460*	SPDT phono-radio
56 D 4081	1461*	SP-3-pos. selector
56 D 4082	1462*	DPDT bandswitch
56 D 4083	1463	SPDT momentary
56 D 4084	1464	DPDT momentary
56 D 5235	1472	DP-3-position

1-4.....Each 1.14 5-9.....Each .95
10-24....Each .86 25-49.....Each .82
50-99....Each .76 100-249....Each .68

ATTENTION INDUSTRIAL BUYERS

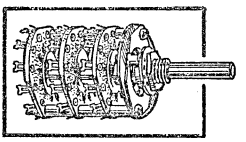
Allied supplies Lutron Powerdial Power Controls and Ohmite Omitrol Power Controls for precision use in a wide variety of industrial applications. See pages 384 and 386 for complete price and ordering information.

Centralab High-Reliability Rotary Switches

CENTRALAB

MINIATURE CERAMIC SWITCHES—1½x1 7/16" WAFERS

Non-Shorting Stock No.	Type PA-	Shorting Stock No.	Type PA-	Total Poles	No. Pos.	Sections	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 4921	2001	56 D 4900	2000	1	2-12	1	2.76	2.30	2.07	1.97	1.84	1.65
56 D 4922	2003	56 D 4901	2002	2	2-6	1	2.76	2.30	2.07	1.97	1.84	1.65
56 D 4923	2005	56 D 4902	2004	2	2-12	2	3.90	3.25	2.93	2.79	2.60	2.33
56 D 4924	2007	56 D 4903	2006	3	2-5	1	2.76	2.30	2.07	1.97	1.84	1.65
56 D 4925	2009	56 D 4904	2008	3	2-12	3	4.98	4.15	3.74	3.56	3.32	2.98
56 D 4926	2011	56 D 4905	2010	4	2-6	2	3.90	3.25	2.93	2.79	2.60	2.33
56 D 4927	2013	56 D 4906	2012	4	2-12	4	5.98	4.98	4.49	4.28	3.99	3.58
56 D 4928	2015	.....	.....	5	2-3	1	2.76	2.30	2.07	1.97	1.84	1.65
56 D 4929	2017	56 D 4908	2016	5	2-12	5	7.16	5.97	5.37	5.12	4.78	4.29
56 D 4930	2019	.....	.....	6	2	1	2.76	2.30	2.07	1.97	1.84	1.65
56 D 4931	2021	56 D 4910	2020	6	2-5	2	3.90	3.25	2.92	2.79	2.60	2.33
56 D 4932	2023	56 D 4911	2022	6	2-6	3	4.98	4.15	3.74	3.56	3.32	2.98
56 D 4933	2025	56 D 4914	2024	6	2-12	6	8.32	6.94	6.24	5.95	5.55	4.98
56 D 4934	2027	56 D 4913	2026	8	2-6	4	5.98	4.98	4.49	4.28	3.99	3.58
56 D 4935	2029	.....	.....	9	2-5	3	4.98	4.15	3.74	3.56	3.32	2.98
56 D 4936	2031	56 D 4916	2030	10	2-3	2	3.90	3.25	2.92	2.79	2.60	2.38
56 D 4918	2033	.....	.....	10	2-6	5	7.16	5.97	5.37	5.12	4.78	4.29
56 D 4938	2035	.....	.....	12	2	2	3.90	3.25	2.92	2.79	2.60	2.33
56 D 4920	2037	.....	.....	12	2-6	6	8.32	6.94	6.24	5.95	5.55	4.98
56 D 4940	2039	.....	.....	15	2-3	3	5.64	4.70	4.23	4.03	3.76	3.38
56 D 4941	2041	.....	.....	18	2	3	5.64	4.70	4.23	4.03	3.76	3.38
.....	.....	56 D 5095	2042†	1	2-10	1	2.50	2.08	1.88	1.79	1.67	1.50
56 D 5445	2043*	.....	.....	1	2-6	1	2.50	2.08	1.88	1.79	1.67	1.50
56 D 5446	2045*	.....	.....	2	2-6	2	3.46	2.88	2.60	2.47	2.31	2.07



PA-2000 SERIES

Precision Constructed

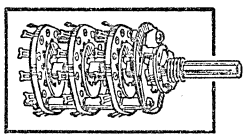
Rotary switches offering excellent RF characteristics. Feature extremely high flash-over points, high-Q, low-loss steatite bodies, minimum intercircuit capacity, and insulated front-back clips. All have positive 30° indexing, adjustable stop or continuous rotation, except * 60° indexing.

All are rated 2.75 amp @ 15 VDC; 230 mA @ 115 VAC. †Type 2042 has 1 off, up to 9 progressively shorting positions.

All are 1½x1 7/16" dia.; have ⅜" spacing between front plate and first section; ½" spacing between all other sections. Sections are .105" thick. Full round, ¼" diameter shafts are 2¼" long from mounting surfaces. Mount in single hole with ⅜"-32NEF-2A threaded bushing, ⅜" long. With mounting nut, lockwasher, and 1¼" black pointer knob. Bulk packaging (quantities of 100 to 300) supplied less knobs, available on Special Order. Shpg. wt., 3 oz. per section.

MINIATURE PHENOLIC SWITCHES—1½x1 7/16" WAFERS

56 D 5065	1001	56 D 5050	1000	1	2-11	1	2.08	1.73	1.56	1.49	1.39	1.24
56 D 5066	1003	56 D 5051	1002	2	2-5	1	2.08	1.73	1.56	1.49	1.39	1.24
56 D 5067	1005	56 D 5052	1004	2	2-11	2	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5068	1007	56 D 5053	1006	3	2-3	1	2.08	1.73	1.56	1.49	1.39	1.24
56 D 5069	1009	56 D 5054	1008	3	2-11	3	3.76	3.13	2.82	2.69	2.51	2.25
56 D 5070	1011	56 D 5055	1010	4	2	1	2.08	1.73	1.56	1.49	1.39	1.24
56 D 5071	1013	56 D 5056	1012	4	2-5	2	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5072	1015	56 D 5057	1014	4	2-11	4	4.38	3.65	3.29	3.13	2.92	2.62
56 D 5073	1017	56 D 4974	1016	5	2-11	5	5.16	4.30	3.87	3.69	2.44	3.09
56 D 5074	1019	56 D 5059	1018	6	2-3	2	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5075	1021	56 D 5060	1020	6	2-5	3	3.76	3.13	2.82	2.69	2.51	2.25
56 D 5077	1025	56 D 4975	1024	8	2	2	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5078	1027	56 D 5063	1026	8	2-5	4	4.38	3.65	3.29	3.13	2.92	2.62
56 D 5079	1029	.....	.....	12	2	3	3.76	3.13	2.82	2.69	2.51	2.25
56 D 5099	1031	.....	.....	10	2-5	5	5.16	4.30	3.87	3.69	3.44	3.09



PA-1000 SERIES

Phenolic Insulated

All have 30° indexing, adjustable stop. 1½ x1 7/16" dia.; shaft, 2¼" long. 2.75 amps @ 15 VDC; 230 mA @ 115 VAC. Index assemblies and hardware identical to PA-2000 Series. Phenolic insulated and precision made. With knob, nut and lockwasher. Shpg. wt., 3 oz.

KNOBS FOR BULK PACK OF SERIES 1000 AND 2000

Type 2300. Black pointer knobs (1¼" diameter) for Series 1000 and 2000 switches. Shpg. wt., 1 oz.

47 D 4172. 1-24.....Each .10
25-99.....Each .08 100-499.....Each .07

PA-1000 PHENOLIC SECTIONS

Provide maximum flexibility in assembly of special switches to meet specialized requirements. For use with PA-300, PA-301 and PA-302 shaft and index assemblies listed at right. Sections are made of 1/16" thick phenolic. Meet rigorous commercial or military specifications. All have 30° indexing and adjustable stop. Same electrical ratings as PA-1000 Series Switches above. †In table below indicates all unused contacts are connected and shorted out. Av. shpg. wt., 2 oz.

Shorting Stock No.	Type PA-	Non-Shorting Stock No.	Type PA-	Total Poles	No. Pos.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 5080	30	56 D 5085	31	1	2-11	1.00	.83	.75	.72	.67	.60
56 D 5081	32	56 D 5086	33	2	2-5	1.00	.83	.75	.72	.67	.60
.....	.....	56 D 5087	35	3	2-3	1.00	.83	.75	.72	.67	.60
.....	.....	56 D 5088	37	4	2	1.00	.83	.75	.72	.67	.60
.....	.....	56 D 5237	41 †	2	2-11	1.00	.83	.75	.72	.67	.60

PA-2000 CERAMIC SECTIONS

All have 30° indexing. For use with index assemblies PA-300, PA-301 and PA-302 listed in next column. *Unused contacts on one side of common are connected and shorted out. †Unused contacts are connected and shorted out. ‡Has one off, and up to 9 shorting positions. Shpg. wt., 2 oz.

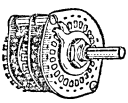
Shorting Stock No.	Type PA-	Non-Shorting Stock No.	Type PA-	Total Poles	No. Pos.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 5040	0	56 D 5045	1	1	2-12	1.38	1.15	1.04	.99	.92	.83
56 D 5041	2	56 D 5046	3	2	2-6	1.38	1.15	1.04	.99	.92	.83
56 D 5042	4	56 D 5047	5	3	2-5	1.38	1.15	1.04	.99	.92	.83
56 D 4972	6	56 D 4973	7	5	2-3	1.38	1.15	1.04	.99	.92	.83
56 D 5044	8	56 D 5049	9	6	2	1.38	1.15	1.04	.99	.92	.83
.....	.....	56 D 4957	19*	1	2-5	1.38	1.15	1.04	.99	.92	.83
56 D 5238	11†	56 D 5240	18†	2	2-11	1.38	1.15	1.04	.99	.92	.83
56 D 5239	12‡	.....	.....	1	2-10	1.38	1.15	1.04	.99	.92	.83

PA-300 SERIES SHAFT AND INDEX ASSEMBLIES

Hardware for assembling miniature switches. Each type contains a 30° PA index assembly, a P-120 pointer knob, an adjustable stop plate, an assortment of spacers, tie bolts, nuts, fiber spacer washers, lock washers, and instructions. Shpg. wt. 3 oz.

Stock No.	Type PA-	Shaft Lgth.	Sec.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 5092	300	2"	1-3	1.50	1.25	1.13	1.07	1.00	.90
56 D 5093	301	4"	4-6	1.98	1.65	1.49	1.42	1.32	1.19
56 D 5094	302	6"	7-9	2.58	2.15	1.94	1.84	1.72	1.55

PA-3000 AND PA-4000 SERIES SWITCHES



18 and 24-position switches using hill-and-dale index mechanism. Voltage breakdown, 1000 V AC rms. Sections are 25/16" high, 1/16" thick. PA-3000 Series. 2 11/64" wide; PA-4000 Series, 1¾" wide. ¼" dia. shafts. 2¼" long. Rated 5.5 amp @ 6 VDC; 2.75 amp @ 15 VDC; 1.5 amp @ 28 VDC; 230 mA @ 115 VAC rms. Indexing: PA-3000, 20°; PA-4000, 15°. Wt., 4 oz.

NON-SHORTING TYPES

Stock No.	Type PA-	Sections	Total Poles	No. Pos.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
56 D 6240	3001	1	1	2-17	2.24	1.87	1.68	1.60	1.49	1.34
56 D 6241	3003	2	2	2-17	3.24	2.70	2.43	2.32	2.16	1.94
56 D 6242	3005	3	3	2-17	4.22	3.52	3.17	3.02	2.82	2.53
56 D 6243	3007	4	4	2-17	5.14	4.28	3.86	3.68	3.43	3.08
56 D 6244	4001	1	1	2-23	2.38	1.98	1.79	1.70	1.59	1.42
56 D 6245	4003	2	2	2-23	3.50	2.92	2.63	2.50	2.34	2.10
56 D 6246	4005	3	3	2-23	4.58	3.82	3.44	3.27	3.05	2.74
56 D 6247	4007	4	4	2-23	5.48	4.57	4.11	3.92	3.66	3.28

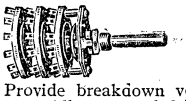
SHORTING TYPES

56 D 6288	3000	1	1	2-17	2.24	1.87	1.68	1.60	1.49	1.34
56 D 6289	3002	2	2	2-17	3.24	2.70	2.43	2.32	2.16	1.94
56 D 6290	3004	3	3	2-17	4.22	3.52	3.17	3.02	2.82	2.53
56 D 6291	3006	4	4	2-17	5.14	4.28	3.86	3.68	3.43	3.08
56 D 6292	4000	1	1	2-23	2.38	1.98	1.79	1.70	1.59	1.42
56 D 6293	4002	2	2	2-23	3.50	2.92	2.63	2.50	2.34	2.10
56 D 6294	4004	3	3	2-23	4.58	3.82	3.44	3.27	3.05	2.74
56 D 6295	4006	4	4	2-23	5.48	4.57	4.11	3.92	3.66	3.28

Centralab Rotary Switches and Assemblies

CENTRALAB

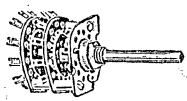
SERIES 2500 CERAMIC ROTARY SWITCHES—1⅝x1⅞" WAFERS



Silicon-treated steatite switches for band change and tap-switch uses. Provide breakdown voltage of 1500 volts rms. All are rated 2.75 amps at 15 volts DC; 350 mA at 115 volts AC, make and break, resistive load. All metal parts, except clips and contacts, are cadmium-plated steel. 1⅝x1⅞" dia. ½" from plate and between sections for 1- and 2-section switches; 1" spacing for others. Bushing, ⅜" diameter x ⅜" long. Shaft, ¼" dia. x 2¼" long from mounting surface. Positive 30° indexing; adjustable stop. Wt., 3 oz. per section.

Shorting		Non-Shorting		Total Poles	No. of Pos.	Poles per Sec.	No. of Sec.	EACH					
Stock No.	Mfr's Type	Stock No.	Mfr's Type					1-4	5-9	10-24	25-49	50-99	100-249
56 D 5214	2500	56 D 5225	2501	1	2-6	1	1	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5215	2502	56 D 5226	2503	1	2-11	1	1	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5216	2504	56 D 5227	2505	2	2-5	2	1	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5217	2506	56 D 5228	2507	3	2-3	3	1	2.96	2.47	2.22	2.12	1.97	1.77
56 D 5218	2510	56 D 5229	2511	2	2-6	1	2	4.22	3.52	3.17	3.02	2.81	2.53
56 D 5219	2512	56 D 5340	2513	2	2-11	1	2	4.22	3.52	3.17	3.02	2.81	2.53
56 D 5220	2514	56 D 5231	2515	4	2-5	2	2	4.22	3.52	3.17	3.02	2.81	2.53
.....	.....	56 D 5232	2517	6	2-3	3	2	4.22	3.52	3.17	3.02	2.81	2.53
.....	.....	56 D 5344	2521	3	2-6	1	3	5.42	4.52	4.07	3.88	3.62	3.24
.....	.....	56 D 5201	2523	3	2-11	1	3	5.42	4.52	4.07	3.88	3.62	3.24
.....	.....	56 D 5202	2525	6	2-5	2	3	5.42	4.52	4.07	3.88	3.62	3.24

SERIES 1400 PHENOLIC ROTARY SWITCHES—1⅝x1⅞" WAFERS



Complete line of laminated, phenolic-insulated rotary switches. Used primarily for band change and general tap-switch applications where miniaturization is not essential. Switch, 1⅝x1⅞" diameter. Bushing, ⅜" diameter x ⅜" long. Shaft, 1⅞" long from end of bushing.

Index assemblies and hardware are identical to Series 2500 (above) allowing interchangeability. All metal parts, except clips and contacts, are cadmium-plated steel. Positive 30° indexing. Come complete with mounting nut, washer and 1¼" black pointer knob. All are rated 2.75 amps at 15 volts DC; 350 mA at 115 volts AC, make and break resistive load. Provide breakdown voltage of 1000 volts. Wt., 3 oz. per section.

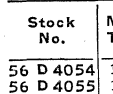
Shorting		Non-Shorting		Total Poles	No. of Pos.	Poles per Sec.	No. of Sec.	EACH					
Stock No.	Mfr's Type	Stock No.	Mfr's Type					1-4	5-9	10-24	25-49	50-99	100-249
56 D 5182	1400	56 D 5163	1401	1	2-6	1	1	2.64	2.20	1.98	1.89	1.76	1.58
.....	.....	56 D 5164	1403	1	2-11	1	1	2.64	2.20	1.98	1.89	1.76	1.58
56 D 5184	1404	56 D 5165	1405	2	2-5	2	1	2.64	2.20	1.98	1.89	1.76	1.58
.....	.....	56 D 5166	1407	3	2-3	3	1	2.64	2.20	1.98	1.89	1.76	1.58
.....	.....	56 D 5167	1409	4	2	4	1	2.64	2.20	1.98	1.89	1.76	1.58
.....	.....	56 D 5168	1411	2	2-6	1	2	3.22	2.68	2.42	2.30	2.15	1.93
56 D 5188	1412	56 D 5169	1413	2	2-11	1	2	3.22	2.68	2.42	2.30	2.15	1.93
.....	.....	56 D 5170	1415	4	2-5	2	2	3.22	2.68	2.42	2.30	2.15	1.93
.....	.....	56 D 5171	1417	6	2-3	3	2	3.22	2.68	2.42	2.30	2.15	1.93
.....	.....	56 D 5172	1419	8	2	4	2	3.22	2.68	2.42	2.30	2.15	1.93
.....	.....	56 D 5135	1421	3	2-6	1	3	4.10	3.41	3.08	2.93	2.73	2.45
.....	.....	56 D 5174	1423	3	2-11	1	3	4.10	3.41	3.08	2.93	2.73	2.45
.....	.....	56 D 5175	1425	6	2-5	2	3	4.10	3.41	3.08	2.93	2.73	2.45
.....	.....	56 D 5139	1427	4	2-6	1	4	4.72	3.93	3.54	3.37	3.15	2.82
.....	.....	56 D 5141	1429	4	2-11	1	4	4.72	3.93	3.54	3.37	3.15	2.82
.....	.....	56 D 5178	1431	8	2-5	2	4	4.72	3.93	3.54	3.37	3.15	2.82

INDEX ASSEMBLIES FOR SERIES 1400 AND 2500

Dependable assemblies for use with above series sections. One-piece flat shaft, ⅜" thick. 30° positive index. Includes one index, one P-120 pointer knob and hardware to complete switch. Use with sections at right to design special application switches. Wt., 2 oz.

Stock No.	Mfr's Type	No. of Sec.	EACH					
			1-4	5-9	10-24	25-49	50-99	100-249
56 D 5497	P-270	1-3	1.65	1.38	1.24	1.18	1.10	.99
56 D 5498	P-271	3-5	2.10	1.75	1.58	1.50	1.40	1.26
56 D 5499	P-272	5-10	2.85	2.38	2.14	2.03	1.90	1.71

GENERAL-PURPOSE ROTARY SWITCHES



Phenolic-insulated switches. Breakdown, 1000 VAC. ⅜" threaded shanks, ⅜" long. ¼" shafts, 1⅞" long. Contacts rated 1.75 amps at 28 VDC; 350 mA at 115 VAC. With knobs. Momentary action, except *positive; †positive one side. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Total Poles	No. of Pos.	EACH					
				1-4	5-9	10-24	25-49	50-99	100-249
56 D 4054	1488	6	3	3.78	3.15	2.84	2.70	2.52	2.26
56 D 4055	1489	6†	3	3.78	3.15	2.84	2.70	2.52	2.26
56 D 4085	1450	4*	2	1.74	1.38	1.25	1.19	1.11	.99
56 D 4087	1451	4	2	2.52	2.10	1.89	1.80	1.68	1.51

CERAMIC SECTIONS FOR SERIES 2500

For changing sections of Series 2500 switches above. Have .187" rotor slot for use with P-270, P-271 and P-272 assemblies at left. All unused contacts of Types GGD and FFD connected and shorted out; Type PISD is progressive. *Total poles. Wt., 2 oz.

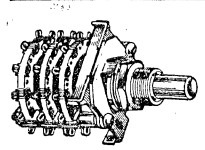
Shorting		Non-Shorting		*	No. Pos.	EACH					
Stock No.	Type	Stock No.	Type			1-4	5-9	10-24	25-49	50-99	100-249
56 D 5203	TD	56 D 5209	XD	1	2-6	1.42	1.18	1.07	1.02	.95	.85
56 D 5204	UD	56 D 5210	YD	1	2-11	1.42	1.18	1.07	1.02	.95	.85
56 D 5205	RD	56 D 5211	RRD	2	2-5	1.42	1.18	1.07	1.02	.95	.85
.....	.....	56 D 5212	SSD	3	2-3	1.42	1.18	1.07	1.02	.95	.85
56 D 5492	PISD	.....	.....	1	2-10	1.42	1.18	1.07	1.02	.95	.85
56 D 5208	GGD	56 D 5496	FFD	1	2-11	1.42	1.18	1.07	1.02	.95	.85

PHENOLIC SECTIONS FOR SERIES 1400

For replacing or changing individual sections of Series 1400 rotary switches shown in listing above. Sections can also be used with index assemblies P-270, P-271 and P-272 (at left, above) to design and assemble switches with special characteristics. Shpg. wt., 2 oz.

.....	.....	56 D 5155	HD	1	2-6	1.12	.93	.84	.80	.75	.67
56 D 5180	BD	56 D 5156	JD	1	2-11	1.12	.93	.84	.80	.75	.67
56 D 5181	CD	56 D 5157	KD	2	2-5	1.12	.93	.84	.80	.75	.67
56 D 5150	DD	56 D 5158	LD	3	2-3	1.12	.93	.84	.80	.75	.67
.....	.....	56 D 5159	MD	4	2	1.13	.93	.84	.80	.75	.67

PSA SUBMINIATURE ROTARY SWITCHES

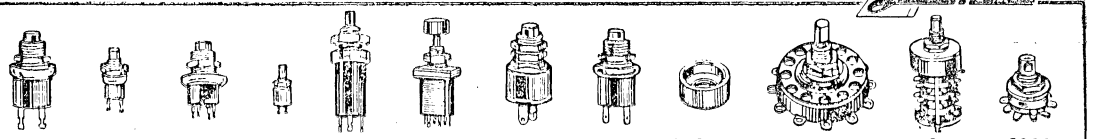


Diallyl phthalate rotary switches offer subminiature size, yet have same electrical rating as much larger switches. Positive 30° indexing with adjustable stops for versatility. Two-ball star-wheel lateral thrust construction for excellent torque control and feel. Sections are ⅛" thick, spaced ⅛". Clips and rotor contacts silver-plated brass. Mounting bushing has ⅜"-32 NEF thread by ⅜" long. Full round shaft, ¼" dia., 1⅜" L.F M.S. Rating: 0.55 amp at 28 VDC; make and break load, 170 mA at 115 VAC. Current Carrying Capacity: 7 amps. Contact Resistance: 5 milliohms. Index Rotational Life: 25,000 cycles minimum. 4 oz.

Shorting		Non-Shorting		Total Poles	No. Pos.	Poles/ Sec.	No. Sec.	EACH					
Stock No.	Type	Stock No.	Type					1-4	5-9	10-24	25-49	50-99	100-249
56 D 6550	PSA-200	56 D 6551	PSA-201	1	2-12	1	1	4.80	4.00	3.60	3.42	3.20	2.88
56 D 6552	PSA-202	56 D 6553	PSA-203	2	2-6	2	1	4.80	4.00	3.60	3.42	3.20	2.88
56 D 6554	PSA-204	56 D 6555	PSA-205	2	2-12	1	2	6.00	5.00	4.50	4.28	4.00	3.60
56 D 6556	PSA-206	56 D 6557	PSA-207	3	2-5	3	1	4.80	4.00	3.60	3.42	3.20	2.88
56 D 6558	PSA-208	56 D 6559	PSA-209	3	2-12	1	3	7.20	6.00	5.40	5.13	4.80	4.32
56 D 6560	PSA-210	56 D 6561	PSA-211	4	2-6	2	2	6.00	5.00	4.50	4.28	4.00	3.60
56 D 6564	PSA-214	56 D 6565	PSA-215	5	2-3	5	1	4.80	4.00	3.60	3.42	3.20	2.88
56 D 6570	PSA-220	56 D 6571	PSA-221	6	2-5	3	2	6.00	5.00	4.50	4.28	4.00	3.60
56 D 6572	PSA-222	56 D 6573	PSA-223	6	2-6	2	3	7.20	6.00	5.40	5.13	4.80	4.32
56 D 6562	PSA-228	56 D 6563	PSA-229	9	2-5	3	3	7.20	6.00	5.40	5.13	4.80	4.32
56 D 6566	PSA-230	56 D 6567	PSA-231	10	2-3	5	2	7.20	6.00	5.40	5.13	4.80	4.32
56 D 6568	PSA-238	56 D 6569	PSA-239	15	2-3	5	3	7.80	6.50	5.85	5.55	5.20	4.68

Miniature Switches

Grayhill



SERIES 24 MINIATURE ROTARY TAP SWITCHES

One pole per deck. Nonshorting contacts. Break 1 A or carry 5 A, 115 VAC, resistive. Breakdown, 500-1000 VAC or better. Contact resistance, 0.003 ohm initial. Life, 100,000 operations. Insulation res., 50,000 megs. 36° indexing. Solder terminals. Dia. 1". 3/8"-32 bushing. 0.25"-long flatted shaft. *Depth behind panel. 4 oz.

Pos.	1-Deck *.58" Stock No.	Mfr's Type	EACH 1-49	EACH 50-99	2-Deck *1.39" Stock No.	Mfr's Type	EACH 1-49	EACH 50-99
2	56 D 6032	24001-2	2.90	2.18	56 D 6041	24002-2	4.75	3.56
3	56 D 6033	24001-3	3.00	2.25	56 D 6042	24002-3	4.95	3.71
4	56 D 6034	24001-4	3.10	2.33	56 D 6043	24002-4	5.15	3.86
5	56 D 6035	24001-5	3.25	2.44	56 D 6044	24002-5	5.35	4.01
6	56 D 6036	24001-6	3.35	2.51	56 D 6045	24002-6	5.55	4.16
7	56 D 6037	24001-7	3.45	2.59	56 D 6046	24002-7	5.75	4.31
8	56 D 6038	24001-8	3.55	2.66	56 D 6047	24002-8	5.95	4.46
9	56 D 6039	24001-9	3.65	2.74	56 D 6048	24002-9	6.15	4.61
10	56 D 6040	24001-10	3.80	2.85	56 D 6049	24002-10	6.35	4.76

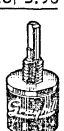
SERIES 5000 MINIATURE ROTARY TAP SWITCHES

Nonshorting switches with one pole and 2 to 10 positions per deck. 36° index. Rated to break 1 amp at 115 VAC, resistive, or carry 5 amps. Mtg. hole 3/8" dia. 1 1/32" dia. *Depth behind panel. 4 oz.

Pos.	1-Deck *.47" Stock No.	Mfr's Type	EACH 1-49	EACH 50-99	2-Deck *1.25" Stock No.	Mfr's Type	EACH 1-49	EACH 50-99
2	56 D 5923	5001-2	2.05	1.54	56 D 6053	5002-2	4.40	3.30
3	56 D 5924	5001-3	2.10	1.57	56 D 6054	5002-3	4.50	3.37
4	56 D 5925	5001-4	2.15	1.61	56 D 6055	5002-4	4.60	3.45
5	56 D 5926	5001-5	2.20	1.65	56 D 6056	5002-5	4.70	3.52
6	56 D 5927	5001-6	2.25	1.69	56 D 6057	5002-6	4.80	3.60
7	56 D 5928	5001-7	2.30	1.72	56 D 6058	5002-7	4.90	3.67
8	56 D 5929	5001-8	2.35	1.76	56 D 6059	5002-8	5.00	3.75
9	56 D 5930	5001-9	2.40	1.80	56 D 6060	5002-9	5.10	3.82
10	56 D 5931	5001-10	2.45	1.84	56 D 6061	5002-10	5.20	3.90

SERIES 50 ROTARY SWITCHES

CD—commercial; no seals, adjustable stops, phenolic base. MD—military, meets MIL-S-3786, integral shaft and panel seal, adjustable stops, diallyl phthalate base. Both are rated to make or break 50mA, 115 VAC for 25,000 cycles; or 200 mA, 115 VAC for 10,000 cycles. Nonshorting contacts, 36° indexing.§ Poles/deck. *PC terminals. Wt., 4 oz.



Stock No.	Mfr's Type	Stop Adjust	EACH 1-49	EACH 50-99
56 D 6422	50CD36-01-1§	2 thru 10	7.05	5.29
56 D 6423	50CD36-01-2§	2 thru 5	8.20	6.15
56 D 6424	50MD36-01-1§	2 thru 10	8.35	6.26
56 D 6425	50MD36-01-2§	2 thru 5	9.50	7.13
56 D 6517	50MDP36-01-1-AJN*	2 thru 10	8.35	6.26
56 D 6518	50MDP36-01-2-AJN*	2 thru 5	9.50	7.13

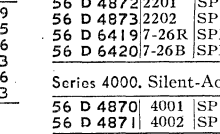
SERIES 51 ROTARY SWITCHES

Similar to series 50, except 12 position, 30° angle of throw. 51MDP-30-01-1-AJN has printed circuit tabs.

56 D 6519	51MD30-01-1-AJN	2 thru 12	8.90	6.68
56 D 6520	51MDP30-01-1-AJN	2 thru 12	8.90	6.68

SERIES 44D ROTARY TAP SWITCHES

Fully enclosed with adjustable stop system. 44 Series, 30° throw angle, 1.162" diameter; 42 Series, 36° throw angle, 1.00" diameter. Rated make/break, 1 A @ 115 VAC resistive, or carry 10 A. Non-shorting contacts. Cont. resistive, .003 ohm initial. Ins. res., 50K megs minimum. Behind panel, 1-deck, 1.025"; 2-deck, 1.371"; 3-deck, 1.717".



Stock No.	Mfr's Type	Decks	Poles/Deck	Max. Pos.	Wt., Oz.	EACH 1-49	EACH 50-99
56 D 6368	44D3001-1-ADJN	1	1	12	3	6.50	4.87
56 D 6369	44D3001-2-ADJN	1	2	6	3	7.30	5.47
56 D 6370	44D3001-3-ADJN	1	3	4	3	7.70	5.77
56 D 6371	44D3001-4-ADJN	1	4	3	3	8.10	6.07
56 D 6372	44D3002-1-ADJN	2	1	12	4	7.85	5.89
56 D 6373	44D3002-2-ADJN	2	2	6	4	9.45	7.09
56 D 6374	44D3002-3-ADJN	2	3	4	4	10.25	7.69
56 D 6375	44D3002-4-ADJN	2	4	3	4	11.05	8.29
56 D 6376	44D3003-1-ADJN	3	1	12	5	9.20	6.40
56 D 6377	44D3003-2-ADJN	3	2	6	5	11.60	8.70
56 D 6379	44D3003-4-ADJN	3	4	3	5	14.00	10.50

PUSHBUTTON SWITCHES

Rugged, momentary contact, pushbutton switches with solder-lug type terminals. For on/off applications, computer equipment, printed circuit panels. Normally open types (indicated by N. O. in table below) have red buttons. Normally closed types (indicated by N. C. in table below) have black buttons. In Series 2000 and Series 46, "R" after Mfr's Type No. indicates red button, "B" black button. Av. shpg. wt., 2 oz.

Series 23. Miniature, over 500,000 operations. Contact resistance, 10 milliohms. Mounting hole, 21/64".

Stock No.	Mfr's Type	Action	Amps@ 115VAC	Size L x Dia.	EACH 1-49	EACH 50-99	EACH 100-499
56 D 4970	23-1	SPST N.O.	1/4	13/64x1/2"	1.10	.83	.66

Series 30. Subminiature, over 1 million operations. Contact resistance, 10 milliohms. Mounting hole, 11/64".

56 D 4967	30-1	SPST N.O.	1	63/64x3/8"	.95	.71	.57
56 D 4966	30-2	SPST N.C.	1	63/64x3/8"	.95	.71	.57

Series 35. Miniature, over 100,000 operations. Mtg. hole, 31/64".

56 D 4964	35-1	DPST N.O.	1/2	117/64x51/64"	1.50	1.13	.90

Series 39. Ultraminiature, over 1 million operations. Butt contact. Mounting hole, 11/64".

56 D 4968	39-1	SPST N.O.	1/2	39/64x1/4"	1.15	.86	.69

Series 46. Miniature, over 250,000 operations. †In Action column indicates break-before-make, ‡ make-before-break. Mtg. hole, 17/64".

Stock No.	Mfr's Type	Action	Amps@ 115VAC	Size L x Dia.	EACH 1-49	EACH 50-99	EACH 100-499
56 D 6411	46-101R	SPDT†	1/4	1 1/32x7/16"	1.40	1.05	.84
56 D 6412	46-101B	SPDT†	1/4	1 1/32x7/16"	1.40	1.05	.84
56 D 6413	46-110R	SPDT‡	1/4	1 1/32x7/16"	1.55	1.16	.93
56 D 6414	46-110B	SPDT‡	1/4	1 1/32x7/16"	1.55	1.16	.93
56 D 6415	46-200R	DPDT†	1/4	1 9/16x1 7/32" sq.	3.10	2.33	1.86
56 D 6416	46-200B	DPDT†	1/4	1 9/16x1 7/32" sq.	3.10	2.33	1.86
56 D 6417	46-201R	DPDT‡	1/4	1 9/16x1 7/32" sq.	3.40	2.55	2.04
56 D 6418	46-201B	DPDT‡	1/4	1 9/16x1 7/32" sq.	3.40	2.55	2.04

Series 2000. Snap-Action, over 25,000 operations. Mtg. hole, 31/64".

Stock No.	Mfr's Type	Action	Amps @ 115 VAC	Size L x Dia.	EACH 1-49	EACH 50-99	EACH 100-499
56 D 4872	2201	SPST N.O.	10	1 59/64x7/8"	2.40	1.80	1.44
56 D 4873	2202	SPST N.C.	10	1 59/64x7/8"	2.40	1.80	1.44
56 D 6419	7-26R	SPDT	10	1 9/64x7/8"	3.50	2.63	2.10
56 D 6420	7-26B	SPDT	10	1 9/64x7/8"	3.50	2.63	2.10

Series 4000. Silent-Action, over 100,000 operations. Mtg. hole, 31/64".

56 D 4870	4001	SPST N.O.	1	1 17/32x51/64"	1.00	.75	.60
56 D 4871	4002	SPST N.C.	1	1 17/32x51/64"	1.00	.75	.60

Button Guard. For Series 2000, 4000, 35. Cadmium-plated.

56 D 4971	10C1015	Provides button recess.	.30	.23	.18
56 D 6421	7C1040	Decorative mtg. nut.	.20	.15	.12

SERIES 19 POWER TAP SWITCHES

Single-pole, single deck. 30° indexing. Built-in stops. Nonshorting contacts, 15 A, 115 VAC resistive, 1 A, 115 VDC resistive. Breakdown, 3500 VAC. Solder terminals. 3/8"-32 bushing. 1.83x1.69" diameter. Require 0.95" behind panel. 1/2"-long flatted shaft. U.L. Component-Program Recognized. Shpg. wt., 5 oz.

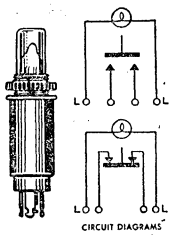
Stock No.	Mfr's Type	Positions	EACH 1-49	EACH 50-99
56 D 6339	19101-2UL	2	3.50	2.62
56 D 6340	19101-3UL	3	3.65	2.74
56 D 6341	19101-4UL	4	3.80	2.85
56 D 6342	19101-5UL	5	3.95	2.96
56 D 6343	19101-6UL	6	4.10	3.07
56 D 6344	19101-7UL	7	4.25	3.19
56 D 6345	19101-8UL	8	4.40	3.30
56 D 6347	19101-10UL	10	4.70	3.52
56 D 6348	19101-11UL	11	4.85	3.64

FOR ADDITIONAL GRAYHILL SWITCHES SEE PAGE 224

Pushbutton and Thumbwheel Switches

GRAYHILL NEON AND INCANDESCENT SWITCHES

SERIES 40 LIGHTED PUSHBUTTON SWITCHES



CIRCUIT DIAGRAMS

Miniature lighted pushbutton switches for momentary applications and printed circuit panels. Ideal for use where space is at a premium such as in digital computers. Also where switches and indicator lights are used in conjunction with one another, such as hotel and motel call systems, reset switches, and warning indicators. Rated 115 VAC resistive, 1 amp. SPST, momentary contact. Low contact resistance. Voltage Breakdown, 1000 VAC. Insulation Resistance, 25,000 megohms. Life Expectancy, 500,000 operations. Fine silver contacts and terminals. Have solder terminals, colored buttons, and independent lamp and switch circuits. Mounting Hole, 25⁄64". Lamp: neon, GE NE2-E or equivalent; incandescent, GE 1764 (20 volts DC maximum) or equivalent. Size, 1.85x.44" dia. Av. shpg. wt., 1 oz.

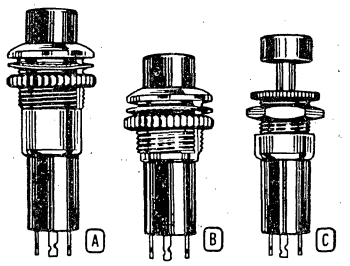
NEON LAMP TYPES

Stock No.	Mfr's Type	Contacts	Button Color	EACH 1-49	EACH 50-99
56 D 6307	40-1	Normally open	Clear	2.45	1.84
56 D 6308	40-1	Normally open	Transparent Amber	2.45	1.84
56 D 6031	40-1	Normally open	Transparent Red	2.45	1.84
56 D 6309	40-1	Normally open	Frosted White	2.45	1.84
56 D 6310	40-2	Normally closed	Clear	2.70	2.02
56 D 6311	40-2	Normally closed	Transparent Amber	2.70	2.02
56 D 6312	40-2	Normally closed	Transparent Red	2.70	2.02
56 D 6313	40-2	Normally closed	Frosted White	2.70	2.02

INCANDESCENT LAMP TYPES

Stock No.	Mfr's Type	Contacts	Button Color	EACH 1-49	EACH 50-99
56 D 6314	40-100	Normally open	Clear	2.75	2.06
56 D 6315	40-100	Normally open	Transparent Amber	2.75	2.06
56 D 6316	40-100	Normally open	Transparent Red	2.75	2.06
56 D 6317	40-100	Normally open	Frosted White	2.75	2.06
56 D 6318	40-100	Normally open	Frosted Red	2.75	2.06
56 D 6319	40-100	Normally open	Frosted Green	2.75	2.06
56 D 6320	40-100	Normally open	Frosted Yellow	2.75	2.06
56 D 6321	40-102	Normally closed	Clear	3.00	2.25
56 D 6322	40-102	Normally closed	Transparent Amber	3.00	2.25
56 D 6323	40-102	Normally closed	Transparent Red	3.00	2.25
56 D 6324	40-102	Normally closed	Frosted White	3.00	2.25
56 D 6325	40-102	Normally closed	Frosted Red	3.00	2.25
56 D 6326	40-102	Normally closed	Frosted Green	3.00	2.25
56 D 6327	40-102	Normally closed	Frosted Yellow	3.00	2.25

ALTERNATE AND MOMENTARY ACTION PUSHBUTTON SWITCHES



- Fully Enclosed Against Contamination
- Small Size Reduces Space Requirement
- Highly Stable Contact Resistance

Quality switches featuring relatively constant contact resistance and total enclosure against contamination from external sources. All are alternate action except Type 46-125, which is momentary contact. All are SPDT, break before make. Type 46-502 has standard mounting; Types 46-125 and 46-525 have bezel mounting. Rated 115 VAC resistive, ¼ amp. Approximately 10-milliohm contact resistance. Voltage Breakdown, 1000 VAC. Life, 250,000 operations. Lock in down position. Size: Type 46-125, 1.554" high x 0.625" dia.; Type 46-502, 1.677" high x 0.375" dia.; Type 46-525, 1.840" high x 0.625" dia. Av. wt., 2 oz.

Stock No.	Type 46-	Fig.	Button Color	EACH 1-49	EACH 50-99
56 D 5904	125R	B	Red	2.35	1.76
56 D 5905	125B	B	Black	2.35	1.76
56 D 5902	502R	C	Red	3.50	2.63
56 D 5903	502B	C	Black	3.50	2.63
56 D 5900	525R	A	Red	3.90	2.93
56 D 5901	525B	A	Black	3.90	2.93

INTERMARKET THUMBWHEEL PRINTED CIRCUIT SWITCHES

STANDARD MODULES (Size, 1.785x0.50x2.56")

Stock No.	Mfr's Type	Description	EACH 1-24	EACH 25-99	EACH 100-249	EACH 250-499
56 D 6964	S110ND	10-pos. decimal	2.75	2.61	2.48	2.34
56 D 6965	SB10N1248	10-pos. BCD	5.50	5.22	4.95	4.67
56 D 6966	SBC10N1248	10-pos. BCD with complements	6.60	6.27	5.94	5.61
56 D 6967	SDP	Divider plates	1.00	.95	.90	.85
56 D 6968	SBM	Blank module	.60	.57	.54	.51
56 D 6969	SEP	End plates	1.00	.95	.90	.85

MINIATURE MODULES (.965x0.50x1.52")

56 D 6970	M110ND	10-pos. decimal	4.00	3.80	3.70	3.40
56 D 6971	MB10N1248	10-pos. BCD	7.00	6.65	6.30	5.95
56 D 6972	MBC10N1248	10-pos. BCD with complements	9.50	9.02	8.55	8.07
56 D 6973	MBM	Blank module (also use as divider)	.60	.57	.54	.51
56 D 6983	MEP	End plates	1.00	.95	.90	.85

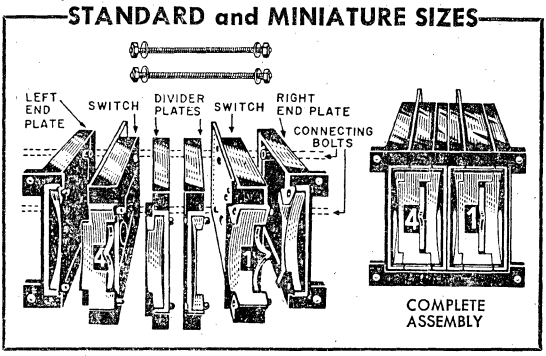
ASSEMBLY HARDWARE

Each package contains two threaded bolts, nuts and washers for proper assembly of switch banks. *Number of modules that can be assembled.

Stock No.	Mfr's Type	*	Stock No.	Mfr's Type	*	Stock No.	Mfr's Type	*
56 D 6974	H-1	1	56 D 6977	H-4	4	56 D 6980	H-7	7
56 D 6975	H-2	2	56 D 6978	H-5	5	56 D 6981	H-8	8
56 D 6976	H-3	3	56 D 6979	H-6	6	56 D 6982	H-9	9

1-24 ..... Each .75
25-99 ..... Each .72 100-249 ..... Each .68
250-499 ..... Each .64 500-999 ..... Each .60

STANDARD and MINIATURE SIZES



Low-cost printed circuit thumbwheel switches for industrial applications where adverse environmental conditions are not ordinarily encountered. Use for manual insertion of data into computers, control processes, numerical control systems. Permits selection of more functions in smaller panel space than older "wafer" switches.

Each module is ½" wide and provides numerical indication of switch function. Special interlocking feature and the use of two threaded rods at the rear permit construction of complete module banks enabling the user to take advantage of maximum custom design flexibility. Divider plates and blank modules separate the banks into clearly defined sections.

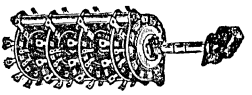
Current: switching, 0.5 amp max. per switch. Voltage: 200 volts, maximum power of 24 watts with 12 watts energized output. Insulation resistance: 1000 megohms. Contact resistance; 0.10 ohm. Life: 100,000 cycles. Available in 10-position decimal, BCD, or BCD-with-complements outputs. Semi-gloss black body with white characters on black wheel. Order from tables at left. From England. Av. shpg. wt., 1 oz.

Depend on Allied for Off-the-Shelf Delivery in Industrial Quantities

Mallory and Ohmite Switches

MALLORY ROTARY SWITCHES AND DIAL PLATES

1200L AND 1300L ROTARY SWITCHES



Phenolic sections. ½" spacing for 1 section, 1" for extras. 30° index. 1¾" dia. mtg. space. ⅜"-32 bushing, ⅜" long. Shaft, ¼" dia. x2". Breakdown, 1000 VAC or DC. 0.6 amps @ 300 VDC or 1 amp @ 300 VAC (resistive). With bar knob. †Add'l. "off" position, all circuits open. *No. of poles. Shpg. wt., 3 oz. per section.

NON-SHORTING

Stock No.	Mfr's Type	Sec.	*	Pos. Per Pole	EACH 1-4	5-9	10-24	25-49	50-99	100 499
56 D 4251	1311L	1	1	11	2.33	1.95	1.76	1.67	1.56	1.40
56 D 4252	1315L†	1	2	5	2.33	1.95	1.76	1.67	1.56	1.40
56 D 4253	1313L†	1	3	3	2.33	1.95	1.76	1.67	1.56	1.40
56 D 4256	1321L	2	1	11	2.87	2.39	2.16	2.04	1.91	1.72
56 D 4257	1325L†	2	4	5	2.87	2.39	2.16	2.04	1.91	1.72
56 D 4258	1323L†	2	6	3	2.87	2.39	2.16	2.04	1.91	1.72
56 D 4261	1331L	3	3	11	3.60	3.00	2.70	2.57	2.40	2.16
56 D 4264	1341L	4	4	11	4.24	3.53	3.18	3.01	2.82	2.55
56 D 4265	1345L†	4	8	5	4.24	3.53	3.18	3.01	2.82	2.55
56 D 4266	1351L	5	5	11	4.57	3.81	3.43	3.25	3.04	2.74
56 D 4267	1356L	5	10	6	5.04	4.20	3.78	3.59	3.36	3.02
56 D 4268	1361L	6	6	11	5.37	4.48	4.02	3.83	3.58	3.23

SHORTING

56 D 4201	1211L	1	1	11	2.33	1.95	1.76	1.67	1.56	1.40
56 D 4206	1221L	2	2	11	2.87	2.39	2.16	2.04	1.91	1.72
56 D 4207	1225L†	2	4	5	2.87	2.39	2.16	2.04	1.91	1.72
56 D 4214	1241L	4	4	11	4.24	3.53	3.18	3.01	2.82	2.55

SPECIAL-PURPOSE ROTARY SWITCHES

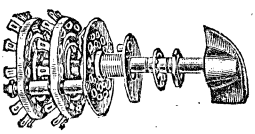
A Type 151L "Hamswitch". Two-section, 5-position switch; 1 pole per section. Non-shorting. 2¼" spacing between sections. Rated 1000 volts AC (rms) or 1500 volts DC. 60° indexing. With brass bushing ⅜" long, ⅜" dia. Shaft, 2" by ¼" dia. is grooved for cutting. With hardware. Shpg. wt., 6 oz.

B Type 13124L 24-Point Tap Switch. Single circuit, 24-position, non-shorting tap switch. Excellent for use in test equipment applications. Continuous rotation, with 15° indexing between positions. Bushing, ⅜" dia. by ⅜" long. 2" shaft is notched for cutting. With dial plate and hardware. Same ratings as Type 151L. Shpg. wt., 6 oz.

B Type 1400L Circuit-Opening Switch. Opens any 1 of 12 circuits, maintains other 11. Ideal for meter switching, inserting resistors and capacitors, etc. Breaking currents: 6A @ 300 VDC; 8A @ 6 VDC; 1A @ 300 VAC; 10A @ 6 VAC. Non-breaking, 10A. Max. VDC, 500 V. 30° indexing. ½x2" shaft. ⅜x⅜" bushing. Hardware, dial plate. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Fig.	EACH 1-4	5-9	10-24	25-49	50-99	100-499
56 D 4318	151L	A	3.00	2.50	2.26	2.14	2.00	1.80
56 D 4295	13124L	B	3.07	2.56	2.30	2.19	2.05	1.85
56 D 4290	1400L	B	5.20	4.35	3.90	3.67	3.47	3.12

CERAMIC SECTION 30° INDEXING SWITCHES

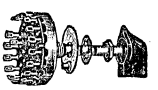


Minimum RF loss. Adjustable stop. Non-shorting. Silver-plated contacts. 500 V AC/DC. Maximum non-breaking current (resistive load), 10 amps. ½" spacing between 2-section types, others have 1" spacing between sections. 1¼" base diameter. With 2" grooved shaft, knob and hardware. *Have additional "off" position. Shpg. wt., 3 oz. per section.

Stock No.	Mfr's Type	Sections	Total Poles	Pos. Per Pole	EACH 1-4	5-9	10-24	25-49	50-99	100-499
56 D 4327	172C	1	1	11	2.64	2.20	1.98	1.88	1.75	1.58
56 D 4328	173C*	1	2	5	2.64	2.20	1.98	1.88	1.75	1.58
56 D 4329	174C*	1	3	3	2.64	2'20	1.98	1.88	1.75	1.58
56 D 4331	176C	2	2	11	3.77	3.15	2.82	2.69	2.51	2.26
56 D 4332	177C*	2	4	5	3.77	3.15	2.82	2.69	2.51	2.26

SERIES 3100J AND 3200J SINGLE-SECTION SWITCHES

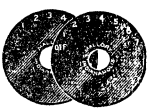
Enclosed, low-voltage switches. For use in tone control, band selector and antenna switching circuits. Phenolic resin insulation. Have ⅜" threaded bushing ⅜" long. ¼" diameter shaft 2" long. Shafts are grooved at popular lengths for easy cutting. All 1 1/16" base types have adjustable stops.



Breakdown rating is 500 volts, AC or DC. Current ratings (resistive load): .125 amp at 300 VDC; 3 amps at 6 VDC; .2 amp at 300 VAC; 5 amps at 6 VAC. Bar knob and nut. Shpg. wt., 4 oz.

Shorting Stock No.	Shorting Mfr's Type	Non-Shorting Stock No.	Non-Shorting Mfr's Type	Poles	Positions	Base Dia.	EACH 1-4	5-9	10-24	25-49	50-99	100-499
56 D 4300	3115J	56 D 4350	3215J	1	5	1¼"	1.13	.94	.86	.81	.76	.68
56 D 4301	31112J	56 D 4351	32112J	1	12	1¼"	1.13	.94	.86	.81	.76	.68
56 D 4302	3122J	56 D 4352	3222J	2	2	1¼"	1.13	.94	.86	.81	.76	.68
56 D 4303	3123J	56 D 4353	3223J	2	3	1¼"	1.13	.94	.86	.81	.76	.68
56 D 4304	3126J	56 D 4354	3226J	2	6	1¼"	1.13	.94	.86	.81	.76	.68
56 D 4305	3134J	56 D 4355	3234J	3	4	1¼"	1.17	.98	.88	.83	.78	.70
56 D 4306	3142J	56 D 4356	3242J	4	2	1¼"	1.17	.98	.88	.83	.78	.70
56 D 4307	3143J	56 D 4357	3243J	4	3	1¼"	1.17	.98	.88	.83	.78	.70
56 D 4308	31117J	56 D 4358	32117J	1	17	1 11/16"	1.73	1.45	1.30	1.23	1.16	1.04
.....	.....	56 D 4359	3229J	2	9	1 11/16"	1.73	1.45	1.30	1.23	1.16	1.04
.....	.....	56 D 4360	3236J	3	6	1 11/16"	1.83	1.53	1.38	1.31	1.22	1.10
56 D 4311	3163J	56 D 4361	3263J	6	3	1 11/16"	1.83	1.53	1.38	1.31	1.22	1.10

DIAL PLATES



These dial plates are for switches 1200L, 1300L and 1¼" base 3100J and 3200J. Etched aluminum. Black background. 1 13/16" diameter plate. Mounting hole has 7/16" diameter. Shpg. wt., 4 oz.

30° SPACING FOR 1¼" BASE SWITCHES

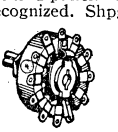
Mfr's Type	Marking	Mfr's Type	Marking
372	1 to 2	382	1 to 12
373	1 to 3	383	Off 1 to 3
374	1 to 4	384	Off 1 to 4
375	1 to 5	385	Off 1 to 5
376	1 to 6	386	Off 1 to 6
377	1 to 7	387	Off 1 to 7
378	1 to 8	388	Off 1 to 8
379	1 to 9	389	Off 1 to 9
380	1 to 10	390	Off 1 to 10
381	1 to 11	.....	.....

56 D 4600 C. Specify Type..... Each .12

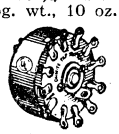
OHMITE CERAMIC-INSULATED POWER TAP SWITCHES

Ceramic-insulated rotary types. Non-shorting, SPST deck. 30° indexing. Model 111 is rated 15 amperes @ 125 VAC; diameter, 1¾". Model 212 rated 20 amperes @ 150 VAC; diameter, 2¼". Model 312 rated 30 amperes @ 300 VAC, 150 volts between taps; diameter, 3 5/16". Require 1⅛ to 2¼" behind panel. Have ¼" fluted shafts. U.L. Component Program-Recognized. Shpg. wt., 10 oz.

MODEL 111 Stock No.	Taps	1-4, EA.	5-9, EA.	MODEL 212 Stock No.	Taps	1-4, EA.	5-9, EA.	MODEL 312 Stock No.	Taps	1-4, EA.	5-9, EA.
56 D 4227	3	4.00	3.40	56 D 4240	5	8.15	6.93	56 D 4278	4	10.70	9.10
56 D 4228	4	4.15	3.53	56 D 4241	6	8.35	7.10	56 D 4276	6	11.05	9.39
56 D 4229	5	4.25	3.61	56 D 4243	8	8.75	7.44	56 D 4273	9	11.65	9.90
56 D 4230	6	4.40	3.74	56 D 4247	12	9.50	8.08	56 D 4272	10	11.80	10.03



Model 111



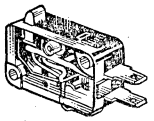
Model 212

ALLIED GIVES YOU HUGE SELECTION, FAST SERVICE, OEM QUANTITY PRICES

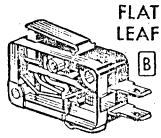
Allied maintains complete stocks of general and special-purpose switches. When you place your switch order at Allied, you get these advantages: Complete one-order service—you buy all you need from a single source; immediate shipment — all switches are stocked in-depth; lowest cost—you get OEM prices and quantity discounts.

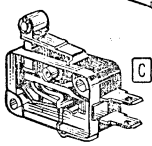
Snap-Action Switches

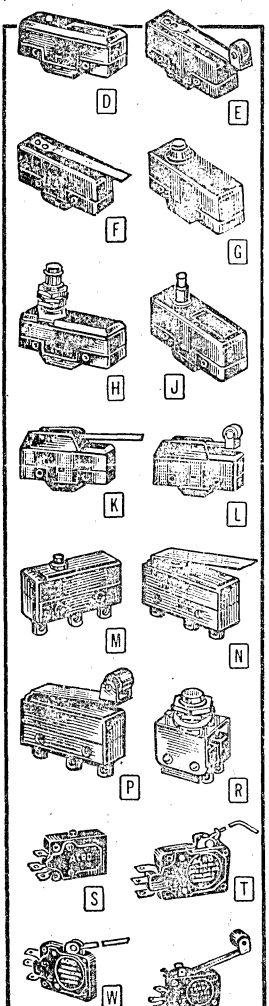
Robertshaw



Mechanical Life Up to 10,000,000 Operations!







SNAP-ACTION SPDT SWITCHES WITH MICRO EQUIVALENTS

Popular replacements for Microswitch types. Feature clip-on covers, constant-stress rolling spring snap-action for long life. Operating forces given in ounces. Switches have screw terminals, except * solder terminals. U.L. Component Program-Recognized. C.S.A. Listed. Av. shpg. wt., 2 oz.

MODEL "V" MINIATURE TYPES WITH TRANSPARENT COVERS

Feature transparent sealed mechanism cover. Excellent contact wiping action and bounce-free motion. Mechanical life, 10 million operations. Rated 15 amps at 125-250 VAC. Easy-handling, one-piece integral actuators. †Micro equivalent is basic switch with actuator harness.

Stock No.	Mfr's Type	Micro Equiv.	Oper. Force	Pre-Travel	Fig.	EACH 1-9	10-19	20-49	50-99	100-199	200-499
56 D 6504	*VD-0001	V3-19	14	.047″	A	1.02	.92	.82	.71	.66	.64
56 D 6525	VD-0007	V3-1	14	.047″	A	1.08	.97	.86	.76	.70	.68
56 D 6526	*VLD-0010	†V3-19 (JV-1)	14	.062″	B	1.12	1.01	.90	.78	.73	.71
56 D 6527	VLD-0012	†V3-1 (JV-1)	14	.062″	B	1.18	1.06	.94	.83	.77	.74
56 D 6528	*VLD-0013	†V3-19 (JV-7)	8	.156″	B	1.12	1.01	.90	.78	.73	.71
56 D 6524	VLD-0015	†V3-1 (JV-7)	8	.156″	B	1.18	1.06	.94	.83	.77	.74
56 D 6530	*VLD-0016	†V3-19 (JV-5)	14	.026″	C	1.30	1.17	1.04	.91	.85	.82
56 D 6531	VLD-0018	†V3-1 (JV-5)	14	.062″	C	1.38	1.24	1.10	.97	.90	.87
56 D 6532	*VLD-0019	†V3-19 (JV-20)	8	.156″	C	1.30	1.17	1.04	.91	.85	.82
56 D 6533	VLD-0021	†V3-1 (JV-20)	8	.156″	C	1.38	1.24	1.10	.97	.90	.87

STANDARD-DUTY TYPES

Contacts are rated at 15 amps, 120, 240 and 480 volts AC; 0.5 amp, 120 volts DC.

56 D 3937	*BRD2-1A	BZ-2R	9-13	.020″	D	1.60	1.44	1.28	1.12	1.04	1.01
56 D 3969	BRD2-1A-1S	BZ-2R-A2	9-13	.020″	D	1.75	1.58	1.40	1.23	1.14	1.10
56 D 3968	*BRD2-5L	BZ-2RL	5	.156″	F	1.85	1.67	1.48	1.30	1.20	1.17
56 D 3971	BRD2-5L-1S	BZ-2RL-A2	5	.156″	F	2.00	1.80	1.60	1.40	1.30	1.26
56 D 3943	*BRD2-2M	BZ-2RL2	5	.156″	E	2.35	2.12	1.88	1.65	1.53	1.48
56 D 3970	BRD2-2M-1S	BZ-2RL2-A2	5	.156″	E	2.50	2.25	2.00	1.75	1.63	1.58
56 D 3944	*BRD2-70	BZ-2RD	9-13	.025″	G	2.05	1.85	1.64	1.44	1.33	1.29
56 D 3972	BRD2-70-1S	BZ-2RD-1A	9-13	.025″	G	2.15	1.94	1.72	1.51	1.40	1.36
56 D 3945	*BRD2-1P	BZ-2RQ1	9-13	.025″	H	3.55	3.20	2.84	2.49	2.31	2.24
56 D 3973	BRD2-1P-1S	BZ-2RQ1-A2	9-13	.025″	H	3.65	3.29	2.92	2.56	2.37	2.30
56 D 3946	*BRD2-10	BZ-2RS	9-13	.025″	J	2.05	1.85	1.64	1.44	1.33	1.29
56 D 3887	BRD2-10-1S	BZ-2RS-A2	9-13	.025″	J	2.15	1.94	1.72	1.51	1.40	1.36
56 D 3947	*BRD2-LW8	BZ-2RW	2½	.406″	K	2.00	1.80	1.60	1.40	1.30	1.26
56 D 3888	BRD2-LW8-1S	BZ-2RW-A2	2½	.406″	K	2.15	1.94	1.72	1.51	1.40	1.36
56 D 3948	*BRD2-LW228	BZ-2RW22	6	.140″	L	2.60	2.34	2.08	1.82	1.69	1.64
56 D 3949	BRD2-LW228-1S	BZ-2RW22-A2	6	.140″	L	2.65	2.39	2.12	1.86	1.72	1.67

HEAVY-DUTY TYPES

Rated at 21 amps, 120-240-480 volts AC; 1 hp at 120 volts AC and 2 hp at 240 VAC. Screw term.

56 D 6534	FAD2-1A-1S	BA-2R-A2	10-18	1/20″	D	1.70	1.53	1.36	1.19	1.11	1.07
56 D 6535	FAD2-5L-1S	BA-2RL-A2	9	11/32″	F	2.00	1.80	1.60	1.40	1.30	1.26
56 D 6536	FAD2-2M-1S	BA-2RL2-A2	9	11/32″	E	2.50	2.25	2.00	1.75	1.63	1.58
56 D 6538	FAD2-1P-1S	BA-2RQ1-A2	10-18	1/20″	H	3.65	3.29	2.92	2.56	2.37	2.30
56 D 6539	FAD2-LV-1S	BA-2RV-A2	2½	5/8″	K	2.15	1.94	1.72	1.51	1.40	1.36
56 D 6540	FAD2-LV2-1S	BA-2RV2-A2	2½	15/32″	L	2.70	2.43	2.16	1.89	1.76	1.70
56 D 6541	FAD2-40-1S	BA-2RB-A2	10-18	1/20″	G	2.15	1.94	1.72	1.51	1.40	1.36

SUBMINIATURE TYPES

Contacts rated at 5 amps, 120 and 240 volts AC. †Indicates double gang switch. Post solder term.

56 D 6542	ZD-0024	1SM1	3-5	.008-.020″	M	1.18	1.06	.95	.83	.77	.75
56 D 6543	ZLD-0036	111-SM1-T	2	.094″	N	1.64	1.48	1.31	1.15	1.07	1.03
56 D 6544	ZLD-0037	111-SM2-T	2	.094″	P	1.98	1.78	1.58	1.39	1.29	1.25
56 D 6545	†ZPD-0088	.....	20	.070″	R	6.50	5.85	5.20	4.55	4.23	4.10

MINIATURE LIGHT-PRESSURE SWITCHES

For a wide variety of applications. All are shock-resistant and constructed for long-life performance. "M" types rated 10 amps, 125-250 VAC. "CM" types rated 3 amps, 250 VAC. All are SPDT. Operating forces are in ounces except ‡grams. 15/16x53/64x9/32″, excl. actuator. Solder term.

Stock No.	Mfr's Type	Actuator Type	Oper. Force	Pre-Travel	Fig.	EACH 1-9	10-19	20-49	50-99	100-199	200-499
56 D 5009	1MD1-1A	Pin plunger	6	1/32″	S	1.32	1.19	1.06	.92	.86	.83
56 D 5019	2MD3-1A	Pin plunger	10	1/32″	S	1.32	1.19	1.06	.92	.86	.83
56 D 5038	1MD1-1A-A18M	Roller	2	5/32″	X	1.92	1.73	1.54	1.34	1.25	1.21
56 D 5000	1MD1-1A-A18	Flat leaf	2	5/32″	W	1.72	1.55	1.38	1.20	1.12	1.08
56 D 5020	1CMD1-2AXX	Pin plunger	‡20-27	3/64″	S	1.32	1.19	1.06	.92	.86	.83
56 D 5021	2CMD1-2AXX	Pin plunger	‡33-44	3/64″	S	1.32	1.19	1.06	.92	.86	.83
56 D 5001	3CMD1-2AXX	Pin plunger	‡45-60	3/64″	S	1.32	1.19	1.06	.92	.86	.83
56 D 5024	1CMD1-2AXX-A22	Wire leaf	‡2.5	.....	T	1.63	1.47	1.30	1.14	1.06	1.03
56 D 5030	2CMD1-2AXX-A24	Flat leaf	‡4	.....	W	1.63	1.47	1.30	1.14	1.06	1.03
56 D 5003	1CMD1-1AXX-A23M	Roller leaf	5-8	3/64″	X	1.63	1.47	1.30	1.14	1.06	1.03
56 D 5004	1CMD1-18AXX-A27	Nylon leaf	‡6	.....	W	1.55	1.40	1.24	1.09	1.01	.98

SNAP-ACTION PUSHBUTTON SWITCHES

Panel-mounting, momentary contact switches. All are overtravel plunger type. Solder lug terminals. Type QPD-5031 is SPDT; min. overtravel, .125″. Rated 10 amps, 125-250 VAC. Types 3DO5-5P, 3DC5-5P compact SPST switches rated 6 amps, 250 VAC; 12 amps, 125 VAC. Min. overtravel, .007″. Type 3DO5-5P is N.O., (has black button), 3DC5-5P is N.C. (red button).

Stock No.	Mfr's Type	Fig.	Oper. Force	Pre-Travel	Size H x Dia.	EACH 1-9	10-19	20-49	50-99	100-199	200-499
56 D 5328	QPD-5031	Z	8 oz.	.050″	15/64x23/32″	3.25	2.93	2.60	2.28	2.11	2.05
56 D 5028	3DO5-5P	Y	10-15 oz.	.10″	137/64x15/16″	1.87	1.68	1.50	1.31	1.22	1.18
56 D 5029	3DC5-5P	Y	10-15 oz.	.03-.06″	137/64x15/16″	1.87	1.68	1.50	1.31	1.22	1.18

Depend on Allied for Same-Day Shipment at OEM Prices

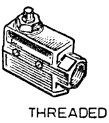
Switches—Snap, Fuseholder, Foot and Mat Types

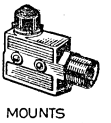
ROBERTSHAW MODEL B SPLIT HOUSING METAL-CASE SWITCHES

SPDT snap-action switches. Bottom enclosure removable for wiring. Liner seals split housing and insulates bottom enclosure. SBH types are internally threaded housing; SBHT types has externally threaded housing. Contacts rated 15 amps, 120-240-480 VAC. Screw terminals. Side-mounting—two 6-32x1½" screws and washers. Size (less actuator), 1¾x3¾x1". U. L. Component Program-Recognized; C. S. A. Listed. *Operating force in ounces. †Height with actuator. 8 oz.

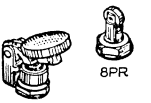
2PN2

6PQ2


THREADED MOUNTS INTERNAL


EXTERNAL

Stock No.	Mfr's Type	Micro Equivalent	Actuator Type	*Oper. Force	Pre-Travel	† Height	EACH 1-9	10-19	20-49	50-99	100-199	200-499
56 D 3950	SBH2-7PN	BZE6-2RN	Sealed plunger	9-24	.078"	2 23/32"	6.55	5.90	5.24	4.59	4.25	4.13
56 D 3951	SBH2-2PN4	BZE6-2RN4	Sealed manual	10-20	.188"	3 11/32"	10.15	9.14	8.12	7.11	6.60	6.39
56 D 3952	SBH2-6PQ	BZE6-2RQ	Plunger	9-13	.020"	1½"	5.15	4.64	4.12	3.61	3.35	3.24
56 D 3956	SBH2-8PR	BZE6-2RQ8	Roller plunger	9-13	.020"	1 15/16"	8.70	7.83	6.96	6.09	5.66	5.48
56 D 3958	SBH2-8PQ2	BZE6-2RQ2	Adj. roller	10-18	.188"	2 9/16"	8.70	7.83	6.96	6.09	5.66	5.48
56 D 3965	SBH2-2PN2	.....	Seal adj. roll	10-20	.188"	3 11/32"	9.85	8.85	7.86	6.90	6.40	6.20
56 D 3963	SBHT2-2PN2	.....	Seal adj. roll	10-20	.188"	3 11/32"	10.10	9.09	8.08	7.07	6.57	6.36


8PR

2PN4

All types shown Are SPDT Action

ROWAN FC FUSEHOLDER, SWITCH AND PILOT LIGHT

115-volt, 60-Hz AC fuseholder, switch, and pilot light. Saves panel space, installation time and cost. Fully sintered silver-cadmium-oxide main-switch contacts have high arc resistance and extremely long life. Takes 6-amp quick or slow-lag 3AC fuse. Unit life: 50,000 cycles at 6 per minute. Use with Fast-on terminals. FCA: Separate circuits for main and pilot light. Main rated 6 amps. FCB: Same as FCA except one side of pilot light is common with main circuit. Mounts in ½" hole with two nuts. Suffix F—Plain Ferrule; K—Knurled Ferrule; N—Knurled Nut; W—Escutcheon requiring ¾" dia. hole. Av. shpg. wt., 2 oz.

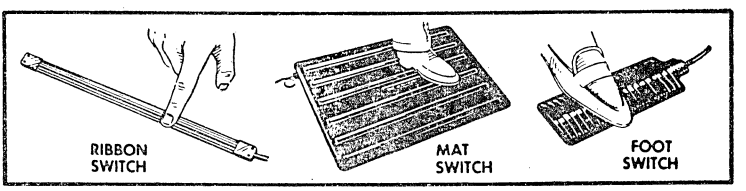
Stock No.	Mfr's Type	EACH 1-9	10-99	100-499	500-999	1000-4999
56 D 3550	FCA-F	3.40	2.80	2.20	1.75	1.50
56 D 3551	FCA-K	3.40	2.80	2.20	1.75	1.50
56 D 3552	FCA-N	3.40	2.80	2.20	1.75	1.50
56 D 3553	FCA-W	3.55	2.95	2.35	1.90	1.65
56 D 3554	FCB-F	3.40	2.80	2.20	1.75	1.50
56 D 3555	FCB-K	3.40	2.80	2.20	1.75	1.50
56 D 3556	FCB-N	3.40	2.80	2.20	1.75	1.50
56 D 3557	FCB-W	3.55	2.95	2.35	1.90	1.65

TAPESWITCH CORP. "CONTROFLEX" RIBBON SWITCHES, MATS AND FOOTSWITCHES

Type CVP 1723 Flexible Area Switching Mat. Controflex elements spaced on 2¾" centers. Water-resistant vinyl. "Mylar" insulation. Overlay with masonite, carpeting or use exposed. Actuated by 5 lbs. pressure. 17x 23x3/32" thick. For 24 V circuits. 1¾ lbs.
56 D 6680 X.....Each 12.00
2-9.....Each 9.60 10-49.....Each 9.12

Type 111 100-Watt Footswitch. Uses Controflex ribbon switches (momentary, normally open) sealed in weatherproof molded flat pad. 2x5x¼" thick; can be taped or cemented to floor. With 6-ft. U.L. lead. 8 oz.
56 D 6681.....Each 3.80
2-9.....Each 3.04 10-49.....Each 2.89

Type TS-1 Chime-Mat Annunciator Kit. (Not illus.) Entrance signal system for stores, offices, plants, shops. Includes mat, dual-note chime, transformer, wire and instructions. Mat is 17x23x3/32" thick. 4½ lbs.
56 D 6682 X.....Each 28.70
2-9.....Each 22.95 10-49....Each 20.67



Type 131-A Controflex Wired Ribbon Switches. 40 oz. sensitivity. Normally open, momentary contact. 1 amp at 117 VAC/28 VDC. Ready to use. Sleeve terminals, 18" lead. ¾" wide, 3/16" thick. Gray.

Stock No.	Lgth. Ft.	Wt., Oz.	EACH 1	2-9	10-49
56 D 6675	1	3	2.90	2.32	2.21
56 D 6676	2	4	4.00	3.20	3.04
56 D 6677	5	7	7.30	5.84	5.55

Type 121BP Sensitive Ribbon Switch. For highly sensitive alarm and control applications Same as switches at left, but 8-oz. pressure closes circuit. 1 amp at 117 VAC/24 VDC. Sealed units have 18-inch leads. 9/16" wide, 5/32" thick. Green.

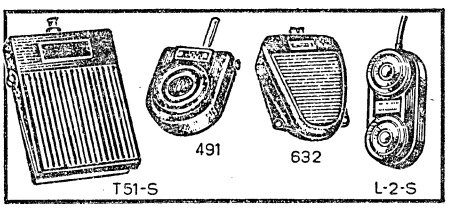
Stock No.	Lgth. Ft.	Wt., Oz.	EACH 1	2-9	10-49
56 D 6678	1	3	2.90	2.32	2.21
56 D 6679	2	4	4.00	3.20	3.04

LINEMASTER FOOT SWITCHES

Model 491-S "Compact." SPDT 10-ampere, 125-volt AC contacts. Steel housing, black crackle finish. Skidproof base.

Model 491-SC. Above, 6-ft. cord, 2-prong series plug. 491-SC3. 8-ft. cord, grounded plug.

Model 632-S. "Clipper." SPDT contacts rated 20 amps at 125-250 VAC. Cast iron housing has rubber anti-skid pad.



Model T51-S. "Treadlite." For low-current loads. SPDT. 7 amps, 110-250 VAC. Rubber treading and skid-proof rubber base pad.

T51-SC Wired. Above, 6-ft. cord, 2-prong series plug. T51-SC3. 6' cord, grounded plug.

Model 632-D. Same as Model 632-S, above, but maintains contact until again actuated.

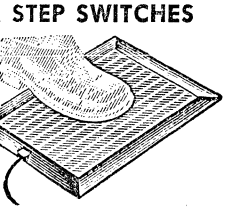
Model L-2S "Lektro-Lok." Switch has 15-amp, 125-VAC contacts on each side. Mechanical interlock. Steel housing.

Stock No.	Mfr's Type	Description	Size	Wt., Lbs.	EACH 1-9	10-19	20-49	50-99
56 D 6683	T51-S	Momentary cont.	3½x2 5/8x1"	½	2.75	2.47	2.20	2.06
56 D 6684	T51-SC	Above, 6' cord	3½x2 5/8x1"	1	4.00	3.60	3.20	3.00
56 D 6692	T51-SC3	Above, 6' cord	3½x2 5/8x1"	1½	5.00	4.50	4.00	3.75
56 D 6685	491-S	Momentary cont.	2 7/8x2½x1⅛"	½	3.25	2.92	2.60	2.44
56 D 6686	491-SC	Above, 6' cord	2 7/8x2½x1⅛"	1¼	5.00	4.50	4.00	3.75
56 D 6693	491-SC3	Above, 8' cord	2 7/8x2½x1⅛"	1½	5.85	5.27	4.68	4.39
56 D 6687	632-S	Momentary cont.	4½x3½x1½"	2	8.25	7.42	6.60	6.19
56 D 6688	632-D	Maintains cont.	4½x3½x1½"	2½	11.00	9.90	8.80	8.25
56 D 6689	L-2S	Two-way	5x2½x1⅛"	1	5.80	5.22	4.64	4.35

RECORA STEP SWITCHES

Can Be Actuated by Foot or Toe

MODEL 1423-12H



"SWITCHMAT" STEP-ON MAT

For indoor or outdoor applications. Turns on lights, acts as alarm, etc. Switch circuit is protected by heavily ribbed brown plastic mat. Resistant to cleaning compounds, oil, acids, etc. Lies flat on floor—won't slip or slide, even on polished floors. Has single-pole, single throw contacts rated 100 watts at 110-120 VAC. With 10-ft. leads. Overall size, 14x23". Wt., 11 lbs.
56 D 6690 X. 1-11.....Each 23.00
12-Up.....Each 17.25

Model 1830-12H "Switchmat." Same quality features as above. Single-pole, single throw contacts rated 100 watts at 110-120 VAC. Overall size, 18x30". Wt., 18½ lbs.
56 D 6691 X. 1-11.....Each 32.00
12-Up.....Each 24.00

Industrial Counters

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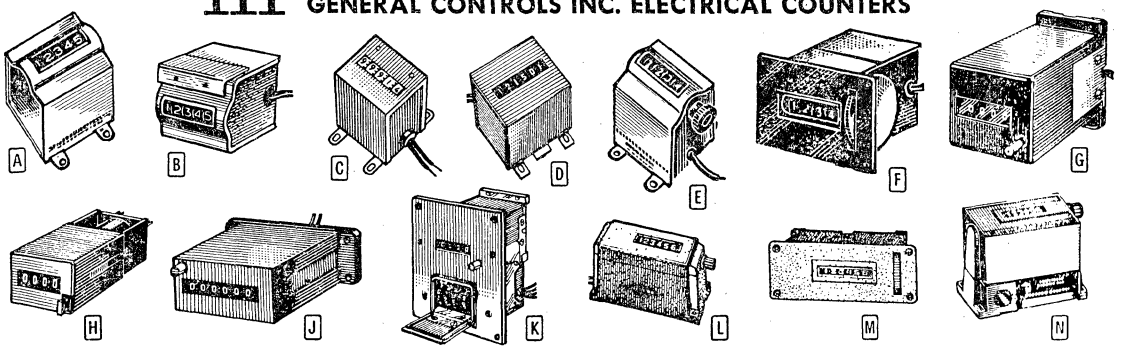
ITT GENERAL CONTROLS INC. ELECTRICAL COUNTERS



- Reset and Non-Reset Types
- For Industrial Applications
- Count Life to 200 Million
- Up to 1000 Counts Per Minute

All counters for use in 60 Hz operation. Available in either base (A in Type No.) or panel mount (B in Type No.) types.

PREFIX "CE40." For coin equipment and moderate-duty industrial applications. Minimum make-time .050 second, break time .050 second. Rated at 600 cpm. Enclosed in tamperproof case. Reset units count to 4 digits, non-reset to 5. Shpg. wt., 1 lb.

PREFIX "CE47." For built-in applications on lab and industrial equipment, with high speed and accuracy. Pushbutton reset except CE47BE402, electric reset. CE47AP402 is base mount; others panel mount. Counts 4 digits at 1200 cpm, 30-million count life. 1 lb.

PREFIX "CE50." Nonreset electric counter. Counts to 99,999 (at 600 cpm) and repeats. Minimum life of 1,000,000 counts. Choice of base* or panel† mounting. Aluminum tamperproof enclosure. Operating Temperatures, 0°F to 160°F. ■U.L. Recog. 120 VAC. 5 oz.

PREFIX "CE59." Pushbutton reset, for 3 or 4 digits. Suffix "302" indicates 3-digit; "402," 4-digit. Rated 1000 cpm, 10-million count life. CE59AP, base mount; CE59BP, panel mount. Wt., 6 oz.

PREFIX "CE60." Non-reset type for use at temperatures from —40° F to +160° F. Rated at 600 cpm, 1-million count life minimum. CE60AN is base mount; CE60BN is panel mount. Shpg. wt., 8 oz.

PREFIX "CE61." Fast pushbutton reset type counts to 6 digits. Rated 1000 cpm, 10-million count life. CE61AP602 is base mount. CE61BP602 is panel mounting. Shpg. wt., 1½ lbs.

PREFIX "CE62." Predetermined output actuates switch when counter reaches preset number. Reset by button or electric pulse. Button opens door to expose easily-set wheels. Panel mount. CE62BP402 has pushbutton reset; CE62BE402 has electric reset with 0.30 second min. pulse. Rated at 900 cpm, 20-million count life. Counts to 4 digits. Shpg. wt., 2½ lbs.

PREFIX "CE600." For general industrial applications. Minimum make and break time .030 second. Enclosed in dust-resistant housing. Rated at 1000 cpm, with 50-million count life. Continuous-duty coils. Counts to 6 digits. Shpg. wt., 1 lb.

PREFIX "CE800." Heavy-duty, with 200-million count life. For drill and punch presses, etc. Minimum make and break time is .030 second. Die-cast aluminum housing. Dustproof and tamperproof. Rated at 1000 counts per minute. Continuous duty coils. 5 lbs.

NON-RESET TYPES

Stock No.	Mfr's Type	Fig.	AC Volts	EACH 1-9	10-24	25-49	50-99	100-249
58 D 8861	CE40AN502	A	120	7.75	6.59	6.20	5.81	5.43
58 D 8860	CE40BN502	B	120	8.35	7.10	6.68	6.26	5.85
58 D 8866	CE50AN502U	C	120	4.50	3.83	3.60	3.38	3.15
58 D 8867	CE50BN502U	C	120	4.50	3.83	3.60	3.38	3.15
58 D 8862	CE60AN601	D	24	8.25	7.01	6.60	6.19	5.78
58 D 8863	CE60AN602	D	120	8.25	7.01	6.60	6.19	5.78
58 D 8864	CE60BN601	D	24	8.75	7.44	7.00	6.56	6.13
58 D 8865	CE60BN602	D	120	8.75	7.44	7.00	6.56	6.13

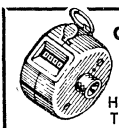
SIZE CHART

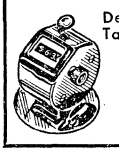
Fig.	Size	Mount Type and Mtg. Centers
A & E	2.484x1.719x1.563″	Base—1.125x1.937″
B	1.562x1.719x2.422″	Panel—.812x640″
C	2.675x1.350x1.563″	Base—1.125x1.750″; Panel—1.563x2.675″
D	2.500x1.530x1.742″	Base—1.860x1.125″; Panel—.781x.351″
F	1.937x2.812x2.422″	Panel—1.562x2.437″
G	2.756x3.150x2.283″	Base—1.890x1.181″; Panel—2.362x.709″
H	0.877x3.598x1.043″	Base—.590x.709″
H	1.535x3.878x1.576″	Panel—1.259x.689″
J	1.181x2.992x3.188″	Base—2.795x.787″; Panel—2.992x1.181″
K	3.780x2.500x2.913″	Panel—3.307x2.441″
L	2.500x1.656x3.500″	Base—3.234x1.359″
M	2.812x1.875x4.437″	Panels—4.063x1.500″
N	3.125x5.625x4.687″	Base—5.250x2.500″

RESET TYPES

Stock No.	Mfr's Type	Fig.	AC Volts	EACH 1-9	10-24	25-49	50-99	100-249
58 D 8870	CE40AS402	E	120	15.25	12.96	12.20	11.44	10.67
58 D 8868	CE40BS401	F	24	15.95	13.56	12.76	11.96	11.17
58 D 8869	CE40BS402	F	120	15.95	13.56	12.76	11.96	11.17
58 D 8880	CE47AP402	G	120	22.00	18.70	17.60	16.50	15.40
58 D 8881	CE47BP402	G	120	22.00	18.70	17.60	16.50	15.40
58 D 8882	CE47BE402	G	120	41.00	34.85	32.80	30.75	28.70
58 D 8883	CE59AP302	H	120	14.95	12.71	11.96	11.24	10.47
58 D 8884	CE59AP402	H	120	16.75	14.24	13.40	12.56	11.73
58 D 8885	CE59BP302	H	120	14.95	12.71	11.96	11.21	10.47
58 D 8886	CE59BP402	H	120	16.75	14.24	13.40	12.56	11.73
58 D 8878	CE61AP602	J	120	25.50	21.68	20.40	19.13	17.85
58 D 8879	CE61BP602	J	120	26.50	22.53	21.20	19.88	18.55
58 D 8876	CE62BP402	K	120	57.70	49.05	46.16	43.28	40.39
58 D 8877	CE62BE402	K	120	73.00	62.05	58.40	54.75	51.10
58 D 8871	CE600AS601	L	24	20.00	17.00	16.00	15.00	14.00
58 D 8872	CE600AS602	L	120	20.00	17.00	16.00	15.00	14.00
58 D 8873	CE600BS601	M	24	23.00	19.55	18.40	17.25	16.10
58 D 8874	CE600BS602	M	120	23.00	19.55	18.40	17.25	16.10
58 D 8875	CE800CS602	N	120	50.00	42.50	40.00	37.50	35.00

CM4 HAND TALLY MECHANICAL COUNTERS


Hand Tally


Desk Tally

High-quality, precision, 4-digit, pushbutton, knob-reset counter. Type CM4CS454 is 1¾″ in diameter, fits comfortably in the palm, and is chrome-plated to resist perspiration. Desk Tally, Type CM4CS454D, has mounting base. Shpg. wt., 4 oz.

Stock No.	Type CM4C	EACH 1-9	10-24	25-49	50-99	100-249
58 D 8887	S454	3.25	2.76	2.60	2.44	2.28
58 D 8888	S454D	4.40	3.74	3.52	3.30	3.08

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Industrial Timer Corporation Timers

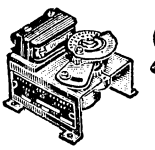
CM, MC AND RC SERIES CAM TIMERS

GEAR-AND-RACK ASSEMBLIES CHART

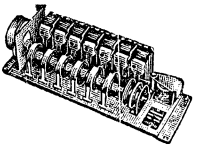
Stock No.	Gear Ass'bly Type No. †	Foundation Units: CM-2 MC-2 RC-2	CM-4 MC-4 RC-4	CM-5 MC-5 RC-5	CM-6 MC-6 RC-6	CM-8 MC-8 RC-8	CM-10 MC-10 RC-10
		Overall Time Cycles Available S=Seconds M=Minutes H=Hours					
58 D 8472	E-12	10S	40S	2M	3M20S	20M	2H
58 D 8500	E-15	12½S	50S	2M30S	4M10S	25M	2H30M
58 D 8468	C-12	15S	60S	3M	5M	30M	3H
58 D 8501	C-14	17½S	70S	3M30S	5M50S	35M	3H30M
58 D 8466	B-12	20S	80S	4M	6M40S	40M	4H
58 D 8504	C-18	22½S	90S	4M30S	7M30S	45M	4H30M
58 D 8467	B-15	25S	100S	5M	8M20S	50M	5H
58 D 8457	A-12	30S	2M	6M	10M	60M	6H
58 D 8507	A-14	35S	140S	7M	11M40S	70M	7H
58 D 8458	A-16	40S	160S	8M	13M20S	80M	8H
58 D 8459	A-18	45S	3M	9M	15M	90M	9H
58 D 8460	A-20	50S	200S	10M	16M40S	100M	10H
58 D 8517	A-22	55S	220S	11M	18M20S	110M	11H
58 D 8461	A-24	60S	4M	12M	20M	2H	12H
58 D 8518	A-30	75S	5M	15M	25M	2H30M	15H
58 D 8465	A-36	90S	6M	18M	30M	3H	18H

†GEAR-AND-RACK ASSEMBLY.....Each 1.75

Corrosion-Resistant Aluminum Cams Have Single Screw Adjustment For Setting On/Off Period From 2% to 98% Of The Complete Time Cycle



Series CM



Series RC

HOW TO ORDER CAM TIMERS

Foundation Units: Use RC series for single cycle. MC or CM for continuous rotation. Use CM series for single switch. MC or RC for multi-switch. Select time cycle desired from gear and rack assemblies chart; determine the specific foundation unit from the column head directly above time cycle. **NOTE: Foundation units determine length of time cycle, for example, RC, CM, or MC-5 handle time cycles from 2 M to 18 M. Select your specific time cycle closest to middle of complete range.** *Specify Stock No. and Mfr's type of both gear and rack assemblies and foundation unit.*

SERIES CM RECYCLING-CAM FOUNDATION UNITS (Order Gear-and-Rack Assembly Separately, Above)

Series CM Recycling Timer. Repeats a definite electrical "Off-On" cycle continuously. Consists of two units: a gear-and-rack assembly, and a Series CM chassis-mounted foundation unit that includes a heavy-duty synchronous motor and a cam-activated SPDT switch. Corrosion-resistant aluminum cams have single screw adjustment for setting "On" or "Off" period from 2% to 98% of complete cycle. Various combinations of these two basic units provide a variety of time cycles (see "How to Order" above, right). Contacts rated 10 amps at 115 V., or 220 V., 60 Hz AC. ■U.L. Recognized. C.S.A. Listed. 2 7/16x3x3 3/16". For 110-120 V, 60 Hz AC. 1½ lbs.

Stock No.	Mfr's Type	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8450	CM-2	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19
58 D 8451	CM-4	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19
58 D 8452	CM-5	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19
58 D 8453	CM-6	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19
58 D 8454	CM-8	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19
58 D 8455	CM-10	18.75	17.81	16.88	15.94	15.00	14.06	13.13	12.19

SERIES MC AND RC FOUNDATION UNITS (Order Gear-and Rack Assembly Separately, Above)

Series MC Multi-Cam Recycling Timer. Identical to CM timer above, but controls more than one circuit. Cams are mounted on single driving shaft, coupled to the motor by a gear-and-rack assembly. Cams can be adjusted in any combination of timed sequences. This individual cam adjustability enables the timer to be used as a programing device. See "How to Order," above, right.

Series RC Single-Cycle Multi-Cam Timer. Provides a single timed electrical cycle upon momentary actuation from a remote position. May be used to control more than 1 circuit. Cams are individually adjustable for any combination of timed sequences. Enables the user to have all the advantages of the Series MC timers, plus the single-cycle homing control. See "How to Order," above,

2-CIRCUIT Shpg. wt., 2 lbs.

Stock No.	Mfr's Type	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8439	MC-2	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8440	MC-4	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8479	MC-5	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8480	MC-6	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8511	MC-8	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8512	MC-10	33.75	32.06	30.37	28.69	27.00	25.31	23.63	21.94
58 D 8513	RC-2	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69
58 D 8515	RC-4	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69
58 D 8516	RC-5	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69
58 D 8541	RC-6	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69
58 D 8544	RC-8	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69
58 D 8549	RC-10	48.75	46.31	43.87	41.44	39.00	36.56	34.12	31.69

4-CIRCUIT Shpg. wt., 2 lbs.

58 D 8612	MC-2	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8613	MC-4	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8614	MC-5	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8615	MC-6	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8616	MC-8	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8617	MC-10	50.75	48.21	45.67	43.14	40.60	38.06	35.53	32.99
58 D 8618	RC-2	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06
58 D 8649	RC-4	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06
58 D 8650	RC-5	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06
58 D 8651	RC-6	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06
58 D 8656	RC-8	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06
58 D 8657	RC-10	66.25	62.94	59.63	56.31	53.00	49.69	46.38	43.06

6-CIRCUIT Shpg. wt., 4 lbs.

Stock No.	Mfr's Type	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8558	MC-2	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8566	MC-4	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8567	MC-5	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8568	MC-6	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8569	MC-8	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8576	MC-10	67.25	63.89	60.53	57.17	53.80	50.44	47.08	43.71
58 D 8580	RC-2	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44
58 D 8583	RC-4	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44
58 D 8586	RC-5	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44
58 D 8587	RC-6	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44
58 D 8588	RC-8	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44
58 D 8589	RC-10	83.75	79.56	75.38	71.19	67.00	62.81	58.63	54.44

8-CIRCUIT Shpg. wt., 5 lbs.

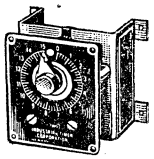
58 D 8600	MC-2	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8601	MC-4	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8602	MC-5	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8603	MC-6	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8604	MC-8	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8605	MC-10	84.25	80.04	75.82	71.61	67.40	63.19	58.97	54.76
58 D 8606	RC-2	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16
58 D 8607	RC-4	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16
58 D 8608	RC-5	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16
58 D 8609	RC-6	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16
58 D 8610	RC-8	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16
58 D 8611	RC-10	100.25	95.24	90.23	85.21	80.20	75.19	70.18	65.16

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Timing Equipment by Industrial Timer

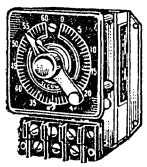
HIGH-ACCURACY TIME-DELAY CONTROLS

H, CH



SF, CSF

TD, CTD



TDAB

TDAF

SERIES 90

SERIES H, CH, SF AND CSF TIME-DELAY TIMERS

Automatic reset units. For use where fixed or adjustable delay is needed between closing one circuit and opening or closing another. SPDT switch rated 10 amps at 115 VAC, with non-inductive load. Clutch is integral part of motor in units up to 1 minute; others have external clutch. Series H and CH for front-panel mounting; SF and CSF for back-panel mtg.; all have 4-screw mtg. holes. Overall size: H and CH, $3\frac{7}{16}$x$3\frac{9}{16}$x$3\frac{1}{2}$"; SF and CSF, $2\frac{3}{4}$x$3\frac{1}{16}$x$2\frac{5}{8}$". For 110-120 V, 60 Hz AC. ■U.L. Recog. Wt., $1\frac{1}{2}$ lbs.

Stock No.	Mfr's Type	Max. Time Cycle	Stock No.	Mfr's Type	Max. Time Cycle	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8432	H-6S	6 sec.	58 D 8486	CH-1M	1 min.	26.50	25.18	23.85	22.53	21.20	19.87	18.55	17.23
58 D 8485	H-15S	15 sec.	58 D 8487	CH-3M	3 min.	26.50	25.18	23.85	22.53	21.20	19.87	18.55	17.23
58 D 8426	H-30S	30 sec.	58 D 8488	CH-5M	5 min.	26.50	25.18	23.85	22.53	21.20	19.87	18.55	17.23
58 D 8431	SF-6S	6 sec.	58 D 8482	CSF-1M	1 min.	23.00	21.85	20.70	19.55	18.40	17.25	16.10	14.95
58 D 8481	SF-15S	15 sec.	58 D 8483	CSF-3M	3 min.	23.00	21.85	20.70	19.55	18.40	17.25	16.10	14.95
58 D 8430	SF-30S	30 sec.	58 D 8484	CSF-5M	5 min.	23.00	21.85	20.70	19.55	18.40	17.25	16.10	14.95

SERIES TD AND CTD TIME-DELAY TIMERS

Synchronous-motor-driven. Clutch engages and drives gear train when motor is energized—when de-energized, it returns to reset position. All have 60 dial divisions. For front-panel mounting in 3" diameter hole. Bakelite case has terminals at rear. SPDT contacts rated at 10 amps. Flange dia., $3\frac{3}{16}$". Depth behind panel: TD, $2\frac{23}{32}$"; CTD, $4\frac{5}{32}$". For 110-120 V, 60 Hz AC. ■U.L. Recog. Shpg. wt., $1\frac{1}{2}$ lbs.

58 D 8433	TD-6S	6 sec.	58 D 8435	CTD-1M	1 min.	30.50	28.98	27.45	25.93	24.40	22.88	21.35	19.83
58 D 8493	TD-15S	15 sec.	58 D 8436	CTD-3M	3 min.	30.50	28.98	27.45	25.93	24.40	22.88	21.35	19.83
58 D 8494	TD-30S	30 sec.	58 D 8495	CTD-5M	5 min.	30.50	28.98	27.45	25.93	24.40	22.88	21.35	19.83

SERIES TDAB AND TDAF TIME-DELAY TIMERS

Series TDAB (back-mounted) and Series TDAF (panel-mounted) timers for circuit controls where adjustable or fixed time-delay is required between the closing or opening of one circuit and the closing or opening of another circuit. For applications requiring high repetitive accuracy, fast reset, and heavy usage. Automatic reset of timing/switching movement in less than 0.2 second. Ideal for plastic molding equipment, packaging machinery, graphic arts equipment and other uses. Snap-action switches (SPDT) rated 10 amps. Sizes: TDAB, $4\frac{9}{16}$x$3\frac{17}{32}$x$4\frac{1}{8}$"; TDAF, $4\frac{1}{2}$x$3\frac{1}{8}$x$3\frac{3}{8}$". For 110-120 volts, 60 Hz AC. Shpg. wt., 4 lbs.

Max. Time Cycle	Dial Div.	BACK MOUNT Stock No.	BACK MOUNT Type TDAB-	PANEL MOUNT Stock No.	PANEL MOUNT Type TDAF-	Max. Time Cycle	Dial Div.	BACK MOUNT Stock No.	BACK MOUNT Type TDAB-	PANEL MOUNT Stock No.	PANEL MOUNT Type TDAF-
1 sec.	1/60 sec.	.....	.....	58 D 8437	1S	3 min.	3 sec.	58 D 8390	3M	58 D 8469	3M
3 sec.	1/20 sec.	.....	.....	58 D 8456	3S	5 min.	5 sec.	58 D 8391	5M	58 D 8473	5M
6 sec.	1/10 sec.	.....	.....	58 D 8462	6S	15 min.	15 sec.	58 D 8392	15M	58 D 8428	15M
15 sec.	¼ sec.	58 D 8387	15S	58 D 8463	15S	30 min.	30 sec.	58 D 8393	30M	58 D 8476	30M
30 sec.	½ sec.	.....	.....	58 D 8464	30S	60 min.	60 sec.	58 D 8394	60M	58 D 8429	60M
60 sec.	1 sec.	58 D 8389	60S	58 D 8427	60S	3 hrs.	3 min.	58 D 8395	3H	58 D 8492	3H

Type	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
Any TDAB or TDAF	43.00	40.85	38.70	36.55	34.40	32.25	30.10	27.95

SERIES 90 TIME-DELAY TIMERS

Rugged, compact timer for use in applications where the time-delay cycle is infrequently changed, or permanently fixed. Excellent for use in photocopy equipment, induction heating units, transmitters, etc. Changes in time delay cycle are made by loosening set screw and offsetting one cam arm in relation to the other. Totally enclosed, snap-action SPDT switch contacts are rated at 10 amps at 115-230 volts AC. Overall size (HWD): $2\frac{5}{8}$x$2\frac{1}{4}$x$2\frac{1}{4}$". For 115 V, 60 Hz AC. ■U.L. Recognized. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Settings Min.	Settings Max.	EACH 1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8416	90-6S	½ sec.	6 sec.	17.00	16.15	15.30	14.45	13.60	12.75	11.90	11.05
58 D 8417	90-15S	1½ sec.	15 sec.	17.00	16.15	15.30	14.45	13.60	12.75	11.90	11.05
58 D 8418	90-30S	3 sec.	30 sec.	17.00	16.15	15.30	14.45	13.60	12.75	11.90	11.05
58 D 8419	90-60S	6 sec.	1 min.	17.00	16.15	15.30	14.45	13.60	12.75	11.90	11.05
58 D 8496	90-90S	9 sec.	1½ min.	17.00	16.15	15.30	14.45	13.60	12.75	11.90	11.05

SOLID-STATE 10-AMP VARIABLE-DELAY TIMERS

Panel-mount delay timers with SPDT contacts rated 10 amps isolated, non-inductive at 115 V, 60 Hz AC. Series ELH plug-in type mounts in female receptacle with no change in wiring; Series ELF is fixed-mount type with rear terminal board. Zener referenced. Repeatability, ±1% of dial setting. For 115/220 VAC. Shpg. wt., 2 lbs.

PLUG-IN PANEL-MOUNT TYPES

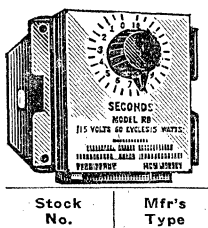
Stock No.	Mfr's Type	Min. Set Sec.	Max. Set Sec.
58 D 8559	ELH 500	.030	.5
58 D 8560	ELH 1s	.050	1
58 D 8561	ELH 5s	.250	5
58 D 8562	ELH 10s	.500	10
58 D 8563	ELH 30s	1.5	30
58 D 8564	ELH 60s	3	60

1-3.....Each 59.50
4-5.....Each 56.53
6-11.....Each 53.55
12-24.....Each 50.58

FIXED PANEL-MOUNT TYPES

Stock No.	Mfr's Type	Min. Set Sec.	Max. Set Sec.
58 D 8590	ELF 500	.030	.5
58 D 8591	ELF 1s	.050	1
58 D 8592	ELF 5s	.250	5
58 D 8593	ELF 10s	.500	10
58 D 8594	ELF 30s	1.5	30
58 D 8595	ELF 60s	3	60

1-3.....Each 53.50
4-5.....Each 50.83
6-11.....Each 48.15
12-24.....Each 45.48



SERIES RB AUTOMATIC RESET TIME DELAY TIMER

Provides adjustable delay between closing of one circuit and operation of timer load switch. Removable back bracket allows panel mounting. SPDT contacts 10 amps non-inductive. Size and mounting interchangeable with other leading manufacturers. $3\frac{1}{32}$x$3\frac{9}{32}$x$2\frac{13}{32}$". For 115 V, 60 Hz AC. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Time Cycle Maximum	Time Cycle Minimum
58 D 8570	RB-5.6S	5.6 sec.	2/10 sec.
58 D 8571	RB-14S	14 sec.	½ sec.
58 D 8572	RB-28S	28 sec.	1 sec.
58 D 8573	RB-56S	56 sec.	2 sec.
58 D 8574	RB-84S	1 min. 24 sec.	3 sec.
58 D 8575	RB-168S	2 min. 48 sec.	6 sec.
58 D 8577	RB-4.5M	4 min. 40 sec.	10 sec.

1-3.....Each 14.50 4-5.....Each 13.78
6-11.....Each 13.05 12-24.....12.33 25-49.....Each 11.60
50-99.....Each 10.88 100-249....10.15 250-499....Each 9.43

■Recognized Under the Component Program of Underwriters' Laboratories, Inc.

Industrial Timer Corporation Timing Controls

SERIES MTD TIME-DELAY TIMERS

- Match Modern Panel-Instruments
- Plastic Face Protects Indicators
- Mounts Through 3" Hole in Panel

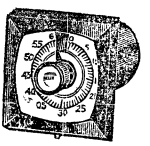
MTD

Designed to match panel-instruments commonly found on modern automatic machines. Provides a predetermined timed delay between the closing of one load circuit and the operation of the timer's isolated load switch. Load contacts are rated 10 amps, are SPDT snap-action, and are brought out to snap-on terminals at the rear of the timer. A rugged plastic face protects the setting and progress indicators from dust and damage. Mounts through a 3-inch hole in panel and is firmly secured by a bracket screwed to the rear of timer case. For 115 V, 60 Hz AC. Specify range: 6 seconds, 15 seconds, 30 seconds, 60 seconds, 5 minutes, 15 minutes, 30 minutes, 1 hour, 3 hours. Shpg. wt., 2½ lbs.

58 D 8550 C. 1-3.....Each 30.50 4-5.....Each 28.97
6-11....Each 27.45 12-24....Each 25.92 25-49....Each 24.40
50-99...Each 22.87 100-249...Each 21.35 250-499.....Each 19.82

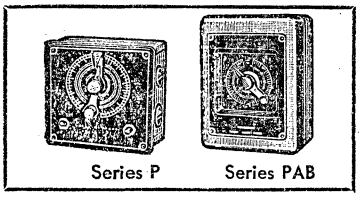
SERIES GTD TIME-DELAY TIMERS

- Synchronous Motor SPDT Load Switch
- Dial Calibrated in 60 Increments
- Time Adjusted with Knob on Dial Face



Designed for use in circuit-controls requiring an adjustable time-delay between the opening of one circuit and the closing or opening of an other circuit. Features instant automatic reset —as soon as clutch is disengaged, an internal spring returns actuating arm to its reset position in a fraction of a second. SPDT load-switch is rated 10 amps non-inductive. Requires 3" mounting hole. No screw holes needed—a single screw under flange of timer tightens bracket against edge of panel. 4x4⅜" flange, 4²³⁄₃₂" behind panel. Equipped with screw terminals. For 115 volts, 60 Hz AC. Specify range: 15 seconds, 30 seconds, 5 minutes, 15 minutes, 30 minutes, 60 minutes. Shpg. wt., 2 lbs.

58 D 8546 C. 1-3.....Each 39.50 4-5.....Each 37.83
6-11....Each 35.55 12-24....Each 33.58 25-49....Each 31.60
50-99...Each 29.63 100-249...Each 27.65 250-499... Each 25.68



Series P Series PAB

INTERVAL TIMERS

SERIES P AUTOMATIC RESET TIMERS

Multi-purpose interval timer with automatic reset. Provided with receptacle for remote starter, and standard AC receptacle for load. Load-switch contacts are rated at 15 amps. Built-in toggle switch is provided for manually operating the load circuit permanently when timed operation is not required. Completely portable, unit is supplied with AC cord and is housed in metal case with keyhole slots in back for wall mounting. Overall size, 5x5x3". For 110-120 V, 60 Hz AC. Shpg. wt., 3 lbs.

Stock No.	Mfr's Type	Max. Time Cycle	Dial Division
58 D 8528	P-4R	15 seconds	¼ second
58 D 8529	P-2R	30 seconds	½ second
58 D 8474	P-1M	1 minute	1 second
58 D 8475	P-3M	3 minutes	3 seconds
58 D 8530	P-5M	5 minutes	5 seconds

1-3.....Ea. 33.00 4-5.....Ea. 31.35
6-11.....Ea. 29.70 12-24...Ea. 28.05
25-49.....Ea. 26.40 50-99...Ea. 24.75
100-249.....Ea. 23.10 250-499.Ea. 21.45

SERIES PAB INSTANT-RESET TIMERS

Extremely accurate, instant-reset, automatic timers designed for heavy-duty use in industrial control applications. Features instant reset adjustment. Electrically operated clutch drives actuating arm to dial setting selected, and automatically releases. Spiral spring resets arm in split second. Output terminals can be wired for circuit transfer applications. Switch contacts rated 15 amps at 115 volts AC with non-inductive load. Metal enclosure has ½" knockouts for use with rigid or flexible conduit. 7⅛x5⅛x 4¼". For 110-120 volts, 60 Hz AC. Shpg. wt., 4 lbs.

Stock No.	Mfr's Type	Max. Time Cycle	Dial Division
58 D 8531	PAB-15S	15 seconds	¼ second
58 D 8532	PAB-30S	30 seconds	½ second
58 D 8534	PAB-60S	60 seconds	1 second
58 D 8536	PAB-15M	15 minutes	15 seconds
58 D 8538	PAB-60M	60 minutes	1 minute

1-3.....Ea. 55.00 4-5.....Ea. 52.25
6-11.....Ea. 49.50 12-24.....Ea. 46.75
25-49.....Ea. 44.00 50-99.....Ea. 41.25
100-249....Ea. 38.50 250-499..Ea. 35.75

SERIES "S" SIGNALING TIMERS

The Series "S" signaling timer is a motor-driven, manual-set, multipurpose process timer that provides an audible signal at the end of either a time-interval or a time-delay. Two color-coded receptacles are provided on the side of case: a black receptacle that operates load or remote signal at the end of cycle, a red receptacle that operates load circuit during time cycle. Setting timer for any part of time cycle lights lamp and powers red receptacle. On completion of cycle, lamp is turned off, buzzer sounds, and switch transfers power to black receptacle. Buzzer sounds until manually turned off, or until timing cycle is started again. Snap-action SPDT contacts rated 10 amps. With metal case, AC cord. For 110 volts, 60 Hz AC. Shpg. wt., 3 lbs.

Specify Time Range

Type	Max. Cycle	Type	Max. Cycle
S-5M	5 min.	S-1H	1 hour
S-15M	15 min.	S-3H	3 hours
S-30M	30 min.	.....	.....

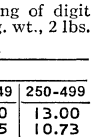
58 D 8533 C. 1-3.....Each 29.00
4-5.....Each 27.55 6-11.....Each 26.10
12-24...Each 24.65 25-49.....Each 23.20
50-99...Each 21.75 100-249...Each 20.30
250-499.....Each 18.85

NON-RESET RUNNING-TIME METERS

Model C2. Provides an accurate account of machine running-time—easy to compute production costs from elapsed time shown, or determine time to replace components with a predetermined life expectancy, thus preventing costly "down-time." Equipped with non-resettable counters that mark every 1/10 hour; total time-range of 10,000 hours. Units are completely enclosed and resistant to dust and moisture. In 3½" round bakelite meter case; require 2⅞" panel mounting hole. With stud-type terminals. For 115 V, 60 Hz AC. Shpg. wt., 2 lbs. See table below.

Model C4. Same as Model C2 above, but has open-type construction. For any application not requiring a cased panel unit, such as direct mounting on machinery. 2½" dia. mtg. flange; overall depth is 2³⁄₁₆". Wt., 2 lbs. See table below.

RESET TIME TOTALIZERS

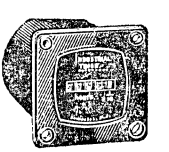


Model C5. Same as units described above, but equipped with special reset counters, making it possible to reset totalizer back to zero at any time. Completely enclosed in baked, black finished steel housing 2⅞" in diameter, 3¼" long. Has heavy steel mounting flange measuring 3¼"x3¼". Screw terminals on back of unit. For operation from 115 V, 60 Hz AC. Shpg. wt., 2 lbs. See table below.

Model C7. Same as Model C5 described above, but employing open-type construction. Has large, edge-knurled dial in front of meter for convenient resetting of digit counters. Size, 2¾x2½x3". Shpg. wt., 2 lbs. See table below.

Stock No.	Mfr's Type	EACH							
		1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8442	C-2	20.00	19.00	18.00	17.00	16.00	15.00	14.00	13.00
58 D 8444	C-4	16.50	15.68	14.85	14.03	13.20	12.38	11.55	10.73
58 D 8446	C-5	42.50	40.38	38.25	36.13	34.00	31.88	29.75	27.63
58 D 8448	C-7	34.50	32.78	31.05	29.33	27.60	25.88	24.15	22.43

AC AND DC RUNNING-TIME METERS



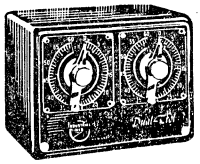
Model C-8, C-9. For AC or DC applications. Equipped with non-resettable counters that mark every 1/10 hour; total time range of 10,000 hours. In electrical apparatus, meter is wired in parallel with the main ON-OFF switch; on non-electrical equipment, wired between the ground and primary of ignition coil; on diesel-powered equipment, connected to starting battery. C-8, DC types powered by solenoid clock movement. C-9, AC type powered by synchronous motor. Mount with 4 screws in 2³⁄₁₆" cutout. Require 3⅝" behind panel.*Universal from 12 to 32 volts DC. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Volts	EACH							
			1-3	4-5	6-11	12-24	25-49	50-99	100-249	250-499
58 D 8519	C-8	6 DC	19.25	18.29	17.33	16.36	15.40	14.44	13.48	12.51
58 D 8521	C-8	* DC	19.25	18.29	17.33	16.36	15.40	14.44	13.48	12.51
58 D 8543	C-9	115 AC	19.25	18.29	17.33	16.36	15.40	14.44	13.48	12.51

Timers, Clocks and Counters

INDUSTRIAL TIMER TIMERS AND CLOCKS

DUAL-TROL TIMING MODULES



- Two Sequences
- Choice of Cycles
- Plug-in Modules
- Recycling

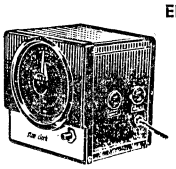
Two adjustable on/off sequencing switch closures. Modules can be combined to give any combinations of cycles listed. 10-amp; SPDT. Specify timing modules desired: 6 seconds, 15 seconds, 30 seconds, 60 seconds, 3 minutes, 5 minutes, 15 minutes, 30 minutes, 60 minutes, 3 hours. Order housing for modules separately. 2 lbs.

58 D 8554 C. 1-3	Each 27.50	4-5	Each 26.13
6-11	Each 24.75	12-24	Each 23.38
25-49	Each 22.00	50-99	Each 20.63

MODULE HOUSING. Each holds two modules. Shpg. wt., 1½ lbs.

58 D 8553. 1-3	Each 22.50		
4-5	Each 21.38	6-11	Each 20.25
12-24	Each 19.13		
25-49	Each 18.00	50-99	Each 16.87

ELECTRIC STOP CLOCKS



Measure time intervals for process and production controls, time and motion studies, other uses. Synchronous motor, cone clutch 360° engagement, automatic wear compensation. Remote start-stop and reset receptacles on side of case. Front-panel reset button. Reset time, .010 seconds. 5x5x4 25/32". For 115 V, 60 Hz AC only. Shpg. wt., 5 lbs.

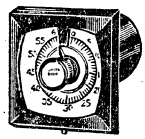
MODEL SC-100. Measures 1/100 second to 60 seconds.

58 D 8441. 1-3	Each 68.50	4-5	Each 65.08
6-11	Each 61.25	12-24	Each 58.23
25-49	Each 54.80	50-99	Each 51.38
100-259	Each 47.95	250-499	Each 44.53

MODEL SC-60. Measures 1 second to 60 minutes.

58 D 8445. 1-3	Each 68.50	4-5	Each 65.08
6-11	Each 61.65	12-24	Each 58.23
25-49	Each 54.80	50-99	Each 51.38
100-249	Each 47.95	250-499	Each 44.53

PBM SERIES TIMERS



Pressing pushbutton closes load switch for duration of preset timed interval. Timer automatically resets and begins new interval when button is depressed. SPDT contacts rated 25 amps non-inductive at 115 V, 60 Hz AC. Specify time ranges: 6 sec.; 15 sec.; 30 sec.; 60 sec.; 5 min.; 15 min.; 30 min.; 1 hour; 3 hours. Shpg. wt., 3 lbs.

58 D 8552 C. 1-3	Each 19.25	4-5	Each 18.29
6-11	Each 17.32	12-24	Each 16.36
25-49	Each 15.40	50-99	Each 14.44
100-249	Each 13.47	250-499	Each 12.51

GP PLUG-IN INTERVAL TIMERS

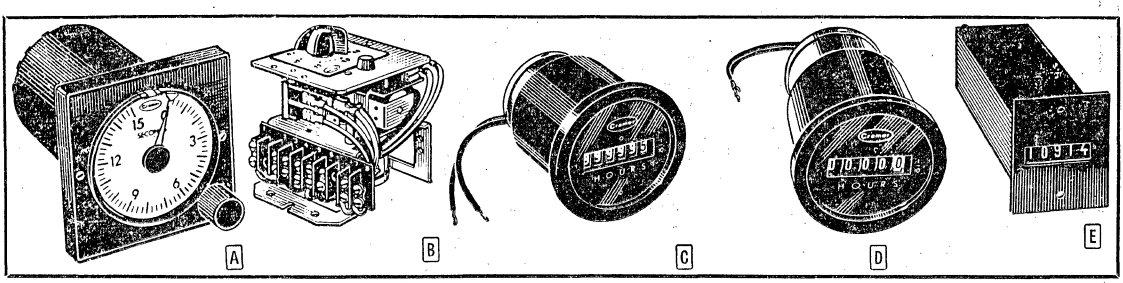
Automatic reset, synchronous motor driven timing control using two sets of instantaneous and two sets of delayed contacts. Contacts rated 10 amps at 115 V, 60 Hz AC. Specify time ranges: 3 sec.; 15 sec.; 60 sec.; 5 min.; 60 min. Overall size, 4x4.35x4.078". Shpg. wt., 2 lbs. 7 oz.

58 D 8400 C. 1-3	Each 48.50	4-5	Each 46.08
6-11	Each 43.65	12-24	Each 41.23
25-49	Each 38.80	50-99	Each 36.38
100-249	Each 33.95	250-499	Each 31.53

SETH-THOMAS ACROTYNE COMMERCIAL WALL CLOCK

Cordless—operates about a year on one "D" flashlight cell. Features accurate, silent transistorized movement with electronic circuit tuning fork and magnetic coupling. Adjustable within ±2 seconds per day. White convex dial; black numerals, hands; red sweep second hand. Steel case. 14½" dia. 2¾" depth. 12" dial.

58 D 8243. No. 612 Bronze. 4½ lbs. 32.50
58 D 8244. No. 613 Chrome. 4½ lbs. 35.00



CRAMER TIMERS, ELAPSED TIME INDICATORS AND COUNTERS

A MODEL 400S PLUG-IN RESET TIMERS. Setting pointer holds at set point, progress pointer shows time remaining. Momentary or sustained contact, interval or delay timing. Reset time, 300 msec, 10 amps resistive. 3 1/16" dia. x 4 5/32". 115 V, 60 Hz AC. Wt., 2 lbs.

Stock No.	Mfr's Type	Time Range	EACH 1-4	5-9	10-24	25-49	50-99
58 D 8066	400S-60S	60 seconds	45.00	36.90	35.60	34.20	32.95
58 D 8067	400S-5M	5 minutes	45.00	36.90	35.60	34.20	32.95
58 D 8068	400S-60M	60 minutes	47.00	38.60	37.10	35.70	34.30
58 D 8069	400S-5H	5 hours	47.00	38.60	37.10	35.70	34.30

B MODEL 472 SURFACE-MOUNT AUTOMATIC RESET TIMERS. Synchronous motor driven with two cam-actuated switches, one solenoid-actuated. Differential clutch. For momentary or sustained contact, interval or delay timing. Repeat accuracy better than 1%. 3 21/32x3 25/32x2 7/8". U.L. Listed. 115 V, 60 Hz AC, *220 V. 1¼ lbs.

Stock No.	Mfr's Type	Time Range	EACH 1-4	5-9	10-24	25-49	50-99
58 D 8056	472A-E15S	15 seconds	30.00	24.60	23.70	22.80	21.90
58 D 8057	472A-E30S	30 seconds	30.00	24.60	23.70	22.80	21.90
58 D 8058	472A-E60S	60 seconds	30.00	24.60	23.70	22.80	21.90
58 D 8059	472A-E5M	5 minutes	30.00	24.60	23.70	22.80	21.90
58 D 8060	472A-E15M	15 minutes	30.00	24.60	23.70	22.80	21.90
58 D 8061	472A-E30M	30 minutes	30.00	24.60	23.70	22.80	21.90
58 D 8062	472A-E60M	60 minutes	30.00	24.60	23.70	22.80	21.90
58 D 8063	472A-E5H	5 hours	32.00	26.24	25.28	24.32	23.36
58 D 8064	472A-E24H	24 hours	32.00	26.24	25.28	24.32	23.36
58 D 8065	472A-E5M	5 minutes*	31.00	25.42	24.49	23.56	22.63

C MODEL 635G NON-RESET ELAPSED TIME INDICATORS. Ideal for measuring running time or downtime of machines or processes. High accuracy inductor motor; large numerals on 1" wheels for excellent readability. 6-digit register. Mounts in 2.22" dia. panel hole; 2 23/32" deep; 2.69" dia. bezel. U.L. Listed. 115 V, 60 Hz AC. ¾ lb.

Stock No.	Mfr's Type	Total Count	EACH 1-4	5-9	10-24	25-49	50-99
58 D 8070	635GL100	99,999.9 minutes	10.50	8.61	8.10	7.55	7.10
58 D 8071	635GM100	999,999 minutes	10.50	8.61	8.10	7.55	7.10
58 D 8072	635GS100	99,999.9 hours	10.50	8.61	8.10	7.55	7.10
58 D 8073	635GT100	999,999 hours	10.50	8.61	8.10	7.55	7.10

D MODEL 636 RESET ELAPSED TIME INDICATORS. As above, with pushbutton mechanism for instant reset to zero. 5-digit. Mounts in 2.22" dia. hole; 3 7/32" deep. 115 V, 60 Hz AC. Wt., ¾ lb.

Stock No.	Mfr's Type	Total Count	EACH 1-4	5-9	10-24	25-49	50-99
58 D 8074	636XE100	9999.9 seconds	25.00	20.50	19.75	19.00	18.25
58 D 8075	636XK100	999.99 minutes	25.00	20.50	19.75	19.00	18.25
58 D 8076	636XL100	9999.9 minutes	25.00	20.50	19.75	19.00	18.25
58 D 8077	636XS100	9999.9 hours	25.00	20.50	19.75	19.00	18.25

E MODEL 767E IMPULSE COUNTER. Miniature counter provides record of events in response to input pulses. 5-digit, non-reset. Operates quietly at rates to 1000 counts/minute. Mounts in 1.12x91" rectangular hole; 4.38" deep; 1.18x1.38" bezel. For 24 VDC. From Yugoslavia. Shpg. wt., 6 oz.

58 D 8078	767E	99999 units	9.50	.....	.....	.....	.....

Make Allied Your Headquarters for Industrial Electronics

Elapsed-Time Meters and Stop Clocks

ENGLER TIMERS AND STOP CLOCK

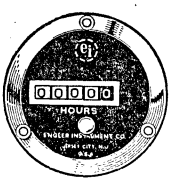
ELAPSED-TIME METERS

A true timing instrument that registers actual elapsed or running time of an operation or process. Ideal on mobile equipment where mileage will not give adequate data for maintenance. Large-numeral digital readout. No overruns. Withstands shock, vibration and temperature environment. Sealed to meet MIL specs. Case dia., 2 7/64". 110 V, 60 Hz. 440-550-V 60 Hz units available on Special Order. Av. shpg. wt., 1 lb.

STOP CLOCK

FLUSH

STD. MTG.



S-O-S METER

Standard Mtg. Stock No.	Mfr's Type	Minimum Reading	Maximum Reading	Reset	Flush Mtg. Stock No.	Mfr's Type
58 D 8622	10NL2	1/10 hr.	10,000 hrs.	Non	58 D 8628	10NL0
58 D 8624	10FL2	1/10 hr.	10,000 hrs.	Front	58 D 8630	10FL0
58 D 8625	13FL2	1/10 min.	10,000 min.	Front	58 D 8631	13FL0
58 D 8626	10SL2	1/10 hrs.	10,000 hrs.	Side	58 D 8632	10SL0

AC METERS

NON-RESET. 1-4....Ea. 17.00 5-9....Ea. 16.10 10-24....Ea. 15.30 25-49.Ea. 14.50 50-99.Ea. 13.70 100-149.Ea. 12.75 150-Up.Ea. 9.35

RESET. 1-4 Ea. 24.00, 5-9 Ea. 22.80, 10-24 Ea. 21.60, 25-49 Ea. 20.40 50-99....Ea. 19.20 100-149....Ea. 18.00 150-Up.....Ea. 13.20

DC METERS (1/10,000 HRS.)

Standard Mtg. Stock No.	Type	Volts	Reset	Flush Mtg. Stock No.	Type
58 D 8634	J12NG	12	Non	58 D 8640	J12NO

STANDARD MOUNTING DC METERS (Cont'd)

NON-RESET. 1-4...Ea. 20.75 5-9...Ea. 19.75 10-24....Ea. 18.70 25-49.Ea. 17.70 50-99.Ea. 16.65 100-149.Ea. 15.15 150-Up.Ea.11.40

RESET. 1-4.....Ea. 28.00 5-9.....Ea. 26.60 10-24.....Ea. 25.20 25-49. Ea. 24.20 50-99. Ea. 22.00 101-149. Ea. 21.00 150-Up. Ea. 15.40

58 D 8646. Mounting Bracket 1.10

ELECTRIC STOP CLOCK

Timer (for 115-volt AC) totalizes and gives split second registering of elapsed time. Instantaneous start-stop feather-touch push button. Immediately resettable. Heavy-duty metal cased instrument never needs servicing. Model CS60 reads in seconds and tenths, Model CS24 in minutes and hundreds. Specify model desired.

58 D 8654. Model CS60. 58 D 8655. Model CS24.

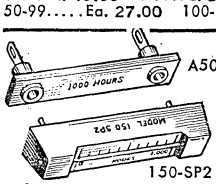
1-4...Ea. 40.00 5-9..Ea. 33.50 10-24. Ea. 30.50 25-49.Ea. 28.50 50-99.....Ea. 27.00 100-149.....Ea. 25.00 150-Up.....Ea. 22.50

"S-O-S" HOUR METERS

"Service-on-Signal" hour meters eliminate the need for costly maintenance time records; light up when maintenance is due. After resetting, light goes out for duration of maintenance time cycle. Can be programmed at machine or set up for remote control (in central maintenance office, etc.). Protected side-reset; easy-to-read figures. Metal case, standard 3-hole 2 17/32" dia. bolt circle. Shpg. wt., 12 oz.

NOTE: Meters are available factory preset in times from 10-90 hours (in 10-hour increments); from 100-1000 hours (in 100 hour increments). Specify time setting required.

Stock No.	Mfr's Type	Range in Hours	Volts	EACH 1-4	5-9	10-Up
58 D 8674 C	SOS10N-L2	10-90	115 VAC	36.50	34.75	32.75
58 D 8675 C	SOS10N-L2	100-1000	115 VAC	36.50	34.75	32.75
58 D 8676 C	SOSJ12N-2	10-90	12 VDC	39.50	37.50	35.50
58 D 8677 C	SOSJ12N-2	100-1000	12 VDC	39.50	37.50	35.50
58 D 8678 C	SOSJ24N-2	10-90	24 VDC	39.50	37.50	35.50
58 D 8679 C	SOSJ24N-2	100-1000	24 VDC	39.50	37.50	35.50

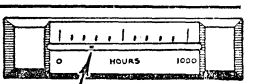


A501

150-SP2

ELAPSED-TIME METERS By CURTIS INSTRUMENTS, INC.

Permit test equipment calibration by actual hours of use. Provides time-to-failure data. Indicates time elapse of klystrons, magnatrons, vidicon tubes, recording heads, electrical or combustion, amp.-hours of batteries.



500-CP Actual Size

Flapsed Time is Read by Position of Gap on Meter (see below).

550-CP Meter. 115 VAC. With 150-SP2, (see right), for 600, 1000 or 3000 hours; mtg. socket; zener-diode inverter power supply. Use R-6 Autosetter to reset meter. Socket, 1 13/16x3/8x1/2". Power Supply, 1 1/8x3/16x3/8". Shpg. wt., 2 oz.

Stock No.	Type 500-	Hours	EACH 1-49	50-99
58 D 8801	CP/600	600	12.95	10.50
58 D 8804	CP/1000	1000	12.95	10.50
58 D 8806	CP/3000	3000	12.95	10.50

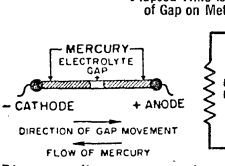
A501 Socket. For 150-SP2 meter at right. 58 D 8803. 1-24...Ea. .50 25-49..Ea. .45

A601 Lens. Fits 150-SP2, 550-CP. Molded acrylic. Magnifies, protects capillary. 1 oz. 58 D 8807. 1-24...Ea. .50 25-49..Ea. .45

120-PC Meter. Microminiature meter for recording mean time-to-failure data on individual PC boards. Works from any stable DC voltage. Can be scaled for any time period by proper resistor. Clear epoxy sealed. Leads on 0.9" centers. 1.11x.22x.18". 1 oz. 58 D 8800. 1-49...Ea. 7.50 50-99..Ea. 5.78

150-SP2 Meter. Meter element in a high-impact case. One-in., 10-division scale. Range: 2-10,000 hours. Typical DC requirements: 100 hours @ 104 μA; 500 @ 20.8 μA; 1000 @ 10.4 μA. Unmarked scale, desired hour scale determines current. Uses .080" and .050"-dia. polarized pins, requires A501 socket. 1 13/16" long, 3/8" wide. 2 oz. 58 D 8802. 1-49..Ea. 8.00 50-99..Ea. 6.35

58 D 8805. R-6 Autosetter. Automatic. Resets 550-SP2, meter in 3 hrs. or less. Takes 5 meters. 4x7x4". 115 V, 60 Hz. 4 lbs...59.50

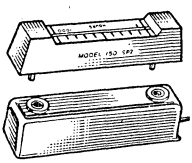


Direct-reading current integrators measure current vs. time electrochemically. Reversible, reusable. Mount, read in any position.

Full-Scale Hours	Microamps
100	41.6
500	8.34
1000	4.16
2000	2.08
3000	1.38

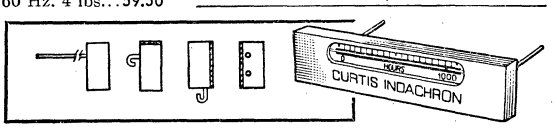
550-CP-2 ADHESIVE-MOUNT ELAPSED TIME METER

- Small Size for Fitting Most Anywhere
- Base Unit Houses Zener Diode Power Supply
- Has Readability Accuracy of ±1%
- Easy-to-read Scale Measures to 1000 Hrs



Invaluable for measurement of equipment usage. Ideal for determining accurately the need for maintenance and recalibration. Easy to install (has adhesive backing) on any flat surface within the equipment housing or on the face panel. Can be connected to any 115 VAC load terminals. This unit is comprised of two parts, base unit houses the unique zener diode power supply which regulates and rectifies the line AC. The second element is the 150-SP2 indicating meter, a polarized unit which plugs into the base. Easily removed for resetting with R-6 Autosetter. Elapsed time is indicated by the black electrolyte gap in the mercury column on the meter unit which moves down the scale as a function of time. Two 8" leads connect to 110-140 V, 60-400 Hz AC. Can also, be adapted for 220 VAC operation. Reads 0-1000 hours on a 1" scale. Current: 2 mA maximum. Readability accuracy is ±1%. Overall accuracy is ±3%. 1 29/32x7/16x7/16". Other scales available. Wt., 1/2 oz.

58 D 8018. 1-49.....Each 12.95
50-99.....Each 10.50



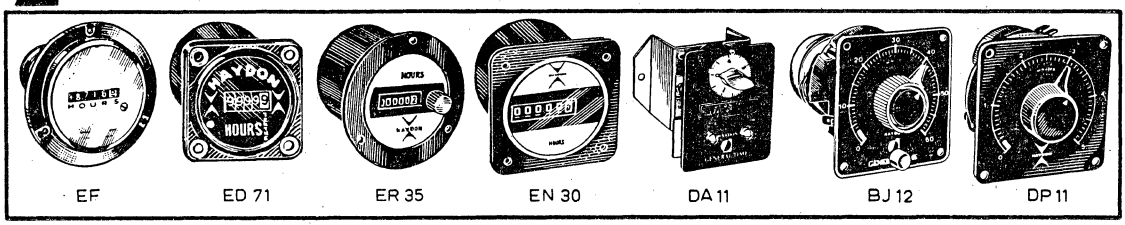
"INDACHRON" ELAPSED TIME METERS

- Maintains Continuous Record of Hours of Equipment Use
- Easily Installed in Office Machines, Appliances, Tools
- Choice of Models for Adhesive or PC Card Mounting

"L" Series. For warranty "metering" and service logging applications. Compact, easily installed. 520L for 115 VAC, includes zener diode power supply. 120L uses DC current in parent equipment to provided desired time constant. Current for 1000 hr. is 6.41 μA; 10,000 hr., .641 μA. 1.63" long. Wt., 1 oz. Specify 1000 or 10,000 Hours.

Stock No.	Mfr's Type	Terminals	Mounting	Voltage	EACH 1-99	100-499
58 D 8022 C	120LC	Leads	Flat PC Card	DC	6.00	4.30
58 D 8023 C	120LT2	Hook	Back/adhesive	DC	6.25	4.47
58 D 8024 C	120LA	8" leads	Adhesive	DC	6.25	4.47
58 D 8019 C	520LT	Hook	Edge/adhesive	115 AC	8.75	6.37
58 D 8020 C	520LT2	Hook	Back/adhesive	115 AC	8.75	6.37
58 D 8021 C	520LA	8" leads	Adhesive	115 AC	8.75	6.37

Haydon® Elapsed-Time Meters, Timers



EF SERIES ELAPSED TIME METER

For highly accurate reading of elapsed time. Provides readout as accurate as line frequency. Unit consists of synchronous inductor motor which directly drives counter drums. Geneva action for fast index at transfer point. Visible through 90° arc up to 6 feet. 120 V, 60 Hz except *240 V. On 120 V, 50 Hz available (allow 4 weeks) see 240-V * price. Mounts in standard 2⅛" hole. ½ lb.

Stock No.	Mfr's Type	Time Range	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8348	EF1333	99,999.9 Min.	9.56	9.08	8.61	8.13	7.65	7.17
58 D 8349*	EF1333	99,999.9 Min.	10.41	9.89	9.37	8.85	8.33	7.81
58 D 8350	EF1335	99,999.9 Hrs.	9.56	9.08	8.61	8.13	7.65	7.17
58 D 8351*	EF1335	99,999.9 Hrs.	10.41	9.89	9.37	8.85	8.33	7.81

ELAPSED-TIME INDICATORS REGISTER UP TO 99,999.9

Type ED71. Combine exceptional reliability with space-saving compactness. For front panel mounting. —12°C to +55°C. Non-resettable, registers hours and tenths up to 9,999.9 in large, easy-to-read figures. Has 11¼" wire leads. 1¾" square bezel, 2³¹⁄₆₄" deep.

Types EN 30, ER 30, and ER 35. As above, but are available in resettable or non-resettable models. Register hours and tenths or minutes and tenths up to 99,999.9. With 3½" round or 3" square bezels, 2¾" deep. Type ER3020—resettable, square bezel, minutes and tenths. Type ER3022—resettable, square bezel, hours and tenths. Type ER3520—resettable, round bezel, minutes and tenths. Type ER3522—resettable, round bezel, hours and tenths. Type EN3010—non-resettable, square bezel, minutes and tenths. Type EN3012—non-resettable, square bezel, hours and tenths. All models have #8-32 stud terminals. Av. shpg. wt., 1½ lbs.

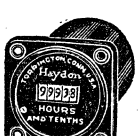
120 VOLTS AC

Stock No.	Mfr's Type	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8211	ED7112	22.31	21.30	20.08	18.97	17.85	16.73
58 D 8213	EN3010	17.00	16.15	15.30	14.45	13.60	12.75
58 D 8214	ER3020	24.65	23.42	22.19	20.95	19.72	18.49
58 D 8216	EN3012	17.00	16.15	15.30	14.45	13.60	12.75
58 D 8217	ER3022	24.65	23.42	22.19	20.95	19.72	18.49
58 D 8212	ER3520	24.65	23.42	22.19	20.95	19.72	18.49
58 D 8215	ER3522	24.65	23.42	22.19	20.95	19.72	18.49

240 VOLTS AC

58 D 8221	ED7112	23.16	22.01	20.85	19.69	18.53	17.37
58 D 8219	ER3020	25.50	24.23	22.95	21.68	20.40	19.13
58 D 8220	EN3012	17.85	16.96	16.07	15.17	14.28	13.39
58 D 8222	ER3022	25.50	24.23	22.95	21.68	20.40	19.13
58 D 8225	ER3520	25.50	24.23	22.95	21.68	20.40	19.13
58 D 8226	ER3522	25.50	24.23	22.95	21.68	20.40	19.13

HERMETICALLY-SEALED MILITARY-TYPE INDICATOR



Type 7010-004. MS28053-5. Registers hours and tenths up to 9,999.9. Synchronous hysteresis motor. For operation from 115 VAC, 400 Hz. Operating temp., —55°C to +85°C. 1¾" square bezel, 2³⁷⁄₆₄" deep. Barrel dia., 1½". 4 mounting holes on 1⁵⁄₁₆" ctrs. Shock: 50 g, 11 ms. Vibration to 1000 cycles at 10 g. Dielectric strength, 500 v rms, 60 Hz for one minute. Meets MIL-M-7793C and MIL-E-5272C spec. MIL STD MS-28053-5 solder terminals. Shpg. wt., ¾ lb.

Stock No.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8310	37.40	35.53	33.66	31.79	29.92	28.05

TYPE DA TIME-DELAY TIMERS

Type DA1102. SPDT, 20-amp switch, 125 or 250 VAC, resistive. Internal clutch—engages and disengages when motor is energized and de-energized. Knob adjustment. 3⅜x2¹¹⁄₁₆x3⅛". ■U.L. Recog. Type DA2102. As above, but has lock-nut adjustment. 1½ lbs.

120 VOLTS AC

Stock No.	Type DA-	Time Range	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8230	11031	0-14 sec.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8231	11032	0-57 sec.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8232	11033	0-4.5 min.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8233	21001	0-14 sec.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8234	21002	0-57 sec.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8236	21003	0-4.5 min.	16.79	15.95	15.11	14.27	13.43	12.59
58 D 8300	21004	0-9.5 min.	16.79	15.95	15.11	14.27	13.43	12.59

240 VOLTS AC

58 D 8237	11031	0-14 sec.	17.64	16.76	15.87	14.99	14.11	13.23
58 D 8238	11032	0-57 sec.	17.64	16.76	15.87	14.99	14.11	13.23
58 D 8239	11033	0-4.5 min.	17.64	16.76	15.87	14.99	14.11	13.23
58 D 8240	21001	0-14 sec.	17.64	16.76	15.87	14.99	14.11	13.23
58 D 8242	21003	0-4.5 min.	17.64	16.76	15.87	14.99	14.11	13.23
58 D 8301	21004	0-9.5 min.	17.64	16.76	15.87	14.99	14.11	13.23

TYPE BJ12 PUSHBUTTON INTERVAL TIMER

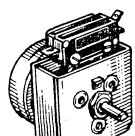
Dependable and rugged panel-mount timer. For control of electrical equipment such as copying machines, mixers, ovens, tumbling and plating equipment. Automatically resets to preset interval. SPDT 15-amp. 120 or 240-volt AC switch. ■U.L. Recog. and C.S.A. Listed. Face-plate. 3⁵⁄₁₆x3⅝". For 120 volts. 60Hz AC. Specify time range: 15 seconds, 30 seconds, 60 seconds, 5 min., or 1 hour. 1½ lbs.

Stock No.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8347C	19.13	18.17	17.21	16.26	15.30	14.34

PANEL-MOUNTING RESET TIMER

Type DP 11. Provides delay or interval timing using a timing motor with an integral clutching mechanism. Adjustable time ranges are easily set by an external control knob. Available in ranges from 15 seconds to 5 minutes. Readout is standard. SPDT. 10 amps. 120 or 240 volt. AC resistive switch. Easily installed—uses accessible snap-action switch, and screw type terminals. Mounts through panel. Dial size, 3⁵⁄₁₆x3⅝". Requires 3⁹⁄₁₆" behind dial. For 120 volts, 60 Hz. Specify time range: 15 seconds, 30 seconds, 60 seconds, 120 seconds, or 5 minutes. Shpg. wt., 1 lb.

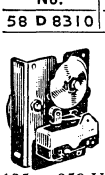
Stock No.	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58D 8202C	20.40	19.38	18.36	17.34	16.32	15.30



TYPE AB51 HANDSET INTERVAL TIMER

Hand set interval timer consisting of synchronous motor, appliance type SPDT switch and setting shaft with gearing. For appliances, amusement devices, vending machines, medical equipment, production machinery, battery charging equipment, other applications. Rotation of shaft energizes motor and load. Upon completion of cycle, load switch opens. Setting can be changed while motor is energized. Switch rated 25 A, ¾ hp at 120 VAC. Motor rated 5 W, 60 Hz; 3.4 W, 50 Hz. Three mounting holes on .562 radius tapped 8-32. Setting shaft ¼" diameter, flatted to 5⁄32" for ½". 3¹⁵⁄₁₆x2½x2⅜" behind panel. Less knob and dial. For 120 VAC. Specify time range: 1 minute, 15 minutes, 60 minutes, 120 minutes, 8 hours, 24 hours. Shpg. wt., ¾ lbs.

58 D 8201C	7.65	7.27	6.89	6.50	6.12	5.74



TYPE RG21 REPEATING-CYCLE TIMERS

Repeat cycle timers are designed to run continuously, repeating a set cycle of make-break switching operations as long as the motor is energized. This unit may be applied to operations requiring only a single time cycle. Wireable through contacts for 1-cycle limit. Adjustable timing-cycle cam. SPDT, 20-amp switch. 125 or 250 VAC, resistive, 50-60 Hz. ¼" shaft. 120 VAC. Size 3¼x 2⁵⁄₁₆x2⁹⁄₃₂". ■U.L. Recognized. Shpg. wt., 1 lb.

Stock No.	Type RG-	Time Range	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8251	21093	1 min.	12.96	12.31	11.67	11.02	10.37	9.72
58 D 8252	21094	5 min.	12.96	12.31	11.67	11.02	10.37	9.72
58 D 8253	21096	15 min.	12.96	12.31	11.67	11.02	10.37	9.72
58 D 8254	21097	30 min.	12.96	12.31	11.67	11.02	10.37	9.72
58 D 8255	21098	60 min.	12.96	12.31	11.67	11.02	10.37	9.72

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Solid-State Elapsed-Time Meters and Clocks

GENERAL TIME HAYDON® SOLID-STATE RESET TIMERS

QT21 SOLID-STATE RESET TIMERS

Delay, interval, repeat cycle use. SPDT relay, 10 amps, 125 VAC resistive. Moisture-resistant PC board; rear-mounting cadmium-plated frame. Repeat accuracy, ±2% of set value. —10° to +55° C. Dial accuracy, ±10%. Reset time, 130 mS max. ¼" male lugs, two 3/16x5/16" slotted holes, 2⅞" ctrs. 117 V, 50-60 Hz AC. 1 lb. *Specify Time Range and Type No.

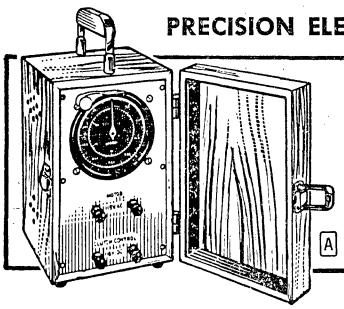
Stock No.	Type QT-	* (Sec.)	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8809 C	21-003	3	18.91	17.97	17.02	16.08	15.13	14.18
58 D 8809 C	21-004	5	18.91	17.97	17.02	16.08	15.13	14.18
58 D 8809 C	21-005	10	18.91	17.97	17.02	16.08	15.13	14.18
58 D 8809 C	21-006	15	18.91	17.97	17.02	16.08	15.13	14.18
58 D 8809 C	21-007	30	18.91	17.97	17.02	16.08	15.13	14.18
58 D 8809 C	21-008	60	18.91	17.97	17.02	16.08	15.13	14.18

QT52 SOLID-STATE RESET TIMERS

Plug-in timers with adjustable periods. DPDT contacts, 10 amps, 125 VAC resistive. Used as delay, relay energizes at end of period; in interval timing, relay energizes through time period, applies power to external load. Same specifications as QT21 types above. Octal plugs. Overall size, 4⅜x3 9/16x2⅛". 117 V, 50-60 Hz AC. Av. shpg. wt., 1 lb.

Stock No.	Type QT-	* (Sec.)	EACH 1-4	5-9	10-24	25-49	50-99	100-249
58 D 8776	52-003	3	20.61	19.58	18.55	17.52	16.49	15.46
58 D 8777	52-004	5	20.61	19.58	18.55	17.52	16.49	15.46
58 D 8778	52-005	10	20.61	19.58	18.55	17.52	16.49	15.46
58 D 8779	52-006	15	20.61	19.58	18.55	17.52	16.49	15.46
58 D 8780	52-007	30	20.61	19.58	18.55	17.52	16.49	15.46
58 D 8781	52-008	60	20.61	19.58	18.55	17.52	16.49	15.46

PRECISION ELECTRIC TIMERS AND CLOCKS By STANDARD ELECTRIC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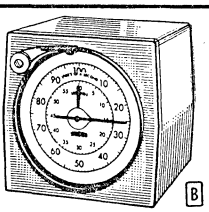
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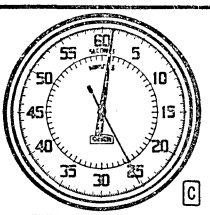
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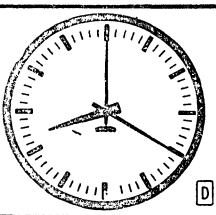

D

A **Model AC-1 Cycle Counter.** Portable. Total count, 60 seconds with 1/100 second scale and cycle divisions. Accuracy, ±.01 second. 115 V, 60 Hz AC. Walnut-grain formica case, 8¾x5¾x7½". Carry handle. 8 lbs.

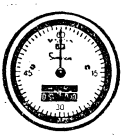
B **"S" Series Elapsed-Time Timers.** Supplied in 5x5x4¼" Kralastic case. Panel mount types require 4⅝" square hole. Pendant switch start/stop control on 3-foot cord on portable units; terminals on panel units. 5-foot power cord. Dial, 3 13/16" dia. 115 V, 60 Hz AC. Accuracy: S-1, ±.01 second; S-10, ±.02 second; S-6, ±.0002 minute; S-60, ±.1 second; SM-60, ±.002 min. Av. wt., 5 lbs.

C **Model SW-1 and SS-60 10" Dial Timers.** Surface wall mounting with local start, stop and reset. Can be wired remote. SS-60 totalizes 60 minutes with 0.1 second accuracy; SW-1 totalized 60 seconds with .01 second accuracy. 115 V, 60 Hz AC. Other mounting styles on special order. 17 lbs.

D **Synchronous Clocks.** Surface wall mounting. White dial, black markers, satin aluminum case. Round case, except Senate, black. 115 VAC, 60 Hz. Shpg. wt., 9 lbs.

Stock No.	Mfr's Type	Fig.	Description	Time Range	Scale Div.	EACH
58 D 8823	S-1	B	Portable manual-reset timer	60 sec.	1/100 sec.	90.00
58 D 8824	S-1-ER	B	S-1 with electric reset	60 sec.	1/100 sec.	116.00
58 D 8825	S-1-P	B	Panel-mt. manual-reset timer	60 sec.	1/100 sec.	94.00
58 D 8826	S-1-P-ER	B	S-1-P with electric reset	60 sec.	1/100 sec.	120.00
58 D 8827	S-1-3H-10-P	B	S-1-P, with 3rd hand to totalize 10 minutes	60 sec.	1/100 sec.	142.00
58 D 8828	S-10	B	Portable manual-reset timer	1000 sec.	1/10 sec.	70.00
58 D 8829	S-10-ER	B	S-10 with electric reset	1000 sec.	1/10 sec.	96.00
58 D 8830	S-10-P	B	Panel-mt. manual-reset timer	1000 sec.	1/10 sec.	74.00
58 D 8831	S-10-P-ER	B	S-10-P; electric reset	1000 sec.	1/10 sec.	100.00
58 D 8832	S-6	B	Portable manual-reset timer	10 min.	1/1000 min.	88.00
58 D 8833	S-6-P	B	Panel-nt. manual-reset timer	10 min.	1/1000 min.	92.00
58 D 8834	S-60	B	Portable manual-reset timer	60 min.	1/5 sec.	67.00
58 D 8835	S-60-ER	B	S-60 with electric reset	60 min.	1/5 sec.	93.00
58 D 8836	S-60-P	B	Panel-mt. manual reset timer	60 min.	1/5 sec.	71.00
58 D 8837	S-60-P-ER	B	S-60-P; electric reset	60 min.	1/5 sec.	97.00
58 D 8838	SM-60	B	Portable manual-reset timer	60 min.	1/100 min.	70.00
58 D 8839	SM-60-P	B	Panel-mt. manual-reset timer	60 min.	1/100 min.	74.00
58 D 8840	AC-1	A	Cycle counter	60 sec.	1/100 sec.	160.00
58 D 8841	SW-1	C	10" wall-mount timer	60 sec.	1/100 sec.	146.00
58 D 8842	SS-60	C	10" wall-mount timer	60 min.	1/5 sec.	119.00
58 D 8843	Senate	D	12-inch Clock (No numerals)	.....	.....	16.95
58 D 8844	Tempo	D	Above, Arabic Numerals	.....	.....	16.95
58 D 8845	Forum	D	Above, Roman Numerals	.....	.....	20.95

SIMPSON ELAPSED TIME METERS

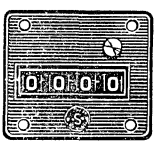


Model 105 2½" Model 106 2½" Model 55ET 3½" Model 57ET 3½"

2½" and 3½" elapsed time panel meters give accurate readout even under adverse vibration, temperature and voltage conditions. Indicate to 99999.9, then recycle. *Voltage adapters for Model 106. Models 105, 106 from West Germany. 2⅜" deep. 12 oz.

Stock No.	Model No.	Type No.	Voltage	EACH 1-9	10-24	25-49
58 D 8816	105	13520	120 VAC	15.00	13.50	12.75
58 D 8817	105	13525	240 VAC	15.00	13.50	12.75
58 D 8818	106	13530	6 VDC	20.00	18.00	17.00
58 D 8819	*	13535	12 VDC	1.00	.90	.85
58 D 8820	*	13538	24 VDC	1.00	.90	.85
58 D 8812	55ET	3580	120 VAC	25.35	22.81	21.55
58 D 8813	57ET	3590	120 VAC	25.35	22.81	21.55
58 D 8814	55ET	3600	240 VAC	25.65	23.08	21.80
58 D 8815	57ET	3610	240 VAC	25.65	23.08	21.80

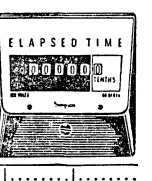
SIMPSON COUNTERS



Electromechanical Counters. Instant number change and wide angle visibility. Count to 9,999. 100 ms per count, (600 counts per minute. White on black numerals, 0.2" high, 0.15" wide. Bezel with black matte finish; steel frame, formed aluminum cover. Size, 2.25x1.84x2.25". Av. shpg. wt., 12 oz.

Stock No.	Model No.	Type No.	Voltage	EACH 1-9	10-24	25-49
58 D 8850	103	12643	120 VAC	15.95	13.56	12.76
58 D 8851	104	12641	6 VDC	15.95	13.56	12.76
58 D 8852	104	12642	12 VDC	15.95	13.56	12.76

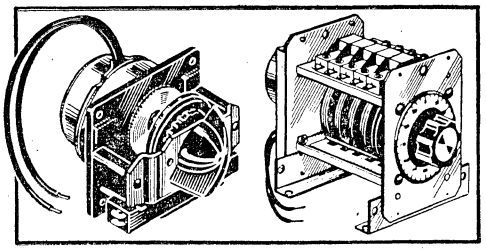
SIMPSON HOUR METERS



Wide-Vue Elapsed Time Meters. 3½" meters read elapsed time to 99,999.9 hours. Highly accurate even under severe conditions. Bezel is constructed of thermosetting materials which withstand high impact. Black matte finish. Black numbers on white background. Overall size, 3.25x3.25x3". Av. shpg. wt., 12 oz.

58 D 8853	1357ET	03595	120 VAC	25.35	.....
58 D 8854	1357ET	03615	240 VAC	25.65	.....

Sequence Timers and Time Switches



MALLORY INDUSTRIAL SEQUENCE TIMERS

Heavy-duty timers for industrial process control and other timing applications. Synchronous drive motors assure maximum accuracy, with broad selection of time intervals. One way clutch permits manual advance. Spring-loaded ratchet cams combine durability with ease of programming changes. SPDT switches are rated 15 amps at 125 VAC (Recognized under Component Program of U.L. Labs). Guarded 3/16" quick-disconnect terminals. Patented plug-in mounting arrangement permits instant replacement of switch without reprogramming timer. Complete timing assemblies consist of basic frame, with appropriate drive motor. Basic frames include foot mounting bracket, knob, dial, terminals, adjusting tool. Front plates are drilled and tapped for panel mounting. Av. assembly shpg. wt., 3 lbs.

HOW TO ORDER

Timers consist of frame and drive motor, listed separately in Tables below. Drive motor listing indicates which frames can be used (see note right). Frame listing indicates No. of circuits each Type will control. Motor attaches to frame with two screws (included). Specify Stock No. and Type of Drive Motor, Stock No. of Frame.

NOTE: Not all combinations of motor and frame are available. For Example: Motor M10S takes 1TA frame only; motors M15S to M30S, M10M and M20M take 1TA and 2TA frame only. All other motors take 1T, 2T, 5T, 10T or 15T frame. Be sure to indicate proper Stock No. and Type of Motor, Stock No. of Frame.

DRIVE MOTORS

Synchronous drive, rated at 117 volts, 60 Hz AC. Includes 7" insulated leads, timing chart and mounting screws.
58 D 8782 C. 1-9...Each 4.85 10-24...Each 3.95 25-49...Each 3.40 50-99....Each 3.00 100-249.....Each 2.60 250-499.....Each 2.00

Mfr's Type	Time Min.	Time Sec.	Use With Frame No.	Mfr's Type	Time Hrs.	Time Min.	Use With Frame No.
M10S		10	1TA	M24M		24	1T thru 15T
M15S		15	1TA or 2TA	M30M		30	1T thru 15T
M20S		20	1TA or 2TA	M45M		45	1T thru 15T
M30S		30	1TA ot 2TA	M60M	1		1T thru 15T
M1M	1		1T thru 15T	M120M	2		1T thru 15T
M2M	2		1T thru 15T	M180M	3		1T thru 15T
M3M	3		1T thru 15T	M240M	4		1T thru 15T
M4M	4		1T thru 15T	M360M	6		1T thru 15T
M6M	6		1T thru 15T	M480M	8		1T thru 15T
M10M	10		1TA or 2TA	M720M	12		1T thru 15T
M12M	12		1T thru 15T	M1440M	24		1T thru 15T
M20M	20		1TA ro 2TA	.....	.....	.....	.....

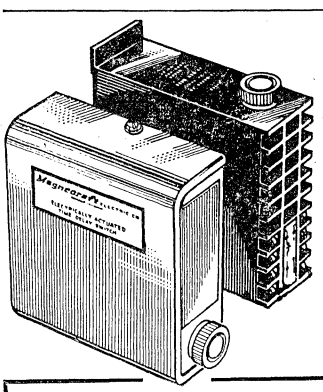
BASIC FRAMES

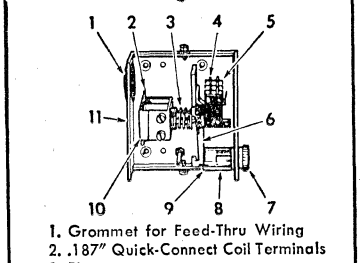
Stock No.	Mfr's Type	Description	EACH 1-9	10-24	25-49	50-99	100-249	250-499
58 D 8783	1T	1-Circuit	5.15	4.80	4.60	4.50	3.90	3.50
58 D 8784	1TA	1-Circuit	5.15	4.80	4.60	4.50	3.90	3.50
58 D 8785	2T	2-Circuits	7.65	7.05	6.85	6.75	5.90	5.00
58 D 8786	2TA	2-Circuits	7.65	7.05	6.85	6.75	5.90	5.00
58 D 8787	5T	5-Circuits	18.15	17.05	16.60	16.00	14.90	14.00
58 D 8788	10T	10-Circuits	31.65	30.05	29.10	28.00	26.90	26.00
58 D 8789	15T	15-Circuits	50.15	47.05	44.60	42.00	39.90	38.50

TIMER ACCESSORIES

58 D 8790	MTS1	SPDT Swch	.86	.80	.77	.75	.65	.59

58 D 8791. MTT1. Adj. Tool for 5T through 15T.....Each .25
58 D 8792. MTT2. Adj. Tool for 1T, 1TA, 2T and 2TA.....Each .25
58 D 8793. MTB1. Mtg. Bkt. for 1T, 1TA, 2T and 2TA.....Each .70
58 D 8794. T257. Bag of 15 Brass Terminals.....Per Bag .25





1. Grommet for Feed-Thru Wiring
2. .187" Quick-Connect Coil Terminals
3. Plunger
4. .187" Switch Terminals
5. Snap-Action Switch(es)
6. Balanced Switch Lever
7. Timing Adjustment Knob
8. Air Dashpot Piston
9. Air Dashpot Timer
10. Electro-Magnetic Coil Assembly
11. Rugged Metal Chassis

MAGNECRAFT ELECTRICALLY ACTUATED TIME DELAY SWITCHES

Operate-delay and release-delay electrically actuated time delay switches with unlimited uses in automation controls, protective circuit delays, alarm systems, temperature controls, and much more. Time tested air dashpot timing unit with counterbalanced switch lever. Timing adjustable from 1 to 150 seconds. —65° C to +180° C. 24 VDC and 120 VAC operating voltages.

CLASS 112 AIR DASHPOT TIME DELAY SWITCHES

Features metal enclosure with few moving parts. Dashpot piston is coupled to a switch lever with solenoid assembly added to air dashpot/snap switch combination initiating the time switching function by electrical actuation. Time delay is adjustable by turning a calibrated knob. Contacts rated at 10 amps, 115 VAC or 32 VDC resistive. Time repeat accuracy, ±10%. Release delay is accomplished without the use of standby power. Mounting: 3/16" dia. holes on 3" centers. Internally wired by customer. 1¾x3 3/16x4 3/16". Av. shpg. wt., 1¼ lbs.

SLOW OPERATE DELAY TYPES

Stock No.	Mfr's Type	Contacts	COIL Volts	COIL Ohms	Time Delay Sec.	EACH 1-9	10-24	25-49	50-99	100-249
41 D 5565	W112ACSOX-4	DPDT	120 AC	.....	1-150	24.30	23.09	21.87	19.44	18.23
41 D 5566	W112CSOX-3	DPDT	24 DC	80	1-150	24.30	23.09	21.87	19.44	18.23

SLOW RELEASE DELAY TYPES

41 D 5567	W112ACSRX-4	DPDT	120 AC	.....	1-150	24.30	23.09	21.87	19.44	18.23
41 D 5568	W112CSRX-3	DPDT	24 DC	80	1-150	24.30	23.09	21.87	19.44	18.23

CLASS 112M AIR DASHPOT TIME DELAY SWITCHES

Electrically identical in specifications and operation to Class 112, but equipped with high-impact plastic enclosure and built-in "screw type terminals" for panel mounting. Adjustable timing available with knob adjust or allen screw adjust with cap to minimize tampering of adjustment. Factory wired, flange mounting. Size, 1½x4½x4 1/32". Av. shpg. wt., 14 oz.

SLOW OPERATE DELAY TYPES

Stock No.	Mfr's Type	Contacts	COIL Volts	COIL Ohms	Time Delay Sec.	Adj. Type	EACH 1-9	10-24	25-49	50-99	100-249
41 D 5569	W112MASOX-1	DPDT	120 AC	.....	1-150	Knob	28.23	26.82	25.41	22.58	21.17
41 D 5570	W112MASOX-2	DPDT	120 AC	.....	1-150	Screw	28.23	26.82	25.41	22.58	21.17
41 D 5571	W112MSOX-2	DPDT	24 DC	80	1-150	Knob	28.23	26.82	25.41	22.58	21.17
41 D 5572	W112MSOX-3	DPDT	24 DC	80	1-150	Screw	28.23	26.82	25.41	22.58	21.17

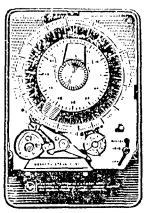
SLOW RELEASE DELAY TYPES

41 D 5573	W112MASRX-1	DPDT	120 AC	.....	1-150	Knob	28.23	26.82	25.41	22.58	21.17
41 D 5574	W112MASRX-2	DPDT	120 AC	.....	1-150	Screw	28.23	26.82	25.41	22.58	21.17
41 D 5575	W112MSRX-1	DPDT	24 DC	80	1-150	Knob	28.23	26.82	25.41	22.58	21.17
41 D 5576	W112MSRX-2	DPDT	24 DC	80	1-150	Screw	28.23	26.82	25.41	22.58	21.17

SEE PAGE 255 FOR MAGNECRAFT SOLID-STATE TIMERS

Paragon Time Switches and Timers

SERIES 4000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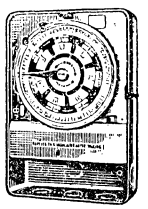
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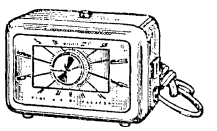
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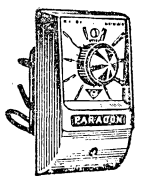


SERIES FA AND FF

4000 24-HOUR 40-AMP TIME SWITCHES OPTIONAL SKIP-A-DAY, CARRY-OVER

For lighted signs, window displays, heating units, etc. Snap-out movement. Up to 7 automatic on-off operations per day. Minimum 90 minutes between operations. T-rated 40 amps. 120 V. DP types switch 9600 watts on 3-wire divided load. *Skip-A-Day omits operation on selected day(s). With set of on-off trippers. 7 13/16x4 1/8x 2 15/16". ▪U.L. Recog. and C.S.A. Listed. For 110-120 V, 60 Hz AC. 2 1/2 lbs.

58 D 8000. 4001-O. SPST.....9.72
58 D 8002. *4003-OS. DPST.....14.27
58 D 8003. *4005-OS. SPDT.....14.27

EXTRA TRIPPERS

Stock No.	Mfr's Type	Set of	For Series
58 D 8047	X-2772	On-Off Trippers	4000
58 D 8048	X-3495	6 Cutout (Skip-A-Day) Pins	4000S
58 D 8050	X-4299	On-Off Trippers	7000
58 D 8051	X-3596	5 On-Off Dial Pins	8035
58 D 8052	X-4444	6 Regular Trippers, Skip, or Prewarn	23000
58 D 8053	X-4445	6 Half Trippers for Main Signal	23000

Per Set.....50

23001-OS PROGRAMMER WITH SKIP-A-DAY, PREWARNING/MAIN SIGNALS

Prewarning rings 1-3 minutes before main signal. Timed signals adjustable 4-60 secs. 24-hour dial in 5-minute increments. Skip-A-Day—signals can be omitted for any 12 or 24-hour period. Also has manual operation. SPST, 15 amps, 120 V. Nine regular trippers for Skip-A-Day, 4 regular sets for prewarning, 12 sets half-trippers for main signals. 10 7/8x7 3/8x3 5/8". ▪U.L. Recog. and C.S.A. Listed. For 110-120 V, 60 Hz AC. Shpg. wt., 8 1/2 lbs.

58 D 8017.....61.07

7000 7-DAY SKIP-A-DAY TIME SWITCHES—OPTIONAL CARRY-OVER

Allows up to 4 automatic on-off operations per day or 28 per week. Any day or days can be omitted. Make settings week in advance. 3 hrs. minimum between operations. 7-day dial. With 7 sets of trippers. ▪U.L. Recog., C.S.A. Listed. 110-120 V, 60 Hz AC.

WITH 7-DAY DIAL. 7007-0, 4PST, N.O., 40-amp, T-rated. 7008-0, 4P, 2 N.O., 2 N.C., 40 amp. 10 7/8x7 3/8x3 5/8". 6 1/2 lbs.

58 D 8013. Type 7007-0.....22.39
58 D 8014. Type 7008-0.....22.39

SERIES AT 60-MINUTE INTERVAL TIMERS

Preset timer shuts off after preset interval lapses. AT45-O rated 1600 watts; has buzzer that sounds at end of timed period. AT3160-O; 840 watts, no buzzer. 3 3/8x5 1/8x 2 3/16". 4-foot cord. ▪U.L. Recog., C.S.A. Listed. 110-120 V, 60 Hz AC. 1 1/2 lbs.

58 D 8008. Type AT45-O.....10.64
58 D 8009. Type AT3160-O.....7.29

ALL-PURPOSE 8035-O TIME SWITCH

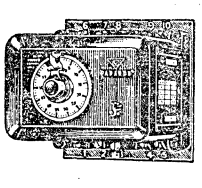
1-12 automatic on-off operations per day (adjustable 30 seconds to 27 1/2 minutes), 2 hours min. between each. Rated 40 amps (1 hp), 120V. With 4 sets of on-off trippers. ▪U.L. Recog. C.S.A. Listed. Size, 7 3/8x4 11/16 x4". For 110-120 V, 60 Hz AC. Shpg. wt., 3 1/2 lbs.

58 D 8036.....18.82

SERIES FA AND FF INTERVAL TIMERS

Manually preset timer. Fits flush in outlet box. 13.8 amps, 120 V, nonind. 4 1/2x2 3/4x 1 3/16". Ivory plate, gold color dial. ▪U.L. Recog., C.S.A. 110-120 V, 60 Hz AC. 3/4 lb.

58 D 8010. FF15-O. 0-15 min. 1-min. div.
58 D 8011. FF51-O. 0-60 min. 1-min. div.
58 D 8012. FA51-O. 0-20 hrs. 30-min. div.
Each.....6.47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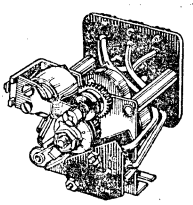
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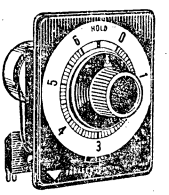
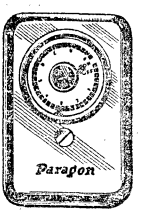


SERIES 2600



SERIES SW

SERIES 1015

SERIES 4000SZ

SERIES 500 AUTOMATIC RESET

For staggered compressor starts, short cycle protection. Sub-panel mounting. Type *500-102-0 "on" delay, †501-102-0 interval, ‡502-102-0 "off" delay. 2-SPDT switches rated at 720 VA per pole. 0-60 sec., 1 sec. div. 4 5/16x4 1/4x4 3/16". ▪U.L. Recog., C.S.A. Listed. 110-120 V, 60 Hz AC. Wt., 2 1/2 lbs.

Stock No.	EACH			
	1-3	4-5	6-11	12-24
58 D 8104*	40.00	38.00	36.00	34.00
58 D 8105†	40.00	38.00	36.00	34.00
58 D 8106‡	40.00	38.00	36.00	34.00

SERIES 536 AUTOMATIC RESET

Electromechanical time delay relays for plant process control. Ideal for use as staggered load start timers. *Type 536-021-0 "on" delay or †Type 536-121-0 "off" delay. Sub-panel mounting. 10 amps noninductive. SPST. 60 sec. time range, 6 sec. divisions. Other types available with ranges from 15 sec. to 3 hrs. 3 3/64x2 3/4x3". For 110-120 V, 60 Hz AC. Shpg. wt., 1 1/4 lbs.

Stock No.	EACH			
	1-3	4-5	6-11	12-24
58 D 8107*	20.00	19.00	18.00	17.00
58 D 8108†	20.00	19.00	18.00	17.00

2600 MANUAL PRESET INTERVAL

Ideal for control of heating and air conditioning systems, amusement rides, pumps, motor control. Panel mounting. Hold position energizes a load without timing—must be manually terminated. SPDT. 10 amps non-inductive. *15 min. time range, 15 sec. div.; †60 min. time range, 60 sec. div. 4 1/2x 3 13/16x3 1/2". 110-120 V, 60 Hz AC. 1 3/4 lbs.

Stock No.	Mfr's Type	EACH			
		1-3	4-5	6-11	12-24
58 D 8109	2605-0*	13.00	12.35	11.70	11.05
58 D 8110	2607-0†	13.00	12.35	11.70	11.05

SW SURFACE MOUNT PERCENTAGE

For electric industrial ovens, infrared heat control, farm ventilation systems, chemical feed systems, farm machinery and pump control, etc. "On" time adj. 2-100% of dial range. Fully "on", fully "off". Range: *10 min.; †30 min.; ‡60 min. SPDT. 15 amps nonind. (1/2 hp). 5 11/32x3 3/8x2 31/32". 110-120 V, 60 Hz AC. Shpg. wt., 1 1/4 lbs.

Stock No.	Mfr's Type	EACH			
		1-3	4-5	6-11	12-24
58 D 8111	SW10M-0*	18.45	17.52	16.60	15.68
58 D 8112	SW30M-0†	18.45	17.52	16.60	15.68
58 D 8113	SW60M-0‡	18.45	17.52	16.60	15.68

SERIES 1015 ON-OFF, SKIP-A-DAY

Ideal for operation of traffic signals, music systems, commercial heating and ventilating. 24-hour dial equipped with 96 self-retaining trippers. Operation for any 15 min. period per 24 hrs. obtained by sliding the tripper in or out with the fingers. Skip-A-Day dial permits skipping pre-selected days of the week. Suitable for indoor-outdoor applications. One control for two voltages. SPDT. 15 amps. 10x5 1/2x4". ▪U.L. Recog., C.S.A. Listed. For 120/240 V, 60 Hz AC. Shpg. wt., 8 lbs.

58 D 8100. Type 1015-CRS.....27.30

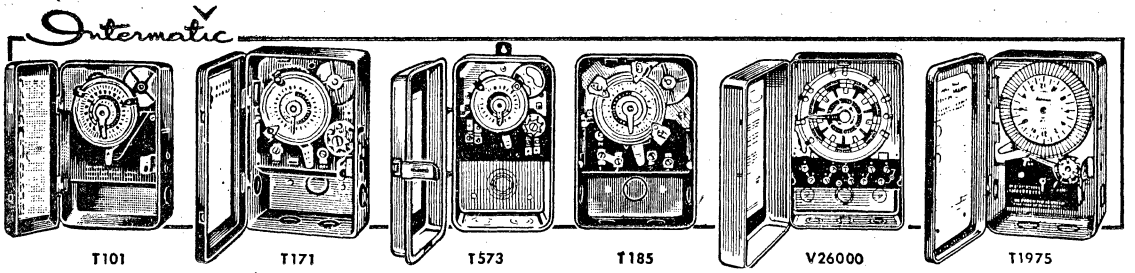
4000SZ ASTRO DIAL SKIP-A-DAY

Astro Dial allows the time control to operate in relation to the setting of the sun. It can be set to come "on" at sunset and "off" at sunrise, or "off" at any other pre-selected time between 9:30 pm and 2:30 am. Resetting the time control with seasonal changes is unnecessary. The Skip-A-Dial allows elimination of operations on pre-selected days of the week. T-rated at 15 amps. With indoor case. 7 13/16x4 1/8x2 15/16". ▪U.L. Recog. and C.S.A. Listed. For 110-120 V, 60 Hz AC. Wt., 3 1/2 lbs.

58 D 8114. Type 4003-OSZ. DPST...21.42
58 D 8115. Type 4005-OSZ. SPDT...21.42

▪ Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Time Switches and Timers



T101 T171 T573 T185 V26000 T1975

For dependable automatic control of lighting, signs, process control, heating and cooling, etc. Most have "Alloy-T" tungsten rated contacts that handle surges up to 8 times rating. Large, easy-to-read dials. Heavy gauge steel cases with hinged cover, padlock hasp. ■U.L. Recog.; C.S.A. Listed.

TYPE T101 24-HOUR TIME SWITCH

SPST switch provides 1 to 12 "on-off" operations per day. Minimum setting, one hour. Rated 40 amps inductive, 4375 watts; 2 hp motor. 5x3x7⅞". For 125 V, 60 Hz AC.
58 D 8322. Shpg. wt., 3 lbs.....**9.72**

TYPE T103. As above, except DPST.
58 D 8321.....**11.02**

TYPE T104. Above, except DPST, for 250 V.
58 D 8795.....**11.67**

TYPE P101. Same as T101 except portable, with 2-prong cord set, receptacle. 10 amps.
58 D 8314.....**11.02**

TYPE T171 "SKIPPER". Same as T101 but permits omitting selected days of week cycle.
58 D 8315.....**12.97**

TYPE T173. Same as T171, except DPST.
58 D 8316.....**14.27**

TYPE T174. Same except DPST, for 250 V.
58 D 8796.....**14.92**

TYPE T175. Same as T171, except SPDT.
58 D 8317.....**14.27**

T573-R HEAVY-DUTY TIME SWITCH

Rugged switch for indoor or outdoor mounting. Has 24-hour dial and skipper feature that omits selected days of week from time cycle. DPST contacts rated 55 amps inductive, 6875 watts, per pole; 2 hp motor load. Raintight case, 5½x3⁹⁄₁₆x9⅝". Rated for 125 V, 60 HZ AC. Wt., 4 lbs.
58 D 8332.....**24.02**

TYPE T185 DELUXE TIME SWITCH

Provides up to 12 independently controlled "on-off" cycles. Adjustable from 5-60 minutes. Minimum interval, 2 hours. Can be used as SPST-NO; SPST-NC; or SPDT, alternate open and closed. Rated 40 amps (4375 watts, tungsten) at 125 VAC. With 3 triggers (1 for each cycle); up to 12 can be used. Tungsten rated for incandescent light loads with a surge more than 8 times normal. 7¾x5x3". U.L. Listed. For 110-120 V, 60 Hz. 3 lbs.
58 D 8313.....**13.62**

V26000 7-DAY TIME SWITCH

With 7 sets of trippers to set a different On-Off program each day of the week. For heating, pumps, other single to three-phase loads. Up to 4 operatons per day; 3-hour minimum interval. 40 amps tungsten per pole; 690 VA pilot duty; 1 hp. 10⅞x7⅜x3⅝". ■U.L. Recog. 125 V, 60 Hz. 6¼ lbs.
58 D 8333. V26001SC. 4PST.....**22.39**
58 D 8334. V26003SC. 4P: 2N.O.-2N.C.
Shpg. wt., 6¼ lbs.....**22.39**

T1975 "SKIPPER" PROGRAM TIMER

"Supervisor" with 96 trippers for 48 "on" and 48 "off" operations every 24 hours. Min. interval, 15 minutes. For full-time control of heating, air conditioning, etc." Skipper" feature omits selected days. Has 7-day Skipper wheel with handy push-pull tabs. SPDT switch rated 20 amps at 125 V, 60 Hz AC. Synchronous, self-start motor, snap-out mechanism. ■U.L. Recog.
58 D 8378. Wt., 3¾ lbs.....**24.34**

TRIPPERS

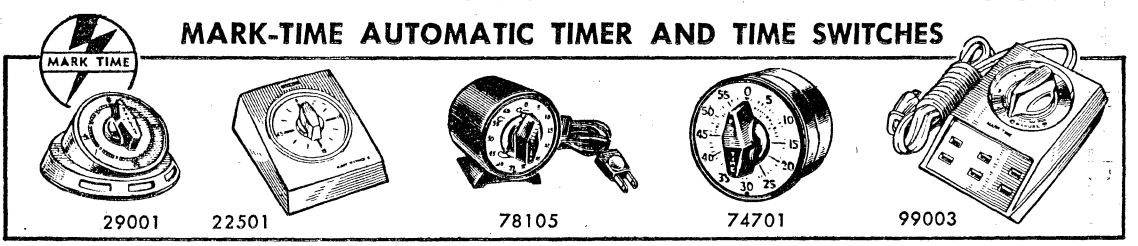
TYPE 107T19GR ON-CUTOFF TRIPPER. For "Skipper" types only. Wt., 3 oz.
58 D 8319.....Each **.33**

TYPE 79T8A SKIPPING SCREWS. For "Skipper" types only. Shpg. wt., 8 oz.
58 D 8364. Pkg. of 2.....Per Pkg. **.13**

EXTRA TRIPPER. For T185 only. Cam can be set for duration of "on-off" cycle.
58 D 8336. Wt., 4 oz.....Each **1.27**

TYPE 107T8A "ON AND OFF" TRIPPERS. For all Intermatic switches (except T185).
58 D 8324. Wt., 2 oz.....Per Set **.33**

MARK-TIME AUTOMATIC TIMER AND TIME SWITCHES



29001 22501 78105 74701 99003

MODEL 29001 "CLOCK WATCHER" BELL TIMER

Times intervals up to 60 minutes with bell tone. Spring driven, requires no AC power. Handsomely styled with white enamel finish. Protective, no-mar base. Shpg. wt., ¾ lbs.
58 D 8380. 1-11.....Each **2.96** 12-99.....Each **2.63**

MODEL 22501 "CLOCK WATCHER II" BELL TIMER

Times intervals up to 60 minutes with loud bell tones. Spring-driven. Ideal for office or lab. Stands on table or mounts on wall. Beige plastic finish. Size, 5½x4x2". Shpg. wt., 10 oz.
58 D 8258. 1-11.....Each **4.46** 12-99.....Each **3.97**

SERIES 78100 PROFESSIONAL TIME SWITCHES

AC receptacle turns off devices after preset time. 10 amps, 125 VAC. *Designed for timing developers, enlargers, etc.; adjustable stop for repeat settings; "hold" feature. ■U.L. Recog., C.S.A. Listed. 3⅜x3¾x3½". 110-120 V, 60 Hz AC. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Maximum Setting	EACH 1-11	EACH 12-99
58 D 8264	78174*	60 Seconds	7.46	6.63
58 D 8265	78104	30 Minutes	7.13	6.33
58 D 8263	78105	60 Minutes	7.13	6.33
58 D 8266	78126	12 Hours	7.13	6.33

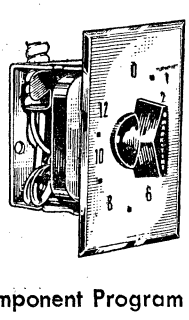
STANDARD BUILT-IN TIME SWITCHES

SPDT switches easily set for "off-type" or "on-type" use, 2⁹⁄₁₆x1⁹⁄₃₂". Rated 20 amps at 125-240 VAC. For panel or 4" octagon switch box. Satin-chrome dial, black knob. ■U.L. Recog. 1 lb.
58 D 8259. Type 74701. For up to 15-minute intervals.
58 D 8261. Type 74702. For up to 30-minute intervals.
58 D 8268. Type 74703. For up to 60-minute intervals.
1-11.....Each **6.38** 12-99.....Each **5.67**

MODEL 99003 "ALL IN ONE" TIME SWITCH

- Combination Time Switch, Extension Cord, 3-Way AC Outlet
- Automatically Turns Off Devices After Up to 4 Hours
- Includes Convenient "Hold" Feature For Manual Operation

Excellent for controlling decoration lights, TV sets, lamps, heating pads, radios, etc. Insert plug into any wall outlet, plug up to 3 devices into 3-way outlet, and set knob for desired time cycle up to 4 hours. After predetermined time has passed, switch automatically shuts devices off. In "hold" position, devices remain in operation and timing ceases until knob is turned manually to another position. SPST switch, rated at 10 amps, 125 volts AC. Handsomely designed cream base with brass finish dial plate. Has 5½-foot cord. For 110-120 V, 60 Hz AC. ■U.L. Recog. Shpg. wt., 1 lb.
58 D 8294. 1-11.....Each **5.96** 12-99.....Each **5.30**



WALL-BOX TIME SWITCHES

Fit std. wallbox. Automatically turn off devices after preset time. 20 amps, 125V. *"Hold" feature for continuous use. ■U.L. Recognized, C.S.A. Listed. 110-120 V, 60 Hz AC. Wt., 9 oz.

Stock No.	Mfr's Type	Max. Setting	EACH 1-11	EACH 12-99
58 D 8269	90004	5 Minutes	5.63	5.00
58 D 8270	90005	15 Minutes	5.63	5.00
58 D 8274	90006	30 Minutes	5.63	5.00
58 D 8275	90021*	3 Minutes	5.63	5.00
58 D 8276	90024*	60 Minutes	5.63	5.00
58 D 8277	90015*	12 Hours	5.63	5.00

■ Recognized Under the Component Program of Underwriters Laboratories, Inc.

RELAYS and MOTORS

Take Advantage of the Fastest Service in the Industry!

AVAILABLE IN QUANTITY FROM ALLIED AT FACTORY OEM PRICES . . . WORLDS LARGEST INVENTORY FOR SAME-DAY SHIPMENT

QUICK INDEX TO MANUFACTURERS AND PRODUCTS

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ER Series	99	260
AMPHENOL-BORG	99	271
CP CLARE	499	272
DORMEYER		
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60	49	271
71, 72	49	271
77, 78	49	271
EBERT		
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B	249	260
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H	249	260
HD 1, 2, 4 & 7	99	260
MR-10, 12, 14 & 17	99	260
S-1/T-1	249	260
SSS	100	260
TD	100	260
100	99	260
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ECI (T-Bar)®		
801	99	272
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Tiny-T ®	249	272
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CS-2100	499	264
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240/245	499	264
1R-625	499	265
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102RMP, 103LMPC	999	252
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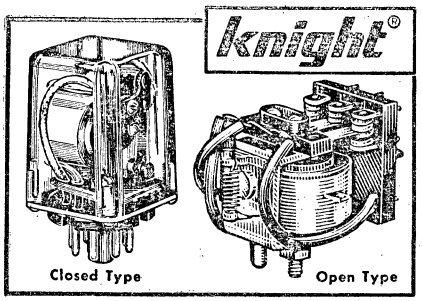
Synchronous Motors	99	
Translators	99	

NOTE: FOR METER RELAYS, SEE PAGE 491 OF THIS CATALOG

General-Purpose and Reed Relays



ALLIED'S OWN KNIGHT RELAYS AT LOW PRICES

Compare prices and specs. Provide highest performance in light-duty power control circuits. Nylon bobbins, shock resistant armature mounting and corrosion-resistant coil. Open type are ■U.L. Recog. Stationary and movable terminal blocks are molded phenolic with ample separation between opposite potentials. Plug-in types are for use where enclosed units are needed for protection or for easy connection and replacement. *Color-coded for voltage and AC, DC or plate circuit. Shpg. wt., open types, 2 oz.; enclosed types, 3 oz. **NOTE: All relays ordered in multiples of 50 will generally be shipped bulk in handy production-line packaging.**

Contact Ratings: 10 amperes at 120 VAC or 32 VDC, non-inductive. **Material:** Silver alloy, gold-flashed. **Coils:** AC or DC. Nylon bobbins sealed with fused wrap. **Insulation:** 1500 Vrms between circuits and frame. **Life Expectancy:** exceeds 5,000,000 operations. **Mounting:** Open types—single-hole, 6-32 tapped. Enclosed—SPDT and DPDT, standard octal; 3PDT, 11-pin plug. **Color Coding:** AC—12 V, red; 24 V, green; 120 V, white. DC—12 V, blue; 24 V, yellow; 110 V, black. **Plate Circuit**—brown. *Open type now available with Quick-Connect terminals.* Order as SO-41, Type No., adding QC to end of number. Example: SO-41 KN100-1C-12A-QC.

GENERAL-PURPOSE OPEN TYPE RELAYS

Stock No.	Knight Type No.	Coil Voltage /Imp.	Contact Action	Coil mA	Coil Ohms	Color Code*	EACH 1-24	25-49	50-99	100-249	250-499	500-999	1000-1499	1500-2499	2500-4999
41 D 4650	KN100-1C- 12A	12 AC	SPDT	170	20	Red	3.15	2.83	2.51	2.20	2.05	1.89	1.81	1.68	1.61
41 D 4651	KN100-1C- 24A	24 AC	SPDT	85	75	Green	3.15	2.83	2.51	2.20	2.05	1.89	1.81	1.68	1.61
41 D 4652	KN100-1C-115A	120 AC	SPDT	35	1500	White	3.15	2.83	2.51	2.20	2.05	1.89	1.81	1.68	1.61
41 D 4653	KN105-1C- 12D	12 DC	SPDT	80	150	Blue	3.00	2.70	2.40	2.10	1.95	1.79	1.72	1.65	1.58
41 D 4654	KN105-1C- 24D	24 DC	SPDT	40	600	Yellow	3.00	2.70	2.40	2.10	1.95	1.79	1.72	1.65	1.58
41 D 4655	KN100-2C- 12A	12 AC	DPDT	170	20	Red	3.70	3.33	2.96	2.59	2.41	2.22	2.13	2.04	1.96
41 D 4656	KN100-2C- 24A	24 AC	DPDT	85	75	Green	3.70	3.33	2.96	2.59	2.41	2.22	2.13	2.04	1.96
41 D 4657	KN100-2C-115A	120 AC	DPDT	35	1500	White	3.70	3.33	2.96	2.59	2.41	2.22	2.13	2.04	1.96
41 D 4658	KN105-2C- 12D	12 DC	DPDT	80	150	Blue	3.35	3.01	2.68	2.35	2.19	2.01	1.93	1.85	1.78
41 D 4659	KN105-2C- 24D	24 DC	DPDT	40	600	Yellow	3.35	3.01	2.68	2.35	2.19	2.01	1.93	1.85	1.78
41 D 4660	KN105-2C-110D	110 DC	DPDT	11	10000	Black	3.95	3.55	3.16	2.77	2.58	2.37	2.28	2.19	2.10
41 D 4661	KN100-3C-115A	120 AC	3PDT	35	1500	White	4.20	3.78	3.36	2.94	2.73	2.51	2.41	2.31	2.22
41 D 4662	KN105-3C- 24D	24 DC	3PDT	40	600	Yellow	3.85	3.46	3.08	2.70	2.51	2.31	2.22	2.13	2.04

GENERAL-PURPOSE ENCLOSED TYPE RELAYS

41 D 4663	KN110-1C- 12A	12 AC	SPDT	170	20	Red	5.45	4.90	4.36	3.82	3.55	3.27	3.14	3.01	2.89
41 D 4664	KN110-1C- 24A	24 AC	SPDT	85	75	Green	5.45	4.90	4.36	3.82	3.55	3.27	3.14	3.01	2.89
41 D 4665	KN110-1C-115A	120 AC	SPDT	35	1500	White	5.45	4.90	4.36	3.82	3.55	3.27	3.14	3.01	2.89
41 D 4666	KN115-1C- 12D	12 DC	SPDT	80	150	Blue	5.40	4.86	4.33	3.79	3.52	3.24	3.11	2.99	2.87
41 D 4667	KN115-1C- 24D	24 DC	SPDT	40	600	Yellow	5.40	4.86	4.33	3.79	3.52	3.24	3.11	2.99	2.87
41 D 4668	KN110-2C- 12A	12 AC	DPDT	170	20	Red	6.05	5.44	4.84	4.24	3.94	3.62	3.48	3.34	3.21
41 D 4669	KN110-2C- 24A	24 AC	DPDT	85	75	Green	6.05	5.44	4.84	4.24	3.94	3.62	3.48	3.34	3.21
41 D 4670	KN110-2C-115A	120 AC	DPDT	35	1500	White	6.05	5.44	4.84	4.24	3.94	3.62	3.48	3.34	3.21
41 D 4671	KN115-2C- 12D	12 DC	DPDT	80	150	Blue	6.10	5.49	4.89	4.28	3.98	3.66	3.51	3.37	3.24
41 D 4672	KN115-2C- 24D	24 DC	DPDT	40	600	Yellow	6.10	5.49	4.89	4.28	3.98	3.66	3.51	3.37	3.24
41 D 4673	KN115-2C-110D	110 DC	DPDT	11	10000	Black	6.70	6.03	5.37	4.70	4.37	4.02	3.86	3.71	3.56
41 D 4674	KN115-2C-2.5K	2500 Ohms	DPDT	10	2500	Brown	6.00	5.40	4.80	4.20	3.90	3.60	3.45	3.30	3.15
41 D 4675	KN115-2C- 5K	5000 Ohms	DPDT	7	5000	Brown	6.10	5.49	4.88	4.27	3.96	3.66	3.51	3.36	3.21
41 D 4676	KN115-2C- 10K	10000 Ohms	DPDT	5	10000	Brown	6.50	5.85	5.20	4.55	4.22	3.90	3.74	3.58	3.42
41 D 4677	KN110-3C-115A	120 AC	3PDT	35	1500	White	7.50	6.75	6.01	5.26	4.89	4.50	4.32	4.15	3.98
41 D 4678	KN115-3C- 24D	24 DC	3PDT	40	600	Yellow	7.45	6.70	5.96	5.22	4.85	4.46	4.28	4.11	3.95

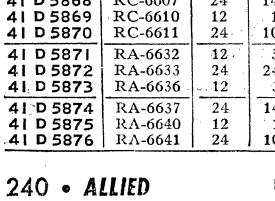
CROSS REFERENCE AND INTERCHANGEABILITY GUIDE

GENERAL-PURPOSE OPEN TYPE RELAYS

Knight	Comar	Guardian	Line	Magnecraft	Milwaukee	Omega	Ohmite	Phillips Advance	P & B
KN100	M	IR-1200	MK/MKO	W88AX	100	200/250	GR	GHA, GHB	KA/KAG
KN105	M	IR-1205	MK/MKO	W88X	100	200/250	GR	GHA, GHB	KA/KAG

GENERAL-PURPOSE ENCLOSED TYPE RELAYS

KN110	M	IR-1210	MKH, MKP	W88ACPX	105	200-PC	GRTP	GHP, GHH	KRP/KRP-G
KN115	M	IR-1215	MKH, MKP	W88CPX	105	200-PC	GRTP	GHP, GHH	KRP/KRP-G/KCP



JAMES ELECTRONICS REED RELAYS

Designed for applications where long life, high speed and top reliability are normally required. Gold contacts, ideal for low-power uses. Gold-flashed independent PC terminals. 125° C glass-filled nylon bobbins for high strength, low moisture absorption. Operate time, 3 msec average; release time, 1 millisecond. Contact ratings, 15 watts at 1 amp resistive. Contact life, 20,000,000 operations. RC series terminals are spaced .218" with 2.500" between centers. RA series terminals are spaced .200" with 2.400" between centers. Av. shpg. wt., 1½ oz.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	Contacts	Size LxHxW	C. P. Clare Equivalent	Auto. Elec. Equivalent	EACH 1-9	10-24	25-99	100-249	250-999	1000-2499
41 D 5865	RC-6602	12	580	SPST-N.O.	2.6x.562x.625"	CRT-1010	.....	2.51	2.09	1.88	1.78	1.71	1.63
41 D 5866	RC-6603	24	2400	SPST-N.O.	2.6x.562x.625"	CRT-1013	.....	2.82	2.34	2.11	2.00	1.92	1.83
41 D 5867	RC-6606	12	355	DPST-N.O.	2.6x.562x.840"	CR2T-1007	.....	3.51	2.91	2.62	2.49	2.39	2.28
41 D 5868	RC-6607	24	1475	DPST-N.O.	2.6x.562x.840"	CR2T-1010	.....	3.70	3.07	2.77	2.63	2.52	2.40
41 D 5869	RC-6610	12	175	3PST-N.O.	2.6x.562x1.062"	CR3T-1007	.....	4.42	3.67	3.31	3.14	3.00	2.87
41 D 5870	RC-6611	24	1032	3PST-N.O.	2.6x.562x1.062"	CR3T-1011	.....	4.62	3.83	3.43	3.28	3.14	3.00
41 D 5871	RA-6632	12	580	SPST-N.O.	2.6x.562x.625"	.....	CR-11	2.51	2.09	1.88	1.78	1.71	1.63
41 D 5872	RA-6633	24	2400	SPST-N.O.	2.6x.562x.625"	.....	CR-12	2.82	2.34	2.11	2.00	1.92	1.83
41 D 5873	RA-6636	12	355	DPST-N.O.	2.6x.562x.840"	.....	CR-15	3.51	2.91	2.62	2.49	2.39	2.28
41 D 5874	RA-6637	24	1475	DPST-N.O.	2.6x.562x.840"	.....	CR-16	3.70	3.07	2.77	2.63	2.52	2.40
41 D 5875	RA-6640	12	175	3PST-N.O.	2.6x.562x1.062"	.....	CR-20	4.42	3.67	3.31	3.14	3.00	2.87
41 D 5876	RA-6641	24	1032	3PST-N.O.	2.6x.562x1.062"	.....	CR-21	4.62	3.83	3.43	3.28	3.14	3.00

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

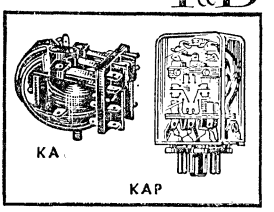
Potter & Brumfield General-Purpose Relays P&B

SERIES KA AND KAP

KA (open) and KAP (with plastic dust cover) relays for small motors, solenoids, other relays. Contacts: movable, gold-flashed silver; stationary, silver overlay. 10-amp relays have silver-cadmium-oxide movables. Type KA are ■ U.L. Recog., AC models C.S.A. Listed; KAP models with " Y" suffix are ■U.L. Recog. and C.S.A. Listed. KA mtg., 6-32 threaded stud and locating tab. Socket information, next page. KAP, SPDT and DPDT types have 8-pin plugs; 3PDT, 11-pin. Write for prices in quantities of 750-999.

COIL DATA FOR KA, KAP AND KRP

DC COILS			AC COILS		
Volts	Res., Ohms	mA	Volts	Res., Ohms	mA
6	32	188	6	6	335
12	120	100	12	21	168
24	472	51	24	75*	84
110	10,000	11.5	120	2250	17.5
.....	.....	.....	240	9110	8.75



TYPE KA OPEN RELAYS (Av. shpg. wt., 4 oz.)

5 AMPERES

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 5158	KA5AY	6 AC	SPDT	3.50	3.33	3.15	2.45	2.28	2.01
41 D 6780	KA5AY	12 AC	SPDT	3.50	3.33	3.15	2.45	2.28	2.01
41 D 5161	KA5AY	24 AC	SPDT	3.50	3.33	3.15	2.45	2.28	2.01
41 D 5164	KA5AY	120 AC	SPDT	3.50	3.33	3.15	2.45	2.28	2.01
41 D 5153	KA5AY	240 AC	SPDT	4.00	3.80	3.60	2.80	2.60	2.30
41 D 5167	KA5DY	6 DC	SPDT	3.35	3.18	3.02	2.35	2.18	1.93
41 D 5170	KA5DY	12 DC	SPDT	3.35	3.18	3.02	2.35	2.18	1.93
41 D 5173	KA5DY	24 DC	SPDT	3.35	3.18	3.02	2.35	2.18	1.93
41 D 6782	KA5DY	110 DC	SPDT	4.05	3.85	3.65	2.84	2.63	2.33
41 D 5159	KA11AY	6 AC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 6781	KA11AY	12 AC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 5162	KA11AY	24 AC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 5165	KA11AY	120 AC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 6783	KA11AY	240 AC	DPDT	4.65	4.42	4.19	3.26	3.02	2.67
41 D 5168	KA11DY	6 DC	DPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 5171	KA11DY	12 DC	DPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 5174	KA11DY	24 DC	DPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 6522	KA11DY	110 DC	DPDT	4.40	4.18	3.96	3.08	2.86	2.53
41 D 5160	KA14AY	6 AC	3PDT	4.65	4.42	4.19	3.26	3.02	2.67
41 D 6779	KA14AY	12 AC	3PDT	4.65	4.42	4.19	3.26	3.02	2.67
41 D 5163	KA14AY	24 AC	3PDT	4.65	4.42	4.19	3.26	3.02	2.67
41 D 5166	KA14AY	120 AC	3PDT	4.65	4.42	4.19	3.26	3.02	2.67
41 D 5152	KA14AY	240 AC	3PDT	5.15	5.23	4.95	3.85	3.58	3.16
41 D 5169	KA14DY	6 DC	3PDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 5172	KA14DY	12 DC	3PDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 5185	KA14DY	24 DC	3PDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 6523	KA14DY	110 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82

10 AMPERES

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 7643	KA5AG	6 AC	SPDT	3.55	3.37	3.20	2.49	2.31	2.04
41 D 7644	KA5AG	12 AC	SPDT	3.55	3.37	3.20	2.49	2.31	2.04
41 D 7645	KA5AG	24 AC	SPDT	3.55	3.37	3.20	2.49	2.31	2.04
41 D 7646	KA5AG	120 AC	SPDT	3.55	3.37	3.20	2.49	2.31	2.04
41 D 7647	KA5AG	240 AC	SPDT	4.05	3.85	3.65	2.84	2.63	2.33
41 D 6029	KA5DG	6 DC	SPDT	3.40	3.23	3.06	2.38	2.21	1.96
41 D 6030	KA5DG	12 DC	SPDT	3.40	3.23	3.06	2.38	2.21	1.96
41 D 6031	KA5DG	24 DC	SPDT	3.40	3.23	3.06	2.38	2.21	1.96
41 D 6032	KA5DG	110 DC	SPDT	4.10	3.90	3.69	2.87	2.67	2.36
41 D 7648	KA11AG	6 AC	DPDT	4.35	4.13	3.92	3.05	2.83	2.50
41 D 7649	KA11AG	12 AC	DPDT	4.35	4.13	3.92	3.05	2.83	2.50
41 D 7650	KA11AG	24 AC	DPDT	4.35	4.13	3.92	3.05	2.83	2.50
41 D 7651	KA11AG	120 AC	DPDT	4.35	4.13	3.92	3.05	2.83	2.50
41 D 7654	KA11AG	240 AC	DPDT	4.75	4.51	4.28	3.33	3.09	2.73
41 D 6020	KA11DG	6 DC	DPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 6021	KA11DG	12 DC	DPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 6022	KA11DG	24 DC	DPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 6023	KA11DG	110 DC	DPDT	4.50	4.28	4.05	3.15	2.93	2.59
41 D 7655	KA14AG	6 AC	3PDT	4.85	4.61	4.37	3.40	3.15	2.79
41 D 7656	KA14AG	12 AC	3PDT	4.85	4.61	4.37	3.40	3.15	2.79
41 D 7657	KA14AG	24 AC	3PDT	4.85	4.61	4.37	3.40	3.15	2.79
41 D 7658	KA14AG	120 AC	3PDT	4.85	4.61	4.37	3.40	3.15	2.79
41 D 7659	KA14AG	240 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 6024	KA14DG	6 DC	3PDT	4.40	4.18	3.96	3.08	2.86	2.53
41 D 6025	KA14DG	12 DC	3PDT	4.40	4.18	3.96	3.08	2.86	2.53
41 D 6026	KA14DG	24 DC	3PDT	4.40	4.18	3.96	3.08	2.86	2.53
41 D 6027	KA14DG	110 DC	3PDT	5.10	4.85	4.59	3.57	3.32	2.93

TYPE KAP ENCLOSED RELAYS (Av. shpg. wt., 5 oz.)

5 AMPERES

41 D 7869	KAP11AY	24 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82
41 D 7870	KAP11AY	120 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82
41 D 7867	KAP11AY	240 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 7871	KAP11DY	12 DC	DPDT	6.60	6.27	5.94	4.62	4.29	3.80
41 D 7872	KAP11DY	24 DC	DPDT	6.60	6.27	5.94	4.62	4.29	3.80
41 D 7873	KAP11DY	110 DC	DPDT	7.30	6.94	6.57	5.11	4.75	4.20
41 D 7876	KAP14AY	120 AC	3PDT	8.30	7.89	7.47	5.81	5.40	4.77
41 D 7868	KAP14AY	240 AC	3PDT	8.70	8.27	7.83	6.09	5.66	5.00
41 D 7877	KAP14DY	12 DC	3PDT	8.20	7.79	7.38	5.74	5.33	4.72
41 D 7878	KAP14DY	24 DC	3PDT	8.20	7.79	7.38	5.74	5.33	4.72
41 D 7879	KAP14DY	110 DC	3PDT	8.85	8.41	7.97	6.20	5.75	5.09
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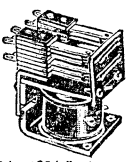
10 AMPERES

41 D 7880	KAP5AG	24 AC	SPDT	6.10	5.80	5.49	4.27	3.97	3.51
41 D 7881	KAP5AG	120 AC	SPDT	6.10	5.80	5.49	4.27	3.97	3.51
41 D 7882	KAP5DG	24 DC	SPDT	6.00	5.70	5.40	4.20	3.90	3.45
41 D 7888	KAP5DG	110 DC	SPDT	6.65	6.32	5.99	4.66	4.32	3.82
41 D 7884	KAP11AG	6 AC	DPDT	6.75	6.41	6.08	4.73	4.39	3.88
41 D 7885	KAP11AG	24 AC	DPDT	6.75	6.41	6.08	4.73	4.39	3.88
41 D 7886	KAP11AG	120 AC	DPDT	6.75	6.41	6.08	4.73	4.39	3.88
41 D 7887	KAP11DG	24 DC	DPDT	6.70	6.37	6.03	4.69	4.36	3.85
41 D 7883	KAP11DG	110 DC	DPDT	7.40	7.03	6.66	5.18	4.81	4.26
41 D 7889	KAP14AG	24 AC	3PDT	8.45	8.03	7.61	5.92	5.49	4.86
41 D 7891	KAP14AG	120 AC	3PDT	8.45	8.03	7.61	5.92	5.49	4.86
41 D 7892	KAP14DG	24 DC	3PDT	8.40	7.98	7.56	5.88	5.46	4.83
41 D 7893	KAP14DG	110 DC	3PDT	9.05	8.60	8.15	6.34	5.88	5.20

SERIES GA MULTIPLE-CONTACT RELAYS



For remote power switching, general circuit and power control uses. Withstand mobile shock and vibration. Moisture resistant coil prevents damage from high humidity. 5A contacts. AC coils for 50/60 Hz. Power at 25°C: DC—2W nominal, 6 W max.; AC—6 VA, Temp. range: —45°C; AC to ±45°C; DC to ±75°C. Pull-in: AC—85% or less of nominal voltage; DC—75% or less. Solder terminals. Mounts with 8-32 screw. $1\frac{1}{16} \times 1\frac{23}{32} \times 1\frac{25}{32}$". 4 oz.

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5194	GA11A	24 AC	DPDT	3.70	3.52	3.33	2.59	2.41
41 D 5196	GA11A	120 AC	DPDT	3.70	3.52	3.33	2.59	2.41
41 D 5198	GA11D	6 DC	DPDT	3.70	3.52	3.33	2.59	2.41
41 D 5105	GA11D	12 DC	DPDT	3.70	3.52	3.33	2.59	2.41
41 D 5107	GA11D	24 DC	DPDT	3.70	3.52	3.33	2.59	2.41
41 D 6527	GA11D	110 DC	DPDT	4.20	3.99	3.78	2.94	2.73
41 D 6014	GA14A	120 AC	3PDT	4.45	4.23	4.01	3.12	2.89
41 D 5193	GA17A	6 AC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 6526	GA17A	12 AC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 5195	GA17A	24 AC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 5197	GA17A	120 AC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 6786	GA17A	240 AC	4PDT	5.80	5.51	5.22	4.06	3.77
41 D 5199	GA17D	6 DC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 5106	GA17D	12 DC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 5108	GA17D	24 DC	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 6785	GA17D	110 DC	4PDT	5.90	5.61	5.31	4.13	3.84

COIL DATA FOR SERIES GA AND GP RELAYS

DC COILS			AC COILS		
Volts	Resistance In Ohms	Av. Current Milliamps	Volts	Resistance In Ohms	Av. Current Milliamps
6	18	333	6	1.7	1000
12	72	167	12	6.8	500
24	288	83	24	24.0	260
110	6050	18	120	690	50
.....	.....	.....	240	2950	25

SERIES GP "PIC & BUILD" RELAYS

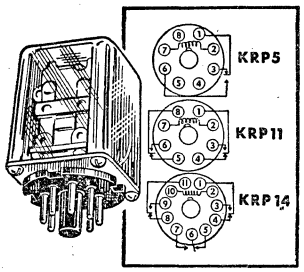
Order GPA or GPD coils and a switch, either GP11 or GP17. Combine to produce over 20 different relays that convert to alternative sensitivities or switching. Same size, specs as GA at left. 2 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6333	GPA	6 AC	1.85	1.76	1.67	1.30	1.20
41 D 6539	GPA	12 AC	1.85	1.76	1.67	1.30	1.20
41 D 6334	GPA	24 AC	1.85	1.76	1.67	1.30	1.20
41 D 6335	GPA	120 AC	1.85	1.76	1.67	1.30	1.20
41 D 6341	GPD	2500 Ohms	1.70	1.62	1.53	1.19	1.11
41 D 6342	GPD	10,000 Ohms	2.30	2.19	2.07	1.61	1.50
41 D 6337	GPD	6 DC	2.30	2.19	2.07	1.61	1.50
41 D 6338	GPD	12 DC	2.30	2.19	2.07	1.61	1.50
41 D 6339	GPD	24 DC	2.30	2.19	2.07	1.61	1.50
41 D 6343	GP11	DPDT Switch	1.90	1.81	1.71	1.33	1.24
41 D 6344	GP17	4PDT Switch	3.25	3.09	2.93	2.28	2.11

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

P&B Potter & Brumfield General-Purpose Relays

SERIES KRP AND KRP-N ENCLOSED RELAYS



General-purpose relays are enclosed in high-impact transparent, cellulose acetate case. Dust and weather proofed. Coil power at 25°C: DC—100 mW minimum, 4 watts maximum; AC—2 volt-amperes. Temperature range: −45°C minimum; AC to +70°C maximum; DC to +85°C maximum. Operate (approx.) 15 msec., release 10 msec. 10 million cycle life. 1000 megohm minimum insulation resistance. Breakdown, 500 V rms, 60 Hz. Shock, 30gs. *KRP-N Series includes a lamp to indicate current or voltage availability in power circuits. Lamp lights when coil is energized. KRP5 and KRP11 plug into standard octal socket. KRP14 plugs into 11-pin socket. Hold-down springs and socket information, next column. Coil Data Chart on preceding page. Both series, $1\frac{13}{32}$x$1\frac{13}{32}$x2". Av. shpg. wt., 5 oz.

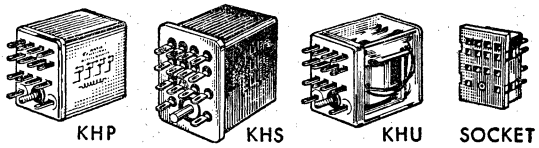
5 AMPERES

Stock No.	Mfr's Type KRP-	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499	500-749	750-999
41 D 5214	5A	6 AC	SPDT	6.00	5.70	5.40	4.20	3.90	3.45	3.30
41 D 5215	5A	24 AC	SPDT	6.00	5.70	5.40	4.20	3.90	3.45	3.30
41 D 5213	5A	120 AC	SPDT	6.00	5.70	5.40	4.20	3.90	3.45	3.30
41 D 5217	5D	6 DC	SPDT	5.95	5.65	5.36	4.17	3.87	3.42	3.27
41 D 5244	5D	12 DC	SPDT	5.95	5.65	5.36	4.17	3.87	3.42	3.27
41 D 5245	5D	24 DC	SPDT	5.95	5.65	5.36	4.17	3.87	3.42	3.27
41 D 5240	5D	110 DC	SPDT	6.60	6.27	5.94	4.62	4.29	3.80	3.63
41 D 5920	11A	6 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82	3.66
41 D 6524	11A	12 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82	3.66
41 D 5216	11A	24 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82	3.66
41 D 5921	11A	120 AC	DPDT	6.65	6.32	5.99	4.66	4.32	3.82	3.66
41 D 6597	11A	240 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08	3.91
41 D 5922	11D	6 DC	DPDT	6.60	6.27	5.94	4.62	4.29	3.80	3.63
41 D 5246	11D	12 DC	DPDT	6.60	6.27	5.94	4.62	4.29	3.80	3.63
41 D 5247	11D	24 DC	DPDT	6.60	6.27	5.94	4.62	4.29	3.80	3.63
41 D 6352	11D	110 DC	DPDT	7.30	6.94	6.57	5.11	4.75	4.20	4.02
41 D 5091	14A	6 AC	3PDT	8.30	7.89	7.47	5.81	5.40	4.77	4.57
41 D 6525	14A	12 AC	3PDT	8.30	7.89	7.47	5.81	5.40	4.77	4.57
41 D 5092	14A	24 AC	3PDT	8.30	7.89	7.47	5.81	5.40	4.77	4.57
41 D 5093	14A	120 AC	3PDT	8.30	7.89	7.47	5.81	5.40	4.77	4.57
41 D 5557	14A	240 AC	3PDT	8.70	8.27	7.83	6.09	5.66	5.00	4.79
41 D 5094	14D	6 DC	3PDT	8.20	7.79	7.38	5.74	5.33	4.72	4.51
41 D 5095	14D	12 DC	3PDT	8.20	7.79	7.38	5.74	5.33	4.72	4.51
41 D 5096	14D	24 DC	3PDT	8.20	7.79	7.38	5.74	5.33	4.72	4.51
41 D 6998	14D	110 DC	3PDT	8.85	8.41	7.97	6.20	5.75	5.09	4.87

10 AMPERES

41 D 6746	5AG	6 AC	SPDT	6.15	5.84	5.54	4.31	4.00	3.54	3.38
41 D 6987	5AG	24 AC	SPDT	6.15	5.84	5.54	4.31	4.00	3.54	3.38
41 D 6993	5AG	120 AC	SPDT	6.15	5.84	5.54	4.31	4.00	3.54	3.38
41 D 6749	5DG	6 DC	SPDT	6.10	5.80	5.49	4.27	3.97	3.51	3.36
41 D 6984	5DG	12 DC	SPDT	6.10	5.80	5.49	4.27	3.97	3.51	3.36
41 D 6990	5DG	24 DC	SPDT	6.10	5.80	5.49	4.27	3.97	3.51	3.36
41 D 6996	5DG	110 DC	SPDT	6.70	6.37	6.03	4.69	4.36	3.85	3.69
41 D 6747	11AG	6 AC	DPDT	6.90	6.56	6.21	4.83	4.49	3.97	3.80
41 D 7666	*11AN	6 AC	DPDT	7.90	7.51	7.11	5.53	5.14	4.54	4.35
41 D 6982	11AG	12 AC	DPDT	6.90	6.56	6.21	4.83	4.49	3.97	3.80
41 D 7667	*11AN	12 AC	DPDT	7.90	7.51	7.11	5.53	5.14	4.54	4.35
41 D 6988	11AG	24 AC	DPDT	6.90	6.56	6.21	4.83	4.49	3.97	3.80
41 D 7668	*11AN	24 AC	DPDT	7.90	7.51	7.11	5.53	5.14	4.54	4.35
41 D 6994	11AG	120 AC	DPDT	6.90	6.56	6.21	4.83	4.49	3.97	3.80
41 D 7669	*11AN	120 AC	DPDT	7.90	7.51	7.11	5.53	5.14	4.54	4.35
41 D 6153	11AG	240 AC	DPDT	7.35	6.98	6.62	5.15	4.78	4.23	4.04
41 D 7670	*11AN	240 AC	DPDT	8.30	7.89	7.47	5.81	5.40	4.77	4.57
41 D 6819	11DG	6 DC	DPDT	6.85	6.51	6.17	4.80	4.45	3.94	3.77
41 D 6985	11DG	12 DC	DPDT	6.85	6.51	6.17	4.80	4.45	3.94	3.77
41 D 7672	*11DN	12 DC	DPDT	7.80	7.41	7.02	5.46	5.07	4.49	4.29
41 D 6991	11DG	24 DC	DPDT	6.85	6.51	6.17	4.80	4.45	3.94	3.77
41 D 7673	*11DN	24 DC	DPDT	7.80	7.41	7.02	5.46	5.07	4.49	4.29
41 D 6997	11DG	110 DC	DPDT	7.50	7.13	6.75	5.25	4.88	4.31	4.13
41 D 7674	*11DN	110 DC	DPDT	8.50	8.08	7.65	5.95	5.53	4.89	4.68
41 D 6748	14AG	6 AC	3PDT	8.60	8.17	7.74	6.02	5.59	4.95	4.73
41 D 6983	14AG	12 AC	3PDT	8.60	8.17	7.74	6.02	5.59	4.95	4.73
41 D 6989	14AG	24 AC	3PDT	8.60	8.17	7.74	6.02	5.59	4.95	4.73
41 D 6995	14AG	120 AC	3PDT	8.60	8.17	7.74	6.02	5.59	4.95	4.73
41 D 7053	*14AN	120 AC	3PDT	9.60	9.12	8.64	6.72	6.24	5.52	5.28
41 D 6152	14AG	240 AC	3PDT	9.00	8.55	8.10	6.30	5.85	5.18	4.95
41 D 7055	*14AN	240 AC	3PDT	10.05	9.55	9.05	7.04	6.53	5.78	5.53
41 D 6981	14DG	6 DC	3PDT	8.50	8.08	7.65	5.95	5.53	4.89	4.68
41 D 6986	14DG	12 DC	3PDT	8.50	8.08	7.65	5.95	5.53	4.89	4.68
41 D 6992	14DG	24 DC	3PDT	8.50	8.08	7.65	5.95	5.53	4.89	4.68
41 D 6999	14DG	110 DC	3PDT	9.20	8.74	8.28	6.44	5.98	5.29	5.06

SERIES KH MINIATURE 4PDT RELAYS



KHP and KHU (with nylon dust cover), KHS (hermetically sealed with metal cover) relays for data processing, computer control, etc. KHU, ■ U.L. Recog. Gold-flashed silver contacts, rated 3 amps at 30 VDC or 120 VAC resistive, except KHP and KHU types with suffix "12", silver-cadmium-oxide contacts. Coil power: DC, 0.5-2 watts; AC, 1.20 VA. Solder terminals. KHP has 3-48 mtg. stud. Fit sockets (below). Sizes: KHP and KHU, $1\frac{17}{64}$x$1\frac{7}{64}$x$\frac{55}{64}$". KHS, $\frac{29}{32}$x$1\frac{5}{32}$x$\frac{29}{32}$". Av. shpg. wt., 2 oz. Contact Allied for prices in quantities of 750-999.

COIL DATA FOR SERIES KH RELAYS

DC COILS Volts	Resistance In Ohms ±10% @25°C	Inductance In H (approx.)	AC COILS Volts	Resistance In Ohms ±10% @25°C	Average Current Milliamps
6	40	.08	6	10.5	200
12	160	.28	12	43	100
24	650	1.0	24	160	52
48	2600	4.5	120	3900	10.5
90	9000	13.5	...	.....	.....
110	11,000	17.0	...	.....	.....

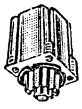
Stock No.	Mfr's Type	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 4252	KHP17A11	6 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 4253	KHP17A11	12 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 4254	KHP17A11	24 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 4255	KHP17A11	120 AC	6.05	5.75	5.45	4.24	3.93	3.48
41 D 7675	KHP17D11	6 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 7676	KHP17D11	12 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 7677	KHP17D11	24 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 7678	KHP17D11	48 DC	5.25	4.99	4.73	3.68	3.41	3.02
41 D 7680	KHP17D11	90 DC	5.90	5.61	5.31	4.13	3.84	3.39
41 D 7679	KHP17D11	110 DC	5.90	5.61	5.31	4.13	3.84	3.39
41 D 6045	KHP17D12	24 DC	5.20	4.94	4.68	3.64	3.38	2.99
41 D 6046	KHP17D12	110 DC	6.05	5.75	5.45	4.24	3.93	3.48
41 D 4256	KHS17A11	6 AC	9.55	9.07	8.60	6.69	6.21	5.49
41 D 4258	KHS17A11	24 AC	9.55	9.07	8.60	6.69	6.21	5.49
41 D 4259	KHS17A11	120 AC	9.90	9.41	8.91	6.93	6.44	5.69
41 D 6047	KHS17D11	6 DC	8.55	8.12	7.70	5.99	5.56	4.92
41 D 6048	KHS17D11	12 DC	8.55	8.12	7.70	5.99	5.56	4.92
41 D 6049	KHS17D11	24 DC	8.55	8.12	7.70	5.99	5.56	4.92
41 D 6050	KHS17D11	110 DC	9.40	8.93	8.46	6.58	6.11	5.41
41 D 5225	KHU17A11	6 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 5226	KHU17A11	12 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 5227	KHU17A11	24 AC	5.55	5.27	5.00	3.89	3.61	3.19
41 D 5228	KHU17A11	120 AC	6.05	5.75	5.45	4.24	3.93	3.48
41 D 5229	KHU17D11	6 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 5230	KHU17D11	12 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 5231	KHU17D11	24 DC	5.05	4.80	4.55	3.54	3.28	2.90
41 D 5232	KHU17D12	24 DC	5.20	4.94	4.68	3.64	3.38	2.99
41 D 5233	KHU17D11	48 DC	5.25	4.99	4.73	3.68	3.41	3.02
41 D 5234	KHU17D11	90 DC	5.90	5.61	5.31	4.13	3.84	3.39
41 D 5235	KHU17D11	110 DC	5.90	5.61	5.31	4.13	3.84	3.39
41 D 5236	KHU17D12	110 DC	6.05	5.75	5.45	4.24	3.93	3.48

SOCKETS

41 D 5940	9KH1	Solder term.	.70	.67	.63	.49	.46
41 D 5990	9KH2	PC terminal	.70	.67	.63	.49	.46

41 D 6028. KHP Hold-Down Spring. Wt., 3 oz.....Box of 50 for 5.80

RELAY ACCESSORIES



8-Pin "P" Case. Type 35D070. Clear plastic case for mounting rectifiers, capacitors, resistors. Octal base. With four screws. 2x$1\frac{13}{32}$x$1\frac{13}{32}$". Av. wt., 1 oz.
41 D 5558. 1-24....Each .65 25-49.....Each .62
50-99..Ea. .59 100-249..Ea. .46 250-499....Ea. .42

11-Pin "P" Case. Type 35D072. As above, 11-pin base.
41 D 5559. 1-24.....Each .80 25-49...Each .76
50-99....Each .72 100-249.....Each .56 250-499.....Each .52

KCP-KRP Hold-Down Spring. Type 9KR15. Two $\frac{5}{32}$" holes. 3 oz.
41 D 5554.....Box of 50 for 5.50

SOCKETS FOR KCP, KRP, KRP-N, KAP, PW, SM RELAYS

Amphenol Barrier Type Sockets. For KAP, KCP, KRP, and KRP-N relays. For SP and DP types, order octal 47 D 0180, p. 330. For 3-pole, order 11-pin 47 D 2593, p. 330.

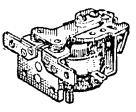
Amphenol Standard Sockets. For KAP, KCP, KRP, KRP-N. For SP and DP relays, order octal 47 D 0028, p. 330. For 3-pole relays, order 11-pin 47 D 0033, p. 330. For PW and SM relays, order 7-pin Type 78 A 7P.

■ Recognized Under the Component Program of Underwriter's Laboratories, Inc.

General-Purpose & Sensitive Relays, Buzzers P&B

KR3 DOUBLE-BREAK HEAVY-DUTY RELAY

Have copper alloy contact arms, silver-cadmium-oxide contacts. 20 amps, 120 VAC, 60 Hz res., or 28 VDC; 1 hp 120/240 V, 60 Hz. SPST-N.O.-DB (1 Form X). 1.6x 1.671x1.52". 6-32 stud mtg on .437" ctr. Same coil rating as KA Series, pg. 241. Wt., 2 oz. KRP3-H Series. Above, enclosed in clear plastic dust cover. Octal base. Shpg. wt., 3 oz.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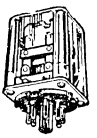
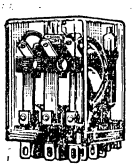
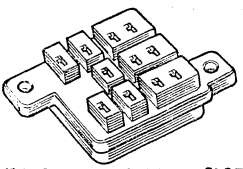
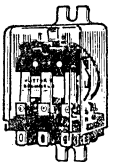

ENCLOSED

Stock No.	Mfr's Type	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5132	KR3AH	24 VAC	4.30	4.09	3.87	3.01	2.80
41 D 5133	KR3AH	120 VAC	4.30	4.09	3.87	3.01	2.80
41 D 5135	KR3DH	12 VDC	4.10	3.90	3.69	2.87	2.67
41 D 5136	KR3DH	24 VDC	4.10	3.90	3.69	2.87	2.67
41 D 5139	KRP3AH	120 VAC	7.00	6.65	6.30	4.90	4.55
41 D 5175	KRP3DH	12 VDC	6.75	6.41	6.08	4.73	4.39
41 D 5176	KRP3DH	24 VDC	6.75	6.41	6.08	4.73	4.39
41 D 5177	KRP3DH	110 VDC	7.45	7.08	6.71	5.22	4.84

KUP SERIES 10-AMPERE ENCLOSED RELAYS


PLAIN CASE


MATCHING SOCKET


SLOTTED FLANGE CASE

Plain Case. Industrial control 10-ampere relays for continuous operation. Terminals .187" quick-connect/solder type. Long-lasting silver-cadmium-oxide contacts. Enclosed in clear, high-impact plastic dust cover. Matching 10-amp molded nylon sockets listed below. Slotted-Flange Case. For direct-to-chassis mounting only. Slot width, .156". 1.531x1.408x1.908". Wt., 3 oz.

Stock No.	Mfr's Type KUP-	Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 4972	5A15	6 AC	SPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 4974	5A15	24 AC	SPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 4975	5A15	120 AC	SPDT	3.90	3.71	3.51	2.73	2.54	2.24
41 D 4976	5A15	240 AC	SPDT	4.30	4.09	3.87	3.01	2.80	2.47
41 D 4977	5D15	6 DC	SPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 4978	5D15	12 DC	SPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 4979	5D15	24 DC	SPDT	3.75	3.56	3.38	2.63	2.44	2.16
41 D 4980	5D15	110 DC	SPDT	4.35	4.13	3.92	3.05	2.83	2.50
41 D 4981	11A15	6 AC	DPDT	4.75	4.51	4.28	3.33	3.09	2.73
41 D 4982	11A15	12 AC	DPDT	4.75	4.51	4.28	3.33	3.09	2.73
41 D 4983	11A15	24 AC	DPDT	4.75	4.51	4.28	3.33	3.09	2.73
41 D 4984	11A15	120 AC	DPDT	4.75	4.51	4.28	3.33	3.09	2.73
41 D 4985	11A15	240 AC	DPDT	5.15	4.89	4.64	3.61	3.35	2.96
41 D 4986	11D15	6 DC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 4987	11D15	12 DC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 4988	11D15	24 DC	DPDT	4.25	4.04	3.83	2.98	2.76	2.44
41 D 4989	11D15	110 DC	DPDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4990	14A15	6 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4993	14A15	120 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4994	14A15	240 AC	3PDT	5.70	5.42	5.13	3.99	3.71	3.28
41 D 4995	14D15	6 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4996	14D15	12 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4997	14D15	24 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4998	14D15	110 DC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4999	9KU1	Sold. Term. Socket		.79	.75	.71	.55	.51	.45
41 D 4932	9KU2	PC Pin Term. Sock.		.95	.90	.86	.67	.62	.55
41 D 4933	9KU3	Hold-Down Springs. 3 oz.....		Box of 50 for 5.25					

KUP SERIES WITH SLOTTED-FLANGE CASE

41 D 4923	14A55	6 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4924	14A55	12 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4925	14A55	24 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4926	14A55	120 AC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05
41 D 4927	14A55	240 AC	3PDT	5.70	5.42	5.13	3.99	3.71	3.28
41 D 4928	14D55	6 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4929	14D55	12 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4930	14D55	24 DC	3PDT	4.90	4.66	4.41	3.43	3.19	2.82
41 D 4931	14D55	110 DC	3PDT	5.30	5.04	4.77	3.71	3.45	3.05

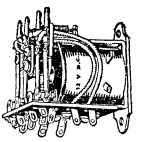
BU AC-OPERATED BUZZER

Spring-steel armature buzzes when coil is energized. 1 1/32x1 1/32x1 3/8". Mtg., 6-32 tapped core. Shpg. wt., 2 oz.

Stock No.	Type	Volts	Ohms	Stock No.	Type	Volts	Ohms
41 D 6005	BU-6AC	6AC	2.75	41 D 6007	BU-24AC	24AC	50
41 D 6006	BU-12AC	12AC	13.75	41 D 6008	BU-120AC	120AC	1250

1-24.....Each 1.95 25-49.....Each 1.85 50-99.....Each 1.76
100-249.....Each 1.37 250-499.....Each 1.27

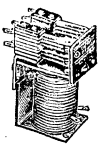
KL MULTIPLE-CONTACT MIDGET RELAYS



Widely used in industrial machine controls, elevator controls, communication equipment, etc. High dielectric phenolic insulation. Silver contacts rated at 5 amps at 120 V, 50-60 Hz AC resistive. AC coils are for 60 Hz. Two 6-32 tapped mtg. holes. 1 23/32x2 1/32x1 15/16". Wt., 5 oz.

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6532	KL11A	120 AC	DPDT	5.30	5.04	4.77	3.71	3.45
41 D 6533	KL14A	120 AC	3PDT	5.90	5.61	5.31	4.13	3.84
41 D 5218	KL17A	120 AC	4PDT	7.00	6.65	6.30	4.90	4.55
41 D 5220	KL17D	24 DC	4PDT	6.60	6.27	5.94	4.62	4.29

GB SENSITIVE 5-AMPERE RELAYS



Medium-cost sensitive 5-amp relays. Sensitivity: 115 mW for single pole, and 275 mW for 4 pole. Silver contacts are designed for maximum self-cleaning action for minimized maintenance. (Pick-up is not adjustable.) Contacts are all rated at 5 amperes. Mounting: 8-32 tapped core and locating half-punch. Size, 2 15/32x1 23/32x1 1/16". Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Coil mA	Coil Ohms	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6789	GB5D	6.8	2500	SPDT	3.80	3.61	3.42	2.66	2.47
41 D 6792	GB5D	4.8	5000	SPDT	4.00	3.80	3.60	2.80	2.60
41 D 6790	GB11D	7.0	2500	DPDT	5.35	5.08	4.82	3.75	3.48
41 D 6793	GB11D	5.0	5000	DPDT	5.45	5.18	4.91	3.82	3.54
41 D 6796	GB11D	3.53	10,000	DPDT	6.10	5.80	5.49	4.27	3.97
41 D 6791	GB17D	10.5	2500	4PDT	6.40	6.08	5.76	4.48	4.16
41 D 6797	GB17D	5.25	10,000	4PDT	7.05	6.70	6.35	4.94	4.58

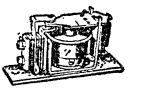
KCP ENCLOSED SENSITIVE 2-AMPERE RELAYS

Sensitive two-ampere relays in transparent, high-impact, weatherproof case. Sensitivity: 125 mW, single pole; 250 mW, double pole; 375 mW, 3 pole. KCP5 and KCP11 plug into a standard octal socket; KCP14 plugs into a standard 11-pin socket. 1/8" diameter gold-flashed silver contacts rated 2 amps. Size, 1 13/32x1 13/32x2" high. See pg. 244 for socket information. 4 oz.

Resistance (Ohms)	Single Pole Pull-in	Single Pole Sens.	Double Pole Pull-in	Double Pole Sens.	Three Pole Pull-in	Three Pole Sens.
2500	7.2 mA	125 mW	10.0 mA	250 mW	12.3 mA	375 mW
5000	5.0 mA	125 mW	7.2 mA	250 mW	8.7 mA	375 mW
10,000	3.6 mA	125 mW	5.0 mA	250 mW	6.1 mA	375 mW

Stock No.	Mfr's Type	Coil Ohms	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5287	KCP5	2500	SPDT	6.50	6.18	5.85	4.55	4.23
41 D 5288	KCP5	5000	SPDT	6.60	6.27	5.94	4.62	4.29
41 D 5289	KCP5	10,000	SPDT	7.05	6.70	6.35	4.94	4.58
41 D 5290	KCP11	2500	DPDT	6.95	6.60	6.26	4.87	4.52
41 D 5291	KCP11	5000	DPDT	7.05	6.70	6.35	4.94	4.58
41 D 5292	KCP11	10,000	DPDT	7.50	7.13	6.75	5.25	4.88
41 D 5097	KCP14	2500	3PDT	8.55	8.12	7.70	5.99	5.56
41 D 5098	KCP14	5000	3PDT	8.65	8.22	7.79	6.06	5.62
41 D 5099	KCP14	10,000	3PDT	9.10	8.65	8.19	6.37	5.92

LB-5 SENSITIVE 5-AMPERE RELAYS



Small, fast-acting units. For any circuit supplying as little as 200 milliwatts of DC. Breakdown, 500 V, rms. Silver contacts rated at 5 amps, 28 V, SPDT action. Adjusted by tail spring hook. For DC only. Mtg., two 3/16" holes on 2 7/32" ctrs. 3 oz.

Stock No.	Ohms	mA	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5625	2500	9	2.85	2.71	2.57	2.00	1.85
41 D 5626	5000	6.3	3.05	2.90	2.75	2.14	1.98
41 D 5774	10,000	4.5	3.30	3.14	2.97	2.31	2.15

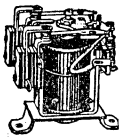
PW HERMETICALLY SEALED 1-AMPERE RELAYS

Precision, lightweight DC relays. Sealed in air-tight brass cans. Withstand 10g vibration to 500 Hz. DS suffix are voltage-actuated, LS current-actuated. Mount in standard 7-pin miniature socket. Silver contacts rated at 1 amp. Size 49/64" dia.; 1 11/16" high (above socket). *Milliamps. For socket information see page 244. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Volts	Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5018	PW5DS	6	202	11.85	11.26	10.67	8.30	7.70
41 D 5019	PW5DS	12	810	11.85	11.26	10.67	8.30	7.70
41 D 5027	PW5DS	24	3240	11.85	11.26	10.67	8.30	7.70
41 D 5028	PW5LS	2.8*	5000	12.25	11.64	11.03	8.58	7.96
41 D 5029	PW5LS	2.0*	10,000	12.70	12.07	11.43	8.89	8.26

All Relays on this Page Available in Quantities up to 999—Write for Prices

P&B Power and Plate-Circuit Relays



LM SENSITIVE 5-AMP RELAYS

Armature spring-tension adjustment and adjustable residual screw permits settings for specific voltages and currents. (LM5; 0.1 to .015 watts. LM11; 0.2 to 0.07 watts.) Silver contacts rated at 5 amperes. LM5 is SPDT; LM11 is DPDT. Mtg., two 6-32 holes on 1 13/16" centers. Sizes: LM5, 2 5/16x1 1/4x2 7/16"; LM11, 2 3/16x2 5/32x2 1/2". Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Ohms	mA	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5673	LM5	2500	6.3	4.35	4.13	3.92	3.05	2.83
41 D 5674	LM5	5000	4.5	4.55	4.32	4.10	3.19	2.96
41 D 5675	LM5	10,000	3.2	4.90	4.66	4.41	3.43	3.19
41 D 5682	LM11	2500	9.0	6.20	5.89	5.58	4.43	4.03
41 D 5683	LM11	5000	6.3	6.40	6.08	5.76	4.48	4.16
41 D 5684	LM11	10,000	4.5	7.05	6.70	6.35	4.94	4.58

RS5D LIGHTWEIGHT SENSITIVE 2-AMP RELAYS

For radio-sonde, light-dimmer, model applications. Voltage and current-actuated types. Sensitivity, 60 mW. Life expectancy, 10 million operations. Operate, 25 ms; release, less than 5 ms. Bar palladium SPDT contracts rated at 2 amps. *6 VDC type. †12 VDC. Molded phenolic insulation; 100 megohms minimum resistance. Mounting: two 4-40 tapped holes on 5/8x3/4" diagonal centers. Mounts in Type "P" plastic case, or with KCP-KRP hold-down spring (page 242) for special applications. Wt., 2 oz.

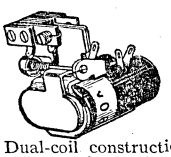
Stock No.	Ohms	mA	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5896	335	*	2.90	2.76	2.61	2.03	1.89
41 D 5504	1350	†	3.05	2.90	2.75	2.14	1.98
41 D 5897	2500	5.0	3.15	2.99	2.84	2.21	2.05
41 D 5898	5000	3.5	3.45	3.28	3.11	2.42	2.24
41 D 5899	10,000	2.5	4.00	3.80	3.60	2.80	2.60

SM MIDGET SENSITIVE 1/4-AMP RELAYS

Fast-acting, subminiature sensitive relays for voltage or current-actuating applications. Ideal for low-level switching in computers, aircraft instruments, etc. Voltage actuated relays are designated SM-D. Current-operated relays are designated SM-L. SPDT contacts, rated 1/4 amp. Stationary contacts gold-flashed silver; movables, rhodium. Units are sealed hermetically in deep-drawn steel tubes. Standard 7-pin miniature tube-type bases. 3/4" dia. 1 11/16" high above socket. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	VDC	Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5915	SM5DS	6	80	7.25	6.89	6.53	5.08	4.71
41 D 6521	SM5DS	12	360	7.25	6.89	6.53	5.08	4.71
41 D 5916	SM5DS	24	900	7.25	6.89	6.53	5.08	4.71
41 D 5917	SM5LS	3.9 mA	5000	7.55	7.17	6.80	5.29	4.91
41 D 5949	SM5LS	2.7 mA	10K	8.10	7.70	7.29	5.67	5.27

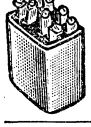
SS5D DC SENSITIVE 2-AMP DUAL-COIL RELAY



An extremely sensitive, precision-built SPDT relay that operates on as little as 2.5 milliwatts and will withstand up to 4.75 watts maximum. Because of its high sensitivity, the SS is ideal for low-energy circuits such as instruments, bridge balancing, etc. Dual series-connected coils operate heavy-duty armature supported by two jeweled needle bearings. Dual-coil construction makes this realy applicable for use as a differential relay by connecting each coil in a separate circuit. Coil resistance, 10K. Contacts rated 2 amps. Mounts by two 6-32 tapped holes on 23/32" centers. Size, 1 1/16x1 5/16x1 3/4". Shpg. wt., 4 oz.

41 D 5844. 1-24.....Each 15.25 25-49.....Each 14.49
50-99....Ea. 13.73 100-249....Ea. 10.68 250-499.....Ea. 9.91

AB AND ABC HEAVY-DUTY 10-AMP POWER RELAYS



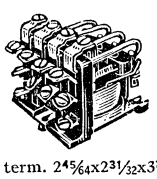
Terminals fit snap-on connectors, or may be dip-soldered to printed circuit. Snap-on screw adapters included. DPDT silver contacts rated 10 amps. AC types U.L. Component-Program Recognized, C.S.A. Listed. *Open type mounts by two 8-32 tapped holes on 1 1/4" centers. Size, 1 15/16x1 13/32x3". Shpg. wt., 6 oz. All others have dust covers, mount by one 8-32 stud 3/8" long. Size, 1 31/64x2 3/32x2 25/32". Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Coil Type	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5419	*AB11AY	120 AC	5.85	5.56	5.27	4.10	3.80
41 D 5433	ABC11AY	120 AC	7.05	6.70	6.35	4.94	4.58
41 D 5464	ABC11AY	240 AC	7.50	7.13	6.75	5.25	4.88
41 D 6771	ABC11D	12 DC	6.95	6.60	6.26	4.87	4.52
41 D 6772	ABC11D	24 DC	6.95	6.60	6.26	4.87	4.52

MR MEDIUM-DUTY POWER RELAYS

Medium-duty power relays for small motors, transmitters and other general-purpose applications. Contacts 7/32" diameter silver, rated 8 amps, except *10 amps. SPST relays are normally open. Sizes: SP units, 1 11/16x1 11/32x2 31/32"; DP units, 2x2 3/16x2 19/32"; 3-pole, 2x2 3/16x2 31/32". Mounting: 5/32" diameter holes on 2 1/4" centers for MR 3 and MR11, 2 5/8" centers for MR5 and MR14. Dust covers below. Wt., 5 oz.

Stock No.	Mfr's Type	Coil Volts	Coil Ohms	EACH 1-24	25-49	50-99	100-249	250-499	500-749
SPST*									
41 D 5975	MR3A	6 AC	2.75	4.30	4.09	3.87	3.01	2.80	2.47
41 D 5978	MR3A	24 AC	50.0	4.30	4.09	3.87	3.01	2.80	2.47
41 D 5665	MR3A	120 AC	1250.0	4.30	4.09	3.87	3.01	2.80	2.47
41 D 5983	MR3D	6 DC	24.0	3.90	3.71	3.51	2.73	2.54	2.24
41 D 5187	MR3D	12 DC	96.0	3.90	3.71	3.51	2.73	2.54	2.24
41 D 5988	MR3D	24 DC	360.0	3.90	3.71	3.51	2.73	2.54	2.24
SPDT									
41 D 5610	MR5A	6 AC	2.75	3.85	3.66	3.47	2.70	2.50	2.21
41 D 6757	MR5A	12 AC	13.25	3.85	3.66	3.47	2.70	2.50	2.21
41 D 5979	MR5A	24 AC	50.0	3.85	3.66	3.47	2.70	2.50	2.21
41 D 5614	MR5A	120 AC	1250.0	3.85	3.66	3.47	2.70	2.50	2.21
41 D 5657	MR5A	240 AC	4600.0	4.30	4.09	3.87	3.01	2.80	2.47
41 D 5618	MR5D	6 DC	24.0	3.55	3.37	3.20	2.49	2.31	2.04
41 D 5188	MR5D	12 DC	96.0	3.55	3.37	3.20	2.49	2.31	2.04
41 D 5989	MR5D	24 DC	360.0	3.55	3.37	3.20	2.49	2.31	2.04
41 D 6760	MR5D	110 DC	8000.0	4.10	3.90	3.69	2.87	2.67	2.36
DPDT									
41 D 5612	MR11A	6 AC	2.75	5.40	5.13	4.86	3.78	3.51	3.11
41 D 6758	MR11A	12 AC	13.25	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5981	MR11A	24 AC	50.0	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5616	MR11A	120 AC	1250.0	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5659	MR11A	240 AC	4600.0	5.85	5.56	5.27	4.10	3.80	3.36
41 D 5985	MR11D	6 DC	24.0	5.15	4.89	4.64	3.61	3.35	2.96
41 D 5190	MR11D	12 DC	96.0	5.15	4.89	4.64	3.61	3.35	2.96
41 D 5991	MR11D	24 DC	360.0	5.15	4.89	4.64	3.61	3.35	2.96
41 D 6761	MR11D	110 DC	8000.0	5.65	5.37	5.09	3.96	3.67	3.25
3PDT									
41 D 5976	MR14A	6 AC	2.75	6.45	6.13	5.81	4.52	4.19	3.71
41 D 6759	MR14A	12 AC	13.25	6.45	6.13	5.81	4.52	4.19	3.71
41 D 5982	MR14A	24 AC	50.0	6.45	6.13	5.81	4.52	4.19	3.71
41 D 5972	MR14A	120 AC	1250.0	6.45	6.13	5.81	4.52	4.19	3.71
41 D 5974	MR14A	240 AC	4600.0	6.85	6.51	6.17	4.80	4.45	3.94
41 D 5191	MR14D	12 DC	96.0	6.10	5.80	5.49	4.27	3.97	3.51
41 D 5992	MR14D	24 DC	360.0	6.10	5.80	5.49	4.27	3.97	3.51
41 D 6762	MR14D	110 DC	8000.0	6.60	6.27	5.94	4.62	4.29	3.80



PM17 4PDT 25-AMP POWER RELAYS

Compact. For polyphase and heavy-duty switching. 4PDT. Silver-cadmium-oxide contacts rated at 25 amps, 220 V, 50-60 Hz, non-inductive. 1 hp per movable arm at 120 or 240 V single-phase. U.L. Component-Program Recognized and C.S.A. Listed except 480 V. Mount by key-hole and 2 channels for 8-32 screws on 2x2 1/2" triangular centers. Screw term. 2 45/64x2 31/32x3 23/64". Act. wt., 14 oz. Av. shpg. wt., 1 lb.

Stock No.	Type PM-	Coil Volts	Res., Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7635	17AY	12 AC	1.4	13.60	12.92	12.24	9.52	8.84
41 D 7636	17AY	24 AC	5.0	13.60	12.92	12.24	9.52	8.84
41 D 7637	17AY	120 AC	120	13.60	12.92	12.24	9.52	8.84
41 D 7638	17AY	240 AC	587	14.10	13.40	12.69	9.87	9.17
41 D 7499	17AY	480 AC	1790	15.00	14.25	13.50	10.50	9.75
41 D 7691	17DY	6 DC	8.2	13.00	12.35	11.70	9.10	8.45
41 D 7692	17DY	12 DC	33.0	13.00	12.35	11.70	9.10	8.45
41 D 7693	17DY	24 DC	132.0	13.00	12.35	11.70	9.10	8.45
41 D 7694	17DY	110 DC	2760.0	13.65	12.97	12.29	9.56	8.87

RELAY COVERS FOR PR, PM AND MR

PR/PM

MR

TYPE 35D013. Has sheet steel base, knockouts for 1/2"-dia. conduit and aluminum cover with 2 screws. Gray enamel. 3 1/8x3 3/8x5 5/16". Mounts 3 No. 10 holes on 1 7/8x4 1/8" centers. Wt., 1 lb.
TYPE 35D227. Size, 3 13/16x3 13/16x5 1/8". 1 lb.
TYPE 35D130. Size, 2 19/32x2 3/8x3 5/8". 8 1/2 oz.

Stock No.	Mfr's Type	Use With	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6777	35D013	PR	3.45	3.28	3.11	2.42	2.24
41 D 7497	35D227	PM	3.45	3.28	3.11	2.42	2.24
41 D 6778	35D130	MR	2.20	2.09	1.98	1.54	1.43

All Relays on This Page Available in Quantities Up to 999—Write for Prices

Special-Purpose and Power Relays

P&B

PR HEAVY-DUTY FAST-ACTING POWER RELAYS

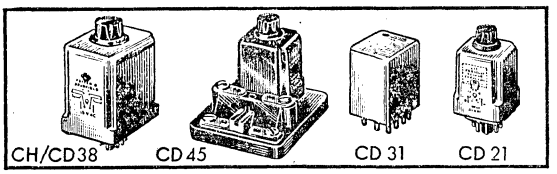
Handle many industrial switching requirements. Silver contacts rated 25 amps except PR11AL5, 20 amps. With heavy screw-terminals *Indicates auxiliary 5-amp contacts. All are ■U.L. Recog. except PR11AL5. AC types also C.S.A. Listed. Nominal power: AC types, 9.8 VA at 50-60 Hz; DC types, 2 watts. Mtg.: two 3/16" holes, 1⅞" ctrs. Sizes: all are 2½" wide; PR3 and PR5, 2 1/32x2½"; PR7, 2½x2 7/16"; PR11, 2½x3⅜". Dust cover on page 244. 12 oz.

COIL DATA CHART FOR PR SERIES

DC COILS		AC COILS (50-60 Hz)	
Volts	Res. (Ohms)	Volts	Res. (Ohms)
6	18	6	.86
12	71	12	3.2
24	288	24	12
110	6050	120	290
...	....	240	1200
...	....	480	4500

Stock No.	Type PR-	Coil Volts	Contacts	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 5846	3AY	6 AC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 6751	3AY	12 AC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 5961	3AY	24 AC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 5600	3AY	120 AC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 5652	3AY	240 AC	SPST	5.00	4.75	4.50	3.50	3.25	2.88
41 D 6509	3DY	12 DC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 6101	3DY	24 DC	SPST	4.55	4.32	4.10	3.19	2.96	2.62
41 D 5968	3DY	110 DC	SPST	5.25	4.99	4.73	3.68	3.41	3.02
41 D 5847	5AY	6 AC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 5878	5AY	12 AC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 5962	5AY	24 AC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 5602	5AY	120 AC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 5966	5AY	240 AC	SPDT	5.25	4.99	4.73	3.68	3.41	3.02
41 D 6750	5DY	6 DC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 6510	5DY	12 DC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 6754	5DY	24 DC	SPDT	4.80	4.56	4.32	3.36	3.12	2.76
41 D 5969	5DY	110 DC	SPDT	5.45	5.18	4.91	3.82	3.54	3.13
41 D 5848	7AY	6 AC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5879	7AY	12 AC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5963	7AY	24 AC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5603	7AY	120 AC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5654	7AY	240 AC	DPST	5.90	5.61	5.31	4.13	3.84	3.39
41 D 6102	7DY	6 DC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 6511	7DY	12 DC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 6513	7DY	24 DC	DPST	5.40	5.13	4.86	3.78	3.51	3.11
41 D 5970	7DY	110 DC	DPST	6.10	5.80	5.49	4.27	3.97	3.51
41 D 5849	11AY	6 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 6752	11AY	12 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 5964	11AY	24 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 5663	11AY	120 AC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 5655	11AY	240 AC	DPDT	7.65	7.27	6.89	5.36	4.97	4.40
41 D 5656	11AY	480 AC	DPDT	8.60	8.17	7.74	6.02	5.59	4.95
41 D 6103	11AL5	6 AC	DPDT*	9.00	8.55	8.10	6.30	5.85	5.18
41 D 6109	11AL5	12 AC	DPDT*	9.00	8.55	8.10	6.30	5.85	5.18
41 D 6753	11AL5	24 AC	DPDT*	9.00	8.55	8.10	6.30	5.85	5.18
41 D 6755	11AL5	120 AC	DPDT*	9.00	8.55	8.10	6.30	5.85	5.18
41 D 6756	11AL5	240 AC	DPDT*	9.45	8.98	8.51	6.62	6.14	5.43
41 D 6508	11DY	6 DC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 6512	11DY	12 DC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 6514	11DY	24 DC	DPDT	7.10	6.75	6.39	4.97	4.62	4.08
41 D 5971	11DY	110 DC	DPDT	7.75	7.36	6.90	5.43	5.04	4.46

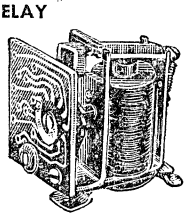
SERIES CH AND CD SOLID-STATE TIME-DELAY DEVICES AND RELAYS



Meet many time delay requirements. Reset within milliseconds. Adjustable over entire time range. Plastic enclosures. Series CH: temp., —10° C to +55° C, acc., ±10%; reset, 100 msec; repeatability, ±2%. Series CD: temp., —40° C to +55° C; acc., ±5%; reset, 60 msec; repeatability, ±1%. CHB/CDB38 and CHD/CDD38 have internal DPDT 10-amp relay. Others are timer only; use with P & B relays: *KRP11AG or KRP14AG; †KRP5DG, KRP11DG, or KRP14DG; ‡KHP17D11 (CDH31 has 180-second fixed delay, adjustable from 1.8 to 120 sec. by using various values of ½-watt resistors); §PR11AY. CDB38-70012, CDD38-30012, CHB38-70011, 70013, and CHD38-30011, 30013 provide delay on release, others delay on operate. Wts.: CD21, 5 oz.; CD31, 3 oz.; CD38, 9 oz.; CD45, 7 oz.; CH38, 5 oz.

Stock No.	Mfr's Type	Input Volts	Delay Sec.	EACH 1-9	10-24	25-49	50-99
41 D 4934	CHB38-30001	24 AC	1.0-10	19.50	18.53	17.55	15.60
41 D 4935	CHB38-30003	24 AC	1.0-180	19.50	18.53	17.55	15.60
41 D 4936	CHB38-70001	120 AC	1.0-10	19.50	18.53	17.55	15.60
41 D 4937	CHB38-70003	120 AC	1.0-180	19.50	18.53	17.55	15.60
41 D 4938	CHD38-30001	24 DC	1.0-10	18.50	17.58	16.65	14.80
41 D 4939	CHD38-30003	24 DC	1.0-180	18.50	17.58	16.65	14.80
41 D 4940	CHB38-70011	120 AC	1.0-10	23.50	22.33	21.15	18.80
41 D 4941	CHB38-70013	120 AC	1.0-180	23.50	22.33	21.15	18.80
41 D 4942	CHD38-30011	24 DC	1.0-10	21.50	20.43	19.35	17.20
41 D 4943	CHD38-30013	24 DC	1.0-180	21.50	20.43	19.35	17.20
41 D 7100	CDB38-70003	120 AC	0.1-10	43.80	41.61	39.42	35.04
41 D 7109	CDB38-70004	120 AC	0.6-60	43.80	41.61	39.42	35.04
41 D 7101	CDB38-70005	120 AC	1.8-180	43.80	41.61	39.42	35.04
41 D 7102	CDD38-30003	24 DC	0.1-10	41.55	39.47	37.40	33.24
41 D 7114	CDD38-30004	24 DC	0.6-60	41.55	39.47	37.40	33.24
41 D 7103	CDD38-30005	24 DC	1.8-180	41.55	39.47	37.40	33.24
41 D 7104	CDB21-70003*	120 AC	0.1-10	38.70	36.77	34.83	30.96
41 D 7105	CDB21-70001*	120 AC	1.8-180	38.70	36.77	34.83	30.96
41 D 7106	CDD21-30003†	24 DC	0.1-10	38.35	36.43	34.52	30.68
41 D 7108	CDH31-30005‡	24 DC	180	38.90	36.96	35.01	31.12
41 D 7110	CDB45-70002§	120 AC	0.6-60	37.05	35.20	33.35	29.64
41 D 7111	CDB38-70012	120 AC	0.6-60	52.45	49.83	47.21	41.96
41 D 7112	CDD38-30012	24 DC	0.6-60	49.50	47.03	44.55	39.60

SA-1N-12A STEPPING RELAY



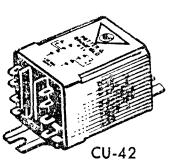
Twelve-position stepping relay for audio-level switching in TV remote control units, scoreboards and process controls. Printed circuit strips handle up to 250 mA. Armature-driven pawl operates ratchet wheel to drive movable contact in 30° steps. Coil voltage, 120; resistance, 140 ohms; power, 20 VA. Mounting: two 6-32 holes on 1 13/16" centers. Shpg. wt., 5 oz.

41 D 7113. 1-24 ..... Each 7.35
25-49....Each 6.98 50-99.....Each 6.62
100-249..Each 5.15 250-499...Each 4.78

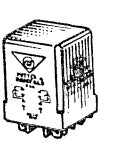
CU SERIES FIXED AND ADJUSTABLE TIME DELAY RELAYS

For applications where accurate time-delay values, fast reset time and excellent repeatability are required. Designed for delay-on-operate use, with fixed timing tolerance of ±5% and resistor adjustable tolerance of ±10%. Ideal for vending equipment, machine tool control or process controls. Each unit contains internally-mounted 10-amp DPDT relay.

Type CU-41 uses KUP series socket listed on page 243. Type CU-42 enclosures have flanged cases for mounting directly to chassis. Units with adjustable time delay require external resistor for operation.* Resistances indicated in table below are for maximum delay time. Both types are enclosed in yellow Lexan case. Av. shpg. wt., 4¼ oz.



CU-42



CU-41

FIXED DELAY TYPES

Stock No.	Mfr's Type	Delay (Sec.)	Input Volts	EACH 1-9	10-24	25-49	50-99
41 D 4900	CUA41-70010	10	120AC	13.50	12.83	12.15	10.80
41 D 4901	CUA41-70120	120	120AC	15.00	14.25	13.50	12.00
41 D 4904	CUC41-30010	10	24DC	13.50	12.83	12.15	10.80
41 D 4903	CUC41-30120	120	24DC	15.00	14.25	13.50	12.00
41 D 4902	CUA41-30010	10	24AC	13.50	12.83	12.15	10.80
41 D 4905	CUA42-70010	10	120AC	13.50	12.83	12.15	10.80
41 D 4906	CUA42-70120	120	120AC	15.00	14.25	13.50	12.00
41 D 4909	CUC42-30010	10	24DC	13.50	12.83	12.15	10.80
41 D 4908	CUC42-30120	120	24DC	15.00	14.25	13.50	12.00
41 D 4907	CUA42-30010	10	24AC	13.50	12.83	12.15	10.80

RESISTOR-ADJUSTABLE DELAY TYPES (LESS RESISTOR)

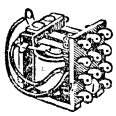
Stock No.	Mfr's Type	Delay (Sec.)	Volts	Res.* (Ohms)	EACH 1-9	10-24	25-49	50-99
41 D 4910	CUF41-70010	1-10	120AC	200K	14.25	13.54	12.83	11.40
41 D 4911	CUF41-70120	1-120	120AC	2.4 meg	15.50	14.73	13.95	12.40
41 D 4914	CUH41-30010	1-10	24DC	160K	14.25	13.54	12.83	11.40
41 D 4913	CUH41-30120	1-120	24DC	2 meg	15.50	14.73	13.95	12.40
41 D 4912	CUF41-30010	1-10	24AC	200K	14.25	13.54	12.83	11.40
41 D 4915	CUF42-70010	1-10	120AC	200K	14.25	13.54	12.83	11.40
41 D 4916	CUF42-70120	1-120	120AC	2.4 meg	15.50	14.73	13.95	12.40
41 D 4919	CUH42-30010	1-10	24DC	160K	14.25	13.54	12.83	11.40
41 D 4918	CUH42-30120	1-120	24DC	2 meg	15.50	14.73	13.95	12.40
41 D 4917	CUF42-30010	1-10	24AC	200K	14.25	13.54	12.83	11.40

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Potter & Brumfield Relays

SPECIAL-PURPOSE TYPE

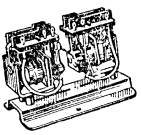
KM 2-AMP SUBMINIATURE RELAYS



For multiple switching applications. Used extensively in small business machines, alarm systems, and communications. Withstand 30g shock. Weight 0.58 oz. 3/32" silver contacts rated at 2 amps. Solder terminals. Mount by 2-56 tapped core and locating half-punch. Size: 1 1/8x53/64x35/64". Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6361	KM5D	6 DC	SPDT	3.80	3.61	3.42	2.66	2.47
41 D 6362	KM5D	12 DC	SPDT	3.80	3.61	3.42	2.66	2.47
41 D 6363	KM5D	24 DC	SPDT	3.80	3.61	3.42	2.66	2.47
41 D 6365	KM11D	6 DC	DPDT	4.15	3.94	3.74	2.91	2.70
41 D 6366	KM11D	12 DC	DPDT	4.15	3.94	3.74	2.91	2.70
41 D 6367	KM11D	24 DC	DPDT	4.15	3.94	3.74	2.91	2.70
41 D 6369	KM14D	6 DC	3PDT	4.80	4.56	4.32	3.36	3.12
41 D 6370	KM14D	12 DC	3PDT	4.80	4.56	4.32	3.36	3.12
41 D 6371	KM14D	24 DC	3PDT	4.80	4.56	4.32	3.36	3.12

KB LATCHING RELAYS



One coil actuates relay to set latch; second coil releases latch. 4PDT except *6PDT. Contacts, 5-ampere silver or 10-ampere silver cadmium-oxide movables. Mounting, two 5/32" holes on 1 3/8" centers. AC 5-ampere types are U.L. Component Program Recognized and C.S.A. Listed. Suffix "G" is 10-amps, all other listings are 5-amps. Size: 2 23/32x1 5/32x2 15/16". Be sure to specify stock no., mfr's type, and coil volts when ordering. Shpg. wt., 7 oz.

Stock No.	Type KB	Coil Volts	Res., Ohms	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D5126	17AY	6 AC	2.3	11.60	11.02	10.44	8.12	7.54	6.67
41 D6540	17AY	12 AC	10	11.60	11.02	10.44	8.12	7.54	6.67
41 D5125	17AY	24 AC	42	11.60	11.02	10.44	8.12	7.54	6.67
41 D5124	17AY	120 AC	1030	11.60	11.02	10.44	8.12	7.54	6.67
41 D6732	17AY	240 AC	4100	12.45	11.83	11.21	8.72	8.09	7.16
41 D5129	17D	6 DC	13.1	10.40	9.98	9.36	7.28	6.76	5.98
41 D6545	17D	12 DC	51.0	10.40	9.98	9.36	7.28	6.76	5.98
41 D5128	17D	24 DC	230	10.40	9.98	9.36	7.28	6.76	5.98
41 D5127	17D	110 DC	4560	11.75	11.16	10.58	8.23	7.64	6.76
41 D6034	17AG	6 AC	2.3	11.70	11.12	10.53	8.19	7.61	6.73
41 D6039	17AG	12 AC	10	11.70	11.12	10.53	8.19	7.61	6.73
41 D6541	17AG	24 AC	42	11.70	11.12	10.53	8.19	7.61	6.73
41 D6543	17AG	120 AC	1030	11.70	11.12	10.53	8.19	7.61	6.73
41 D6731	17AG	240 AC	4100	12.55	11.92	11.30	8.79	8.16	7.22
41 D6037	17DG	6 DC	13.1	10.65	10.12	9.59	7.46	6.92	6.12
41 D6038	17DG	12 DC	52.0	10.65	10.12	9.59	7.46	6.92	6.12
41 D6040	17DG	24 DC	230	10.65	10.12	9.59	7.46	6.92	6.12
41 D6041	17DG	110 DC	4560	11.95	11.35	10.76	8.37	7.77	6.87
41 D6043	23DG*	24 DC	230	12.95	12.30	11.66	9.07	8.42	7.45

KBP ENCLOSED LATCHING PLUG-IN RELAYS

Fast acting, positive latching relay designed for overload or memory work. Available for 120 volts AC, 12 volts DC and 24 volts DC. Momentary impulse to one of the coils operates relay to set latch. Second pulse to other coil releases it. Enclosed in translucent polypropylene cover for maximum protection. Suffix G, 10 amps; others 5 amps. Has 20-pin octal type plug for socket mounting. All 4PDT, except KBP20 which is 5PDT. Plug fits Amphenol socket. Type 77MIP20. 3.50x1.781x1.56". Specify Stock No., Type, Coil Volts. Shpg. wt., 8 oz.

41 D5110	P17A	120 AC	.....	16.30	15.49	14.67	11.41	10.60	9.37
41 D5111	P17AG	120 AC	.....	16.50	15.68	14.85	11.55	10.73	9.49
41 D5112	P17D	24 DC	.....	15.15	14.39	13.64	10.61	9.85	8.71
41 D5113	P17DG	12 DC	.....	15.40	14.63	13.68	10.78	10.01	8.86
41 D5114	P17DG	24 DC	.....	15.40	14.63	13.68	10.78	10.01	8.86
41 D5115	P20A	120 AC	.....	16.80	15.96	15.12	11.76	10.92	9.66
41 D5116	P20AG	120 AC	.....	17.05	16.20	15.35	11.94	11.08	9.80
41 D5117	P20DG	12 DC	.....	16.20	15.39	14.58	11.34	10.53	9.32
41 D5118	P20DG	24 DC	.....	16.20	15.39	14.58	11.34	10.53	9.32

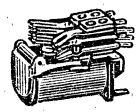
KT DPDT 5-AMP ANTENNA-SWITCHING RELAYS

Useful for switching antenna between transmitter and receiver. Glass base insulation provides minimum loss in RF applications. For 300-ohm line. Mounts by one 6-32 stud. Fine silver contacts are rated at 5 amps. Size: 1 1/4x1 5/8x1 11/16". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Coil Volts	Res., Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6373	KT11A	6 AC	6.1	4.10	3.90	3.69	2.87	2.67
41 D 6374	KT11A	120 AC	2250	4.10	3.90	3.69	2.87	2.67
41 D 6375	KT11D	6 DC	32.1	4.10	3.90	3.69	2.87	2.67
41 D 6376	KT11D	12 DC	120	4.10	3.90	3.69	2.87	2.67

TELEPHONE-TYPE RELAYS

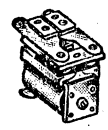
LS 4-AMP MEDIUM-COIL RELAYS



Short springs and lightweight armature for fast action. Stainless steel bearing for long life—100 million operations. Bifurcated palladium contacts: 4 amps at 120 V, 60 Hz, resistive; DC 4 amps, 150 watts. Nominal coil power, 1.8 watts. Tinned, pierced solder-type terminals. Two 6-32 tapped holes on 3/4" centers. 1 11/16x2 1/8x1 1/8". 5 oz.

Stock No.	Mfr's Type	Coil Volts	Ohms	Action	EACH 1-24	25-499
41 D 7660	LS17D	24 DC	300	4PDT	6.25	5.29
41 D 7661	LS17D	48 DC	1300	4PDT	6.40	5.41
41 D 7663	LS23D	24 DC	300	6PDT	7.55	6.39

MB3D* 60-AMP MINIATURE DC POWER RELAYS



For very high current applications. Contact arms are heavy brass with large silver contacts. Solder terminals. Rated 60 amps @ 28 VDC, resistive. SPST, double break, normally open. 1 5/8x2 7/32x1 3/8". Mounting: Four 3-48 holes on 3/4x3/8" centers. *Both relays are type MB3D. Av. shpg. wt., 3 oz.

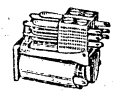
Stock No.	Coil Volts	Ohms	mA	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 5065	12 DC	62.3	193	6.10	5.80	5.49	4.27	3.97	3.51
41 D 5066	24 DC	245.0	98	6.10	5.80	5.49	4.27	3.97	3.51

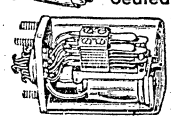
MG 2-AMP SUBMINIATURE DC RELAYS

Subminiature telephone-type relay that withstands shock and vibration of 10g from 55 to 500 Hz. Temperature range of —55° to +85° C. All are 4PDT, except *DPDT. Contacts are 3/32" dia. silver, gold-flashed; rated 2 amps @ 28 VDC or 120 VAC resistive. Mounting: 4 tapped No. 3-48 holes on 1/2" centers. Overall size (open) 1 1/16x1 1/16x1 1/4". †in table indicates coil VDC. Av. shpg. wt., 2 oz.

Stock No.	Type MG	†	Ohms	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 5298	11D*	12	90	5.70	5.42	5.13	3.99	3.71	3.28
41 D 5299	11D*	24	365	5.70	5.42	5.13	3.99	3.71	3.28
41 D 5384	17D	12	90	7.65	7.27	6.89	5.36	4.97	4.40
41 D 5391	17D	24	365	7.65	7.27	6.89	5.36	4.97	4.40

MH 5-AMP MINIATURE DC RELAYS

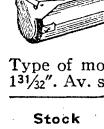




Save space and weight. 4PDT, except *6PDT. Two types: open, and hermetically sealed metal housing (denoted by suffix M). Contacts, 1/8" dia. gold-flashed silver, rated 5 amps. Sealed models have hook-end solder terminals. Mounting: Open types, four 3-48 tapped holes on 3/8x3/8" centers; sealed models, three 6-32 threaded studs on 1 1/4x1/2" centers. Sizes: Open, 1 39/64x2 5/32x1 9/16"; sealed, 1 11/16x1 1/32x2 1/2". †Coil VDC. Wts., open, 3 oz.; sealed, 6 oz.

Stock No.	Type MH-	†	Ohms	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 6054	17D	12	96.0	6.55	6.22	5.90	4.59	4.26	3.77
41 D 5936	17D	24	365.0	6.55	6.22	5.90	4.59	4.26	3.77
41 D 6056	17DM	12	96.0	13.30	12.64	11.97	9.31	8.65	7.65
41 D 6061	23D*	12	62.3	8.30	7.89	7.47	5.81	5.40	4.77
41 D 6738	23D*	24	245.0	8.30	7.89	7.47	5.81	5.40	4.77

ML 3-AMP MINIATURE HIGH-SENSITIVITY DC RELAYS



Excellent sensitivity with outstanding switching capabilities. Type ML11D is DPDT; ML17D is 4PDT. Wide range of uses—ideal for transistorized computer networks, telephone systems. Single contact arms have 1/8" dia. gold-flashed contacts rated at 3 amps (120 V, 60 Hz, resistive) for an estimated mechanical life of 10,000,000 operations. Solder lug connections. Type of mounting: four 3-48 holes on 3/8" centers. Size, 1 19/32x3/4x1 31/32". Av. shpg. wt., 3 oz.

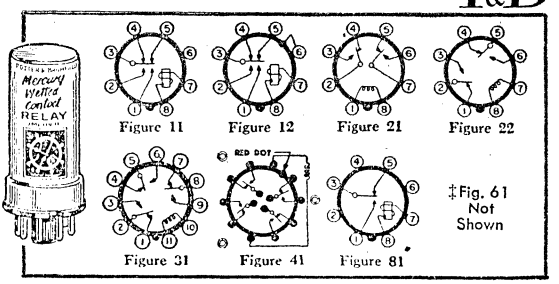
Stock No.	Type ML	Coil Ohms	Coil mA	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 6062	11D	2,500	4.0	7.00	6.65	6.30	4.90	4.55	4.03
41 D 6063	11D	5,000	2.83	7.15	6.79	6.44	5.01	4.65	4.11
41 D 6064	11D	10,000	2.0	7.50	7.13	6.75	5.25	4.88	4.31
41 D 6070	17D	2,500	5.65	8.30	7.89	7.47	5.81	5.40	4.77
41 D 6081	17D	5,000	4.0	8.50	8.08	7.65	5.95	5.53	4.89
41 D 6082	17D	10,000	2.83	8.80	8.36	7.92	6.15	5.72	5.06

Specify Stock No., Mfr's Type and Coil Volts When Ordering Relays

Potter & Brumfield Special-Purpose Relays P&B

JM SERIES MERCURY-WETTED RELAYS WITH SEALED-IN-GLASS CONTACTS

Ultra-reliable high-speed relays with sealed-in-glass mercury contacts. Series JMF (module type) and JML have SPDT break-before-make (Form C), non-bridging contact arrangement. All others SPDT, make-before-break (Form D) bridging contact arrangement. **Timing:** JMF/JML, 200/sec.; JMP and JM1, 100/sec.; JM2, 3, and 4, 60/sec. **Contact Rating:** JMF/JML, 500V or 2A max., 100VA max.; JMP and JM1 to 4, 500V, 5A max., 250VA max (with contact protection). **Sensitivity** (in amp-turns): JMF/JML, 27.3; JMP, 70; JM1, 190; JM2 and 3, 250; JM4, 260. **Shock:** 30 g for 11 ms. **Vibration:** to 10 g, 10-500 Hz. **Temperature:** 39°C mercury freezes; 107°C potting softens. Vertical mounting. Have octal plugs except termination 41 which is 14-pin and termination 31, 11-pin. Steel enclosures, JMP, JML SERIES: Permanent magnet biasing. *Single-side-stable. †Bi-stable. §Chopper. **Last two digits of type number indicate termination figure number.** Av. shpg. wt., 10 oz.



‡Fig. 61 Not Shown

JMP SERIES POLARIZED SPST SINGLE-COIL (3 7/64x1 5/16" dia.)

Stock No.	Type/ Fig.	Coil Ohms	Coil mA	Coil V	C. P. Clare Equivalent	EACH 1-9	EACH 10-24	EACH 25-99
41 D 7757	*1160-11	1000	5.60	.....	HGP-1005	17.50	13.65	12.78
41 D 7758	*1200-11	4000	2.96	.....	HGP-1002	18.75	14.63	13.69
41 D 7760	†5200-11	4000	1.5	.....	HGP-1003	18.75	14.63	13.69
41 D 7762	§8120-12	500	.....	6.3	HGP-1028	18.05	14.07	13.17

JMF SERIES NON-BRIDGING SPDT PC MODULE (1 1/16x5/8" dia.)‡

41 D 4966	*1070-61	450	12.9	.....	.....	10.80	8.42	7.88
41 D 4967	*1080-61	675	11.6	.....	.....	10.80	8.42	7.88
41 D 4968	*1120-61	1425	8.4	.....	.....	10.80	8.42	7.88
41 D 4969	*1150-61	2400	7.8	.....	.....	10.80	8.42	7.88
41 D 4970	*1160-61	4000	4.0	.....	.....	11.35	8.85	8.29

JML SERIES NON-BRIDGING SPDT SINGLE-COIL (2 41/64x1 5/16" dia.)

41 D 7766	*1061-81	40	9.75	.....	HGS-5009	13.35	10.41	9.75
41 D 7767	*1110-81	350	3.56	.....	HGS-5011	13.35	10.41	9.75
41 D 7769	*1160-81	1000	2.21	.....	HGS-5015	13.35	10.41	9.75
41 D 7770	*1190-81	2500	1.43	.....	HGS-5003	14.25	11.12	10.40
41 D 7771	*1200-81	4000	1.25	.....	HGS-5008	14.25	11.12	10.40
41 D 6018	1240-81	11000	0.72	.....	.....	14.25	11.12	10.40
41 D 7772	*1260-81	25K	0.52	.....	HGS-5016	14.25	11.12	10.40
41 D 7775	†5160-81	1000	1.24	.....	HGS-5006	13.90	10.84	10.15
41 D 7776	†5200-81	4000	0.53	.....	HGS-5004	14.25	11.12	10.40
41 D 7781	§8130-81	600	.....	6.3	HGS-5017	13.90	10.84	10.15

JM1 SERIES SPDT SINGLE-COIL (3 13/64x1 17/64" dia.)

Stock No.	Type/ Fig.	Coil Ohms	Coil mA	Coil V	C. P. Clare Equivalent	EACH 1-9	EACH 10-24	EACH 25-99
41 D 7711	109-12	130	38.8	16.1	HG1012-4	16.15	12.60	11.79
41 D 7712	112-11	500	20.1	31.6	HG1026-1	16.15	12.60	11.79
41 D 7713	114-11	700	20.0	37.4	HG1004-1	16.15	12.60	11.79
41 D 7715	114-12	700	20.0	37.4	HG1051-4	16.15	12.60	11.79
41 D 7717	118-11	2500	10.1	70.7	HG1001-1	16.40	12.79	11.97
41 D 7718	119-11	4000	8.1	89.5	HG1002-1	8.15	8.15	8.15
41 D 7722	120-11	7000	6.0	117.0	HG1009-1	17.00	13.26	12.41
41 D 7723	121-11	11K	5.0	148.0	HG1011-1	17.00	13.26	12.41

JM2 SERIES DPDT SINGLE-COIL (3 13/32x1 17/32" dia.)

41 D 7726	104-22	50	110.0	12.25	HG2A-1008-2A2	26.20	20.44	19.13
41 D 7710	106-21	140	65.5	20.5	HG2A-1042-2A1	26.20	20.44	19.13
41 D 7727	109-22	315	44.0	30.7	HG2A-1003-2A2	26.20	20.44	19.13
41 D 7728	111-22	700	30.5	45.8	HG2A-1002-2A2	26.20	20.44	19.13
41 D 7729	112-22	1250	22.1	61.2	HG2A-1015-2A2	26.20	20.44	19.13
41 D 7731	115-21	5000	11.3	122.0	HG2A-1001-2A1	26.20	20.44	19.13
41 D 7732	115-22	5000	11.3	122.0	HG2A-1004-2A2	26.20	20.44	19.13
41 D 7861	110-22	500	34.8	38.7	HG2A-1017-2A2	26.20	20.44	19.13

JM3 SERIES 3PDT SINGLE-COIL (3 13/32x1 17/32" dia.)

41 D 7734	109-31	315	44.0	30.7	HG3A-1004-3A1	33.90	26.44	24.75
41 D 7739	115-31	5000	11.3	122.0	HG3A-1003-3A1	33.90	26.44	24.75

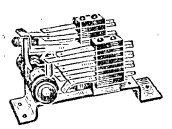
JM4 SERIES 4PDT SINGLE-COIL (3 9/16x1 11/16" dia.)

41 D 7741	106-41	65	100.0	15.1	HG4A-1013-4A1	43.70	34.09	31.90
41 D 7742	110-41	390	42.0	37.0	HG4A-1011-4A1	43.70	34.09	31.90

IMPULSE AND SEQUENCING RELAYS

AP 5-AMP RATCHET IMPULSE RELAYS

For applications requiring on-off or reversing action on alternate impulses. Gives positive operation on impulses as short as 60 ms. Stop mechanism. Intermittent duty. Contacts are 3/16" fine silver, rated 5 A at 120 V, 60 Hz. Coils are wound on molded bobbins. Has tinned solder terminals. Mtg: Three 5/32" dia. holes on 3 3/8x7/8" triangular cuts. AC types for 50-60 Hz. Size, 2 5/16x2 1/4x3 3/4". Av. shpg. wt., 9 oz.

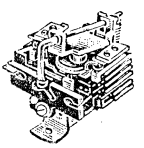


ALL ARE DPDT EXCEPT *4PDT

Stock No.	Mfr's Type	Coil Volts	Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 5997	AP11A	6 AC	0.6	9.65	9.17	8.69	6.76	6.27
41 D 6581	AP11A	12 AC	2.28	9.65	9.17	8.69	6.76	6.27
41 D 5993	AP11A	120 AC	240	9.65	9.17	8.69	6.76	6.27
41 D 6583	AP11A	240 AC	900	10.20	9.69	9.18	7.14	6.63
41 D 6585	AP11D	6 DC	4.0	9.65	9.17	8.69	6.76	6.27
41 D 5999	AP11D	24 DC	65.0	9.65	9.17	8.69	6.76	6.27
41 D 6589	AP11D	110 DC	1350	10.40	9.88	9.36	7.28	6.76
41 D 5994	AP17A*	120 AC	240	11.70	11.12	10.53	8.19	7.61
41 D 6588	AP17D*	12 DC	15.5	11.70	11.12	10.53	8.19	7.61
41 D 5778	AP17D*	24 DC	65.0	11.70	11.12	10.53	8.19	7.61

PC 7.5-AMP IMPULSE RELAYS

Armature and pusher assembly operate phenolic rocker switching from one contact pile to the other on alternate pulses. For on-off or reversing. Pulses may be as short as 60 milli-seconds at 5 Hz. Gold-flashed silver cadmium-oxide contacts rated 7.5 amps at 120 volts AC, resistive load. AC coils are for 50-60 Hz. Mtg., two 5/32" holes on 2 5/8" ctrs. Size, 2 1/16x2 31/32x2 5/64". Shpg. wt., 5 oz.



ALL ARE DPDT EXCEPT *4PDT

Stock No.	Mfr's Type	Coil Volts	Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 6504	PC11A	6 AC	0.6	6.20	5.89	5.58	4.34	4.03
41 D 6728	PC11A	12 AC	2.28	6.20	5.89	5.58	4.34	4.03
41 D 6502	PC11A	24 AC	8.8	6.20	5.89	5.58	4.34	4.03
41 D 6500	PC11A	120 AC	240.0	6.20	5.89	5.58	4.34	4.03
41 D 6726	PC11D	6 DC	4.0	6.00	5.70	5.40	4.20	3.90
41 D 6111	PC11D	12 DC	15.5	6.00	5.70	5.40	4.20	3.90
41 D 6506	PC11D	24 DC	65.0	6.00	5.70	5.40	4.20	3.90
41 D 6503	PC17A*	24 AC	8.8	8.55	8.12	7.70	5.99	5.56
41 D 6501	PC17A*	120 AC	240.0	8.55	8.12	7.70	5.99	5.56
41 D 6507	PC17D*	24 DC	65.0	8.35	7.93	7.52	5.85	5.43

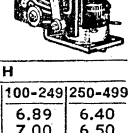
GM 3-AMP IMPULSE/SEQUENCING RELAYS

Single-coil latching relay. For uses requiring up to 6 operations per shaft revolution. Two Form C contacts (DPDT) switched indirectly and alternately by cams. *Additional two Form C contacts operate directly by armature. Contacts rated 3 amps. Mtg., 8-32 tapped core. †120 VAC, 425 ohms; ‡24 VDC, 120 ohms. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Action	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 7789	GM11A	DPDT†	8.00	7.60	7.20	5.60	5.20
41 D 7791	*GM11AL11	DPDT†	11.35	10.78	10.22	7.95	7.38
41 D 7793	GM11D	DPDT‡	7.65	7.27	6.89	5.36	4.97

GM IMPULSE/SEQUENCING RELAYS WITH PC BOARDS

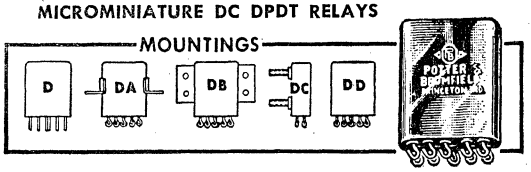
Uses design of GM series, left, with addition of uni-directional printed circuit board with up to 12 steps. The board is attached to an extension of the ratchet shaft; the movable contact arm advances one position each time the armature drops out. *Coil volts 120 AC; 510 ohms. †24 DC; 144 ohms. Contact rating, 1/4 watt. Size, 2.312x1.875x1.875". Av. shpg. wt., 5 oz.



Stock No.	Mfr's Type	Action	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 7782	GM1N10A	10-step*	9.85	9.36	8.87	6.89	6.40
41 D 7783	GM1N12A	12-step*	10.00	9.50	9.00	7.00	6.50
41 D 7784	GM1N10D	10-step†	9.60	9.12	8.64	6.72	6.24
41 D 7785	GM1N12D	12-step†	9.75	9.26	8.78	6.83	6.34

P&B Potter & Brumfield Relays

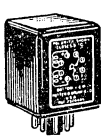
SEALED SC SINGLE-COIL AND SL LATCHING MICROMINIATURE DC DPDT RELAYS



SC is single-coil permanent magnet relay, has polarized coil circuit. SL magnetic dual-coil latching relay—coils may be series-connected for polar operation. Meet MIL-R-5757E, quality assurance std.—MIL-Q-9858A and MSPC SPEC 339 —65° to +125°C. Breakdown, 1000 V rms between coil and case and between contact sets. Weigh ¾ oz. Contacts, 3 amps at 28 VDC; 1 amp at 120 V, 60 Hz, resistive. SC11D 8-pin takes Cinch 54A20730 receptacle; SL11D 11-pin takes Viking P/N VB10/3DV 1 receptacle. *Indicates relay meets specifications of MIL-R-5757/10C. Size, .795x.359x.890". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Ohms	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6820	SC11D	35	6	19.00	18.05	17.10	13.30	12.35
41 D 6822	SC11D	135	12	19.00	18.05	17.10	13.30	12.35
41 D 6591	SC11D	550	24	19.00	18.05	17.10	13.30	12.35
41 D 6828	SC11DA	135	12	19.00	18.05	17.10	13.30	12.35
41 D 6592	SC11DA	550	24	19.00	18.05	17.10	13.30	12.35
41 D 6832	SC11DB	35	6	19.00	18.05	17.10	13.30	12.35
41 D 6834	SC11DB	135	12	19.00	18.05	17.10	13.30	12.35
41 D 6593	SC11DB	550	24	19.00	18.05	17.10	13.30	12.35
41 D 7639	SC11DC	550	24	19.00	18.05	17.10	13.30	12.35
41 D 7641	SC11DD	550	24	19.00	18.05	17.10	13.30	12.35
41 D 7040	SC7141*	.....	24	19.15	18.19	17.24	13.41	12.45
41 D 6821	SL11D	40	6	20.85	19.81	18.77	14.60	13.55
41 D 6823	SL11D	160	12	20.85	19.81	18.77	14.60	13.55
41 D 6594	SL11D	630	24	20.85	19.81	18.77	14.60	13.55
41 D 6829	SL11DA	160	12	20.85	19.81	18.77	14.60	13.55
41 D 6595	SL11DA	630	24	20.85	19.81	18.77	14.60	13.55
41 D 6833	SL11DB	40	6	20.85	19.81	18.77	14.60	13.55
41 D 6835	SL11DB	160	12	20.85	19.81	18.77	14.60	13.55
41 D 6596	SL11DB	630	24	20.85	19.81	18.77	14.60	13.55
41 D 7640	SL11DC	630	24	20.85	19.81	18.77	14.60	13.55
41 D 7642	SL11DD	630	24	20.85	19.81	18.77	14.60	13.55

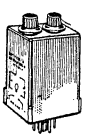
ULTRA-SENSITIVE MDP POLARIZED HIGH-SPEED RELAYS



Bounce-Free action. Two types of contacts: Bi-stable (*)—one form C contact arrangement, armature remains on last position; Center-stable (†)—one form K contact arrangement, armature remains on center-off, contacts open. Tungsten-Paliney contacts, rated: Bi-stable .01-.1 amp, 25-150 V; center-stable (silver) 3 amps resistive @ 28 VDC. Ambient temp., —60° to +85° C. 1 7/16x1 7/16x1 13/16". Dust Cover. 8 or 12-pin plugs. ‡Resistance per coil. §Barber-Colman equiv., AYLZ-, except #Sigma 72AOZ-TCP. Shpg. wt., 9 oz.

Stock No.	Type MDP-	Coils No.	mA	Res. ‡	§ AYLZ-	EACH 1-9	10-49	50-249
41 D 6151	*300-1	2	1.5	150	#160TG	23.45	21.11	19.93
41 D 6163	†1006	1	0.32	330	7305-100	26.85	24.17	22.82
41 D 6169	†1007	1	0.27	480	7306-100	26.85	24.17	22.82
41 D 6172	†1011	1	0.10	3500	7310-100	26.85	24.17	22.82
41 D 6173	†1013	1	0.067	7200	7312-100	26.85	24.17	22.82
41 D 6176	†2009	2	0.32	1000	7358-100	26.85	24.17	22.82
41 D 6177	†2011	2	0.17	2300	7360-100	26.85	24.17	22.82

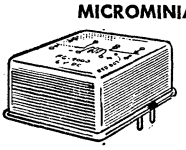
CS SERIES SOLID-STATE VOLTAGE SENSORS



Series 30010, 70010 offer adj. pick-up, drop-out voltages. *Series 31010, 71010 have fixed pick-up, adj. drop-out voltages. Current drain: 3 mA (max.); after sensing, 30 mA. Set-point accuracy: 1%. DC types have reverse polarity protection. 2 Form C (DPDT) contacts: 3 amps @ 28 VDC resistive; 120 VAC resistive. Operating temp., —40°C to +55°C. 2 7/8x1 3/4x 2 3/8". AC types—50/60 Hz. Octal plug, nylon dust cover. Av. shpg. wt., 10 oz.

Stock No.	Type CSJ/L38	Pick-Up Range	Drop-Out Range	V	EACH 1-9	10-24	25-49	50-99
41 D 5237	30010	20-30 V	18-28 V	AC	29.75	28.26	26.78	23.80
41 D 5238	70010	92-140 V	90-138 V	AC	32.50	30.88	29.25	26.00
41 D 5239	30010	20-30 V	18-28 V	DC	25.75	24.46	23.18	20.60
41 D 5241	71010	105 V*	90-103 V	AC	28.75	27.31	25.88	23.00
41 D 5242	31010	22 V*	16-20 V	DC	22.70	21.57	20.43	18.16

MICROMINIATURE SEALED DPDT RELAYS



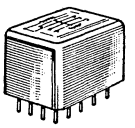
FC Series Relays. Conventional miniature types. Mount flat on printed circuit boards. Plug into 0.2" grid. Hermetically sealed—meet all applicable specifications of MIL-R-5757E, quality assurance standard —MIL-Q-9858A, MSFC-SPEC-339. Have bifurcated contacts of silver-magnesium-nickel alloy rated 3 amps. Pick-up: 160 mW. Ambient temperature range: —65° to +125°C. Shock; 150g for 11 ms; linear acceleration, 400g; vibration, 30g from 55 to 2000 Hz. Size: .485x1.100". Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Ohms	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7045	FC11D	60	6DC	18.80	17.86	16.92	13.16	12.22
41 D 7046	FC11D	210	12DC	18.80	17.86	16.92	13.16	12.22
41 D 7047	FC11D	900	24DC	18.80	17.86	16.92	13.16	12.22

FL Series Latching Relays. Similar to FC Series listed above, but employ dual-coil design. Remain firmly latched in either armature position without applied coil power. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Ohms	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6009	FL11D	67.5	6DC	21.15	20.09	19.04	14.81	13.75
41 D 6010	FL11D	230	12DC	21.15	20.09	19.04	14.81	13.75
41 D 5509	FL11D	1000	24DC	21.15	20.09	19.04	14.81	13.75

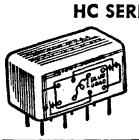
TL 4PDT LATCHING RELAYS



Microminiature 4PDT latching relay. Coils are encapsulated and hermetically sealed. Strong magnetic forces in the de-energized relay lock the gold-plated, silver-alloy contacts in the desired position, rendering them impervious to shock well beyond the specified range. Rated 3 amps, at 28 VDC resistive load. Temperature range, —65° to +125° C. Meet or exceed applicable sections of MIL-R-5757E and MSFC-SPEC-339. Mounting same as SC/SL types —see illustration above, at left. Overall size, 1 1/32x1 13/64x3/4 inches. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Ohms	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5141	TL17D	600	24DC	30.20	28.69	27.18	21.14	19.63
41 D 5142	TL17DB	600	24DC	30.20	28.69	27.18	21.14	19.63
41 D 5143	TL17DA	600	24DC	30.20	28.69	27.18	21.14	19.63

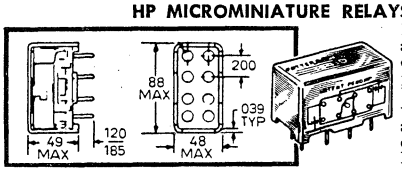
HC SERIES HALF-SIZE CRYSTAL CAN RELAYS



Micro-miniature. Meets MIL-R-5757E, complies with MSFC-SPEC-339. Bifurcated, gold-plated silver DPDT contacts (2 amps at 28 VDC). *Plug-in case; †solder terminals, shoulder bracket. Temp. —65° to +125°C. Size, .8x.4x .4". Av. shpg. wt., ½ oz.

Stock No.	Mfr's Type	Ohms	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7035	HC11D*	814	24	18.40	17.48	16.56	12.88	11.96
41 D 7036	HC11DA†	814	24	18.40	17.48	16.56	12.88	11.96

HP MICROMINIATURE RELAYS



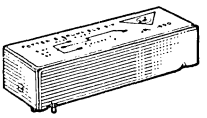
P&B microminiature relays are designed for printed circuit board mounting where space is at a premium. Encased in black, hi-impact dust covers for maximum protection. The HP Series is a non-polarized, non-latching half-size relay with terminals arranged on a .200" grid, suitable for plug-in or soldering. Its specifications are tailored to fit the performance demands of sophisticated equipment such as TV cameras and other products having hi-density circuits. High-torque motor offers consistent positive action. Long-life DPDT gold-plated silver contacts rated low-level to 2 amps at 30 VDC, resistive; 0.5 amp maximum at 120 VAC. Highlights: Insulation resistance, 1000 megohms minimum at 500 VDC; breakdown voltage, 500 V rms, 60 Hz, between mutually insulated points. Size: .49x.88x.48". Approximate wt., 0.3 oz. *Socket/retainer ring. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	DC V	Coil Res., Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7041	HP-11D	12	218	7.95	7.55	7.16	5.57	5.17
41 D 7042	HP-11D	24	870	7.95	7.55	7.16	5.57	5.17
41 D 7044	9 HP1 Socket*			.48	.47	.43	.34	.31

Make Allied Your Headquarters for All Your Relays

Reed, Time Delay and Special Relays P&B

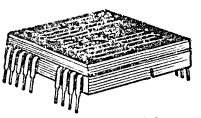
JR SERIES DRY REED RELAYS



Insulated with glass supported nylon, acetate film and glass. Hermetically sealed. Printed circuit pin terminals. Form A, SPST-N.O. Form B, SPST-N.C.; *True Form C (uses reed switch with two stationary and one movable contact, N.C. until coil is energized causing an SPDT break before make). Operating time, 3 milliseconds. Operating temperature range: —50°C to +85°C. Breakdown: 500 V rms 60 Hz between insulated parts. Size, 2 13/16x1 9/32" dia. Av. shpg. wt., 2½ oz.

Stock No.	Type JR-	Coil VDC	Coil Ohms	Contact Rating Form	Contact Rating Watts	EACH 1-9	EACH 10-24	EACH 25-99
41 D 4944	1000	6	150	1A	15	3.05	2.28	1.94
41 D 4945	1001	6	100	2A	15	4.10	3.06	2.60
41 D 4949	1020	6	150	1A	50	4.60	3.21	2.73
41 D 4948	1040	6	150	1C*	10	7.65	5.71	4.86
41 D 4951	1005	12	600	1A	15	3.05	2.28	1.94
41 D 4952	1006	12	400	2A	15	4.10	3.06	2.60
41 D 4953	1008	12	150	4A	15	5.70	4.25	3.62
41 D 4954	1086	12	200	1A, 1B	15	5.05	3.77	3.21
41 D 4955	1045	12	600	1C*	10	7.65	5.71	4.86
41 D 4956	1025	12	600	1A	50	4.30	3.21	2.73
41 D 4958	1010	24	2400	1A	15	3.55	2.65	2.25
41 D 4959	1011	24	1600	2A	15	4.35	3.25	2.76
41 D 4960	1013	24	600	4A	15	6.00	4.48	3.81
41 D 4961	1088	24	800	1A, 1B	15	5.35	3.99	3.40
41 D 4962	1050	24	2400	1C*	10	8.00	5.97	5.08
41 D 4963	1030	24	2400	1A	50	4.60	3.43	2.92

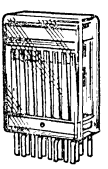
JDT DUAL THIN-LINE REED RELAYS



Low profile reed relays ideal for high-density packaging applications. Hermetically sealed dry reed switches are epoxy encapsulated and feature dual in-line terminals on .100" centers. SPST contacts rated 10 watts minimum resistive (50 VDC and 0.5 A max. switching). Initial contact resistance: 200 milliohms max. Expected life: 20 million operations (resistive). Operate time: 4 msec max. at 25°C with contact bounce of 0.3 msec included. Release time: 2 msec max. Temperature range: —50° to +85° C. Size: 4100, 1.250x.800x .275" max.; 8100, 1.250x1.200x.275" max. Shpg. wt., 4100, ½ oz.; 8100, ¾ oz.

Stock No.	Type JDT-	Coil VDC	Coil Ohms	Contact Rating Form	Contact Rating mW	EACH 1-9	EACH 10-24	EACH 25-99
41 D 5756	4100	6	115	4A	310	7.65	5.71	4.86
41 D 5757	4105	12	480	4A	310	7.65	5.71	4.86
41 D 5758	4110	24	1850	4A	310	8.30	6.19	5.27
41 D 5759	8100	6	60	8A	600	12.95	9.66	8.22
41 D 5760	8105	12	260	8A	600	12.95	9.66	8.22
41 D 5761	8110	24	1050	8A	600	13.70	10.22	8.70

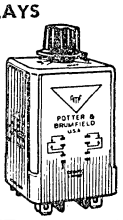
KDP GENERAL-PURPOSE RELAY



Compact relay for dense packaging uses in electrical control systems. Has 8 Form C bifurcated contacts for simultaneous switching of several isolated outputs. 8PDT contacts rated 1 amp at 30 VDC or 0.5 amp at 120 VAC, resistive. Operate time: 15 msec max. at 25° C. Life: electrical, 100,000 operations, mechanical, 10 million operations. Temp. range, —45° to +70° C. 1.19x.56x1.54". Socket below. Wt., 1½ oz.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249
41 D 5762	KDP-29D	24	580	9.35	8.88	8.42	6.55
41 D 5763	9KD2	Socket, hold-down springs..... Pkg. of 10/9.50					

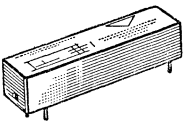
CUB51 ADJUSTABLE TIME-DELAY RELAYS



Knob-adjustable delay-on-operate time delay relays. DPDT contacts rated 10 amps at 28 VDC resistive, or 120 V, 60 Hz AC, 80% power factor. Calibrated dial. Tolerance: adjustable, ±10%. Repeatability, ±3%. Reset time, 150 msec. Recycle time, 150 msec. Transient protection of twice rated input voltage for up to 8 msec. Polarity protected. For operation at normal room temperature. Timing intervals are adjustable over timing ranges from 1 to 10 seconds or 1 to 120 seconds. Size, 1.53x1.406x2.782" max. (including knob). Shpg. wt., 3½ oz.

Stock No.	Type CUB51-	Time Delay Seconds	Volts AC	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99
41 D 5764	70010	1-10	120	15.50	14.73	13.95	12.40
41 D 5765	70120	1-120	120	17.00	16.15	15.30	13.60

CJ SERIES TIME DELAY REED RELAYS



Dry reed relay in enclosure with solid-state timing components .2" ctr. PC pins. Reset or recycling time, less than 60 ms. CJH adjustable ±10%. —10° to +55° C. External resistor for max. time (not included): *750K, †1.8 meg. .687 h. x 2.718" (max.). Av. shpg. wt., 2½ oz.

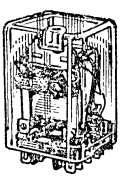
FIXED TIME-DELAY ON OPERATE

Stock No.	Mfr's Type	Time Sec.	Input Volts	Action Input	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99
41 D 4599	CJC-01-20003	3	12VDC	SPST NO	18.85	17.91	16.97	15.08
41 D 4600	CJC-01-30003	3	24VDC	SPST NO	18.85	17.91	16.97	15.08
41 D 4601	CJC-02-20003	3	12VDC	SPST NC	19.50	18.53	17.55	15.60
41 D 4602	CJC-03-20003	3	12VDC	SPDT	20.75	19.71	18.68	16.60
41 D 4603	CJC-03-30003	3	24VDC	SPDT	20.75	19.71	18.68	16.60

RESISTOR ADJUSTABLE ON OPERATE

Stock No.	Mfr's Type	Time Sec.	Input Volts	Action Input	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99
41 D 4604	CJH-01-10120†	1-120	6VDC	SPST NO	22.10	21.00	19.89	17.68
41 D 4605	CJH-01-20010*	0.1-10	12VDC	SPST NO	19.35	18.38	17.42	15.48
41 D 4606	CJH-01-20120†	1-120	12VDC	SPST NO	22.10	21.00	19.89	17.68
41 D 4607	CJH-01-30010*	0.1-10	24VDC	SPST NO	19.35	18.38	17.42	15.48
41 D 4608	CJH-01-30120†	1-120	24VDC	SPST NO	22.10	21.00	19.89	17.68
41 D 4609	CJH-02-20010*	0.1-10	12VDC	SPST NC	20.00	19.00	18.00	16.00
41 D 4610	CJH-02-20120†	1-120	12VDC	SPST NC	22.75	21.61	20.48	18.20
41 D 4611	CJH-03-10120†	1-120	6VDC	SPST NC	24.00	22.80	21.60	19.20
41 D 4612	CJH-03-20010*	0.1-10	12VDC	SPDT	21.25	20.19	19.13	17.00
41 D 4613	CJH-03-20120†	1-120	12VDC	SPDT	24.00	22.80	21.60	19.20
41 D 4614	CJH-03-30010*	0.1-10	24VDC	SPDT	21.25	20.19	19.13	17.00
41 D 4615	CJH-03-30120†	1-120	24VDC	SPDT	24.00	22.80	21.60	19.20

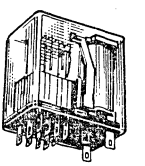
KUL MAGNETIC LATCHING RELAYS



Continuous duty single coil types. Uses a permanent magnet in parallel with normal magnetic circuit, requires only half the space of mechanical interlock types. Continuous latch condition even during loss of power. Contacts rated 10 amps at 28 VDC or 120 VAC, 80% power factor. —45° to +75° C. All are DPDT, except *SPDT. See KUP listing, page 243, for sockets. 1.406x.531x2.156". Av. wt., 3½ oz.

Stock No.	Type KUL-	Coil V	Coil Ohms	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 5769	5A15S*	120 AC	3700	6.30	5.99	5.67	4.41	4.10
41 D 5770	5D15S*	24 DC	472	5.45	5.18	4.91	3.82	3.54
41 D 5771	11A15S	12 AC	37	7.10	6.75	6.39	4.97	4.62
41 D 5772	11A15S	24 AC	176	7.10	6.75	6.39	4.97	4.62
41 D 5773	11A15S	120 AC	3700	7.10	6.75	6.39	4.97	4.62
41 D 5775	11D15S	12 DC	120	6.05	5.75	5.45	4.24	3.93
41 D 5776	11D15S	24 DC	472	6.05	5.75	5.45	4.24	3.93

MTP TELEPHONE TYPE RELAYS

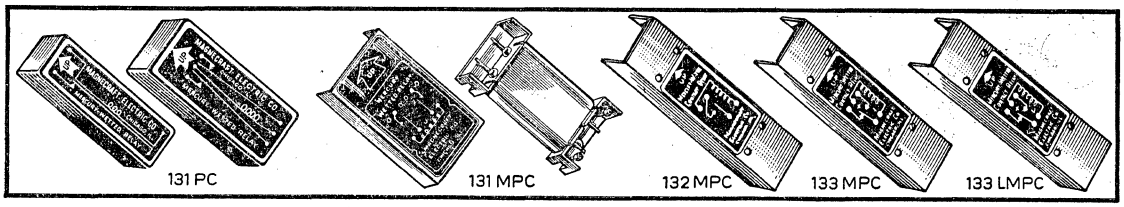


Miniature telephone-type relays in clear plastic dust cover. D11 types have .080" dia. silver contacts rated low level to 2 amps at 24 VDC. D12 types have .100" diameter silver contacts rated low level to 5 amps at 24 VDC. Temperature range: —55° to +71° C, except 6PDT types, —55° to +65° C. Solder terminals, sockets below. 1.188x.734x.938" max. Av. shpg. wt., 3 oz.

Stock No.	Type MTP-	Coil VDC	Action	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249	EACH 250-499
41 D 5780	11D11	12	2PDT	3.25	3.09	2.93	2.28	2.11
41 D 5781	11D11	24	2PDT	3.25	3.09	2.93	2.28	2.11
41 D 5782	11D11	110	2PDT	4.95	4.70	4.46	3.47	3.22
41 D 5783	17D11	6	4PDT	3.65	3.47	3.29	2.56	2.37
41 D 5784	17D11	12	4PDT	3.65	3.47	3.29	2.56	2.37
41 D 5785	17D11	24	4PDT	3.65	3.47	3.29	2.56	2.37
41 D 5786	17D11	48	4PDT	3.65	3.47	3.29	2.56	2.37
41 D 5787	17D11	110	4PDT	5.35	5.08	4.82	3.75	3.48
41 D 5788	23D11	12	6PDT	4.65	4.42	4.19	3.26	3.02
41 D 5789	23D11	24	6PDT	4.65	4.42	4.19	3.26	3.02
41 D 5790	23D11	110	6PDT	5.55	5.27	5.00	3.89	3.61
41 D 5791	11D12	12	2PDT	3.35	3.18	3.02	2.35	2.18
41 D 5792	11D12	24	2PDT	3.35	3.18	3.02	2.35	2.18
41 D 5793	17D12	6	4PDT	3.85	3.66	3.47	2.70	2.50
41 D 5794	17D12	12	4PDT	3.85	3.66	3.47	2.70	2.50
41 D 5795	17D12	24	4PDT	3.85	3.66	3.47	2.70	2.50
41 D 5796	17D12	48	4PDT	3.85	3.66	3.47	2.70	2.50
41 D 5797	17D12	110	4PDT	5.50	5.23	4.95	3.85	3.58
41 D 5798	23D12	24	6PDT	5.00	4.75	4.50	3.50	3.25
41 D 5766	9MT200	2PDT Socket, Spring, Ground Wire.... Ea. .55						
41 D 5767	9MT201	4PDT Socket, Spring, Ground Wire.... Ea. .60						
41 D 5768	9MT202	6PDT Socket, Spring, Ground Wire.... Ea. .95						

Magnecraft Mercury-Wetted, Dry Reed Relays

MERCURY-WETTED-CONTACT REED RELAYS



W131PCX MINIATURE ENCAPSULATED MAGNEREED

Epoxy-encapsulated, mercury-wetted-contact reed relays with PC contacts. Fast low-level and low-load switching. Contacts rated 28 VA at 1 A or 100 V maximum resistive. Operate and release time 1 ms, average. No contact bounce maintains stability of adjustment. Life rated at load, 100 million cycles. Contact resistance, 50 milliohms, average. All normally open. Operating position, upright, not more than 30° from vertical. Nominal power: SPST, 600 mW; DPST, 900 mW. Actual wt.; SPST, 1 oz.; DPST, 2 oz. Wt., 4 oz.

SPST TYPES 5/16x1/2x1 1/2″

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4423	131PCX-9	12	250	8.44	7.60	7.17	6.75	5.91
41 D 4424	131PCX-10	24	1000	8.55	7.70	7.27	6.84	5.99

DPST 9/16x11/16x1 1/2″

41 D 4426	131PCX-12	6	40	10.62	9.56	9.03	8.50	7.43
41 D 4427	131PCX-13	12	150	10.66	9.59	9.06	8.53	7.46
41 D 4428	131PCX-14	24	650	10.71	9.64	9.10	8.57	7.50

W131MPC MINIATURE MODULAR RELAYS

Modular packaged mercury-wetted reed relays with PC contacts. Snap-on steel enclosures. Contacts rated 28 VA at 1 A or 100 V maximum resistive. 1 ms average operate, release time. Life at rated load, 100 million cycles. All N.O. contacts. In table, suffix 2-5 have SPST-N.O. (1 form "A") contacts; nominal power, 600 mW; size, 3/8x1 3/32x1″. Suffix 6-9 have DPST-N.O. (2 form "A") contacts; nominal power, 700 mW; 3/8x3 9/64x1″. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type W131-	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4164	MPCX-2	6	70	6.40	5.76	5.44	5.12	4.48
41 D 4165	MPCX-3	12	300	6.48	5.83	5.51	5.18	4.53
41 D 4166	MPCX-4	24	1100	6.53	5.88	5.55	5.22	4.57
41 D 4167	MPCX-5	48	4300	6.98	6.28	5.93	5.58	4.89
41 D 4168	MPCX-6	6	50	11.53	10.38	9.80	9.22	8.07
41 D 4169	MPCX-7	12	220	11.58	10.42	9.84	9.26	8.11
41 D 4170	MPCX-8	24	850	11.65	10.48	9.90	9.32	8.15
41 D 4171	MPCX-9	48	3300	11.93	10.74	10.14	9.54	8.35

MAGNEREED MERCURY-WETTED REED RELAYS

Operate/release time, 2 milliseconds average. Operating position, upright (can be operated at up to 30° from vertical). Life expectancy, more than 25 million operations. 50 milliohm contact res. Snap-on steel enclosure. PC pins on 0.2″ grid. 2 5/8x4 1/64x3/4″. Wt., 4 oz.

SERIES 132MPC SPST N.O. 50 VA up to 400 VAC resistive.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4463	132MPCX2	6	70	5.83	5.25	4.96	4.66	4.08
41 D 4464	132MPCX3	12	250	5.83	5.25	4.96	4.66	4.08
41 D 4465	132MPCX4	24	1000	5.83	5.25	4.96	4.66	4.08
41 D 4466	132MPCX5	48	4000	6.00	5.40	5.10	4.80	4.20

SERIES 133MPC SPDT. 50 VA at up to 400 VAC resistive.

41 D 4469	133MPCX2	6	70	8.42	7.58	7.16	6.74	5.89
41 D 4470	133MPCX3	12	250	8.42	7.58	7.16	6.74	5.89
41 D 4471	133MPCX4	24	1000	8.42	7.58	7.16	6.74	5.89
41 D 4472	133MPCX5	48	4000	8.60	7.74	7.31	6.88	6.02

BI-STABLE LATCHING MERCURY-WETTED RELAYS

Upright modular pkg. No coil curr. required to hold either latching position. Ideal for memory applications. SPDT Form C break-before-make contacts rated 2 A or 400 V. 2 ms operate. Single-wound, 150 mW; double-wound, 200 mW. 2 5/8x3 3/4x4 1/64″. Wt. 2 oz.

SINGLE-WOUND COILS

Stock No.	Mfr's Type W133-	Coil VDC (mA*)	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 5008	LMPCX17	40*	70	9.87	8.88	8.39	7.90	6.91
41 D 5009	LMPCX18	6	250	9.88	8.89	8.40	7.90	6.92
41 D 5010	LMPCX19	12	1000	9.92	8.93	8.43	7.94	6.94
41 D 5011	LMPCX20	24	4000	10.07	9.06	8.56	8.06	7.05
41 D 5012	LMPCX21	4*	7000	10.17	9.15	8.64	8.14	7.12

DOUBLE-WOUND COILS (†Per winding)

41 D 5013	LMPCX22	80*	30†	11.23	10.11	9.55	8.98	7.86
41 D 5014	LMPCX23	6	120†	11.25	10.13	9.56	9.00	7.88
41 D 5015	LMPCX24	12	460†	11.32	10.19	9.62	9.06	7.92
41 D 5016	LMPCX25	24	1800†	11.42	10.28	9.71	9.14	7.99
41 D 5017	LMPCX26	8*	3000†	11.50	10.35	9.78	9.20	8.05

LOW-COST IN-LINE DRY REED RELAYS

CLASS 101M SPST MINIATURE REED RELAY

Stock No.	Mfr's Type	Coil mA	Coil VDC	Coil ±10% Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4440	W101MX-1	....	6	100	2.20	1.98	1.87	1.76	1.54
41 D 4441	W101MX-2	....	12	250	2.25	2.03	1.91	1.80	1.58
41 D 4442	W101MX-3	....	24	500	2.25	2.03	1.91	1.80	1.58
41 D 4443	W101MX-4	9	.....	2500	2.43	2.19	2.07	1.94	1.70

CLASS 102M SPST STANDARD-SIZE REED RELAY

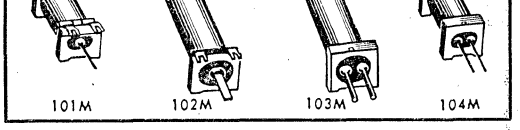
41 D 4444	W102MX-1	40	.....	100	2.18	1.96	1.85	1.74	1.53
41 D 4445	W102MX-2	....	6	200	2.25	2.03	1.91	1.80	1.58
41 D 4446	W102MX-3	....	12	500	2.25	2.03	1.91	1.80	1.58
41 D 4447	W102MX-4	....	24	2000	2.47	2.22	2.10	1.98	1.73
41 D 4448	W102MX-5	5.5	.....	5000	2.63	2.37	2.24	2.10	1.84

CLASS 103M SPDT STANDARD-SIZE REED RELAY

41 D 4122	W103MX-1	....	6	200	4.23	3.81	3.60	3.38	2.96
41 D 4123	W103MX-2	....	12	500	4.23	3.81	3.60	3.38	2.96
41 D 4124	W103MX-3	....	24	2000	4.45	4.01	3.78	3.56	3.12
41 D 4125	W103MX-4	5.5	.....	5000	4.62	4.16	3.93	3.70	3.23

CLASS 104M SPDT MINIATURE REED RELAY

41 D 4126	W104MX-1	....	6	200	5.63	5.07	4.79	4.50	3.94
41 D 4127	W104MX-2	....	12	250	5.68	5.11	4.83	4.54	3.98
41 D 4128	W104MX-3	....	24	500	5.68	5.11	4.83	4.54	3.98
41 D 4129	W104MX-4	9	.....	2500	5.87	5.28	4.99	4.70	4.11



Positive reliability and rugged design at minimum cost. Reed leads fastened to molded bobbin for stress relief. Coil terminal inserts prevent shorts. High-speed operation, long life, sealed contacts and simplicity of construction.

Class 101M. SPST normally open. Contact rating: 12 volt-amps max. at 0.25 amp, or 100 VAC max. Nominal coil power, 600 mW. Operate time, 1 ms; release, 0.5 ms. Average life, 5 million operations. 2 1/4x1/2x7/16″. Av. shpg. wt., 2 oz.

Class 102M. SPST, normally open. Contact rating: 15 volt-amps max. at 1 amp, or 250 VAC max. Nominal coil power, 300 mW. Operate time, 3 ms; release, 0.5 ms. Average life, 20 million operations. 3 1/2x1 9/32x1/2″. Av. shpg. wt., 3 oz.

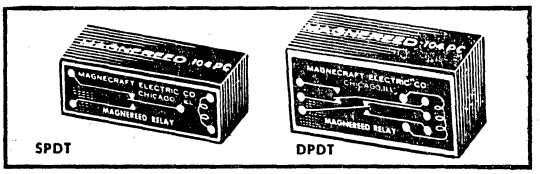
Class 103M. SPDT Form C. Contact rating: 10 VA max. at 0.5 amp, or 250 VAC max. Nominal coil power, 300 mW. Operate time, 2 ms: release, 0.5 ms. Average life, 25 million operations. 3 7/16x1 1/2x1 9/32″. Av. shpg. wt., 2 oz.

Class 104M. SPDT Form C. Contact rating: 3 VA max. at 0.25 amp, or 28 VAC max. Nominal coil power, 500 mW. Operate time, 1 ms; release, 1 ms. Average life, 10 million operations. 1x7/16x1/2″. Av. shpg. wt., 2 oz.

Phone, Wire or Write for Prices on Relays in Quantities of 500-999

Dry Reed Relays — Magnecraft

ENCAPSULATED DRY-REED RELAYS



Inherent reliability and very long life, combined with exceptionally fast low-level and low-load switching, make Magnereed relays the logical choice for a tremendous range of applications. Rigid, tinned terminals and compact size make these relays the wise choice for printed circuit mounting. Encapsulation of the assembly in epoxy resin eliminates breakage and protects coil. Nylon bobbin integrally molded with terminal board supports and terminal pins riveted in position. Hermetically sealed against dust, damage.

TYPE W101PCX MINIATURE MAGNEREED

Normally open contacts are rated at 12 VA @ ¼ amp maximum or 100 volts AC maximum. Operating time 1 ms; release time ½ ms average. Operating life expectancy: 5,000,000 cycles at maximum ratings. Nominal power 600 mW. Contact resistance, 150 milliohms, average. Capacitance across contacts, 0.8 pF. Av. shpg. wt., 3 oz.

SPST TYPES 9/16x1/2x1 1/2" (Nominal Power 600 mW)

Stock No.	Mfr's Type	mA or VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4061	101PCX-5	6 V	65	5.11	4.60	4.34	4.09	3.58
41 D 4062	101PCX-6	12 V	250	5.16	4.64	4.39	4.13	3.61
41 D 4063	101PCX-7	24 V	1000	5.26	4.73	4.47	4.21	3.68

DPST TYPES 9/16x1 1/16x1 1/2" (Nominal Power 900 mW)

41 D 4065	101PCX-9	6 V	40	7.15	6.43	6.08	5.72	5.00
41 D 4066	101PCX-10	12 V	150	7.18	6.46	6.10	5.74	5.03
41 D 4067	101PCX-11	24 V	650	7.24	6.52	6.15	5.79	5.07

TYPE W102PCX STANDARD MAGNEREED

Normally open contacts are rated 15 VA @ 1 ampere; 250 VAC maximum. Operating time 3 ms average; release ½ ms average. Life expectancy: 20,000,000 cycles. Contact resistance, 100 milliohms average. Any operating position. Shpg. wt., 3 oz.

SPST TYPES 5/8x21/32x2 1/4" (Nominal Power 400 mW)

41 D 4049	102PCX-2	12 V	400	4.83	4.35	4.10	3.86	3.38
41 D 4051	102PCX-3	24 V	1500	4.87	4.38	4.14	3.90	3.41

DPST TYPES 5/8x1 1/4x2 1/4" (Nominal Power 700 mW)

41 D 4055	102PCX-6	12 V	200	6.28	5.65	5.34	5.02	4.40
41 D 4059	102PCX-7	24 V	800	6.33	5.70	5.38	5.06	4.43

TYPE W103PCX STANDARD MAGNEREED

Contacts are rated 10 VA res., ½ amp or 250 VAC maximum, non-ind. Operating time 2 ms average; release time ½ ms average. Life: 25,000,000 cycles. No biasing magnet. Contact resistance: 100 milliohms average. Any operating position. Shpg. wt., 3 oz.

SPDT TYPES 5/8x21/32x2 1/4" (Nominal Power 400 mW)

41 D 4114	103PCX-1	6 V	100	7.22	6.50	6.14	5.78	5.05
41 D 4115	103PCX-2	12 V	400	7.27	6.54	6.18	5.82	5.09
41 D 4116	103PCX-3	24 V	1500	7.32	6.59	6.22	5.86	5.12
41 D 4117	103PCX-4	6.5 mA	5000	7.76	6.98	6.60	6.21	5.43

DPDT TYPES 5/8x1 1/4x2 1/4" (Nominal Power 700 mW)

41 D 4118	103PCX-5	6 V	50	10.77	9.69	9.15	8.62	7.54
41 D 4119	103PCX-6	12 V	200	10.79	9.71	9.17	8.63	7.55
41 D 4120	103PCX-7	24 V	800	10.84	9.76	9.21	8.67	7.59
41 D 4121	103PCX-8	9.0 mA	5000	11.31	10.18	9.61	9.05	7.92

TYPE W104PCX MINIATURE MAGNEREED

Contacts are rated 3 VA @ 0.25 amp or 28 V, AC max. non-ind. Operate and release, 1 ms. average. No biasing magnet. Contact resistance, 150 milliohms average. Life, 10 million cycles. 3 oz.

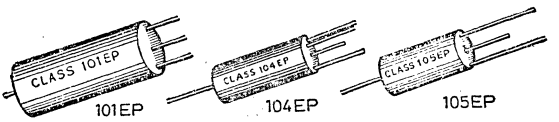
SPDT 9/16x1/2x1 1/2" (Nominal Power 600 mW)

41 D 4069	104PCX-8	12 V	225	10.12	9.11	8.60	8.10	7.08
41 D 4070	104PCX-9	24 V	1000	10.22	9.20	8.69	8.18	7.15
41 D 4073	104PCX-10	8 mA	5000	10.64	9.58	9.04	8.51	7.45

DPST TYPES 9/16x1 1/16x1 1/2" (Nominal Power 900 mW)

41 D 4080	104PCX-4	12 V	150	14.62	13.16	12.43	11.70	10.23
41 D 4081	104PCX-5	24 V	650	14.68	13.21	12.48	11.74	10.28

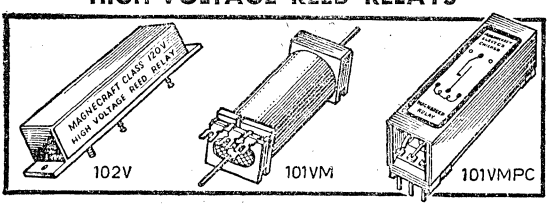
MINIATURE ENCAPSULATED RELAYS



Fully encapsulated in epoxy resin, highly resistant to mechanical shock, excessive humidity and corrosive atmospheres. Precious metal contacts. Type 101: SPST-N.O. contact load rating, 12 VA at .25 amp. max. or 100 VAC max. non-inductive. Operate, 1 ms. Release ½ ms. average. Contact resistance, 150 milliohms average. 1x7/16" dia. Type 104: SPDT, 3 VA maximum at 250 mA or 28 V, maximum non-inductive. 1 ms. operate and release time. Size, 1x7/16" diameter. Type 105: SPST-N.O., 0.1 VA maximum at 10 mA or 12 volts maximum. Less than 500 microseconds operate and release time. 7/16x1/4" diameter. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	mA or VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4180	101EPX-5	6 V	65	3.62	3.26	3.08	2.90	2.53
41 D 4181	101EPX-6	12 V	225	3.62	3.26	3.08	2.90	2.53
41 D 4182	101EPX-7	24 V	1000	4.24	3.82	3.60	3.39	2.97
41 D 4183	101EPX-8	8 mA	5000	4.68	4.21	3.98	3.74	3.28
41 D 4016	104EPX-2	6 V	65	7.37	6.63	6.26	5.90	5.16
41 D 4017	104EPX-3	12 V	225	7.37	6.63	6.26	5.90	5.16
41 D 4018	104EPX-4	24 V	1000	8.05	7.25	6.84	6.44	5.64
41 D 4019	104EPX-5	8 mA	5000	8.55	7.70	7.27	6.84	5.99
41 D 4889	105EPX-1	6 V	90	6.18	5.56	5.25	4.94	4.33
41 D 4890	105EPX-2	12 V	350	6.18	5.56	5.25	4.94	4.33
41 D 4891	105EPX-3	24 V	1300	6.30	5.67	5.36	5.04	4.41

HIGH-VOLTAGE REED RELAYS



Type 101VM. Open style, molded design with axial leads. Sealed SPST N.O. contacts rated 1000 VDC at 1 mA. Nom. pwr., 600 mW. Operate, 1 ms. ½x7/16x1". Type 101 VMPC. Snap-on PC steel enclosure. SPST N.O. contacts rated 1000 VDC max. at .001 amp resistive. Nom. pwr., 700 mW. Operate, 1 ms. 1 1/8x39/64x3/8". Type 102V. Metal-covered. SPST N.O. contacts rated 50 VA at 5000 VDC or 3 A max. resistive. Operate 3 ms. Cover internally insulated, offers shielding. 4 1/2x1 5/16x7/8". Type W102HVX. Metal-covered PC package. SPST N.O. contacts rated 10,000 V at .001 A. Nom. Pwr.: 1.5 mW. 4 1/2x1 5/16x7/8". Type 102UHVX. SPST N.O. contacts rated at 20,000 VDC max. at .001 amps max. Av. wt., 3 oz.

1000 VOLTS

Stock No.	Mfr's Type	mA or VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41D5000	101VMX-1	6 V	100	10.90	9.81	9.27	8.72	7.63
41D5001	101VMX-2	12 V	250	10.92	9.83	9.28	8.74	7.64
41D5002	101VMX-3	24 V	500	10.93	9.83	9.29	8.74	7.65
41D5003	101VMX-4	9 mA	2500	11.12	10.01	9.45	8.90	7.78
41D5004	101VMPCX-1	6 V	50	11.90	10.71	10.12	9.52	8.33
41D5005	101VMPCX-2	12 V	220	11.97	10.77	10.17	9.58	8.38
41D5006	101VMPCX-3	24 V	850	12.00	10.80	10.20	9.60	8.40
41D5007	101VMPCX-4	48 V	3300	12.22	11.00	10.39	9.78	8.55

5000 VOLTS

41D4482	102VX-9	140 mA	30	13.69	12.32	11.64	10.95	9.58
41D4483	102VX-10	6 V	70	13.69	12.32	11.64	10.95	9.58
41D4484	102VX-11	12 V	250	13.73	12.36	11.67	10.98	9.61
41D4485	102VX-12	24 V	1000	13.78	12.40	11.71	11.02	9.65
41D4486	102VX-13	48 V	4000	14.15	12.74	12.03	11.32	9.91
41D4487	102VX-14	9 mA	7000	14.58	13.12	12.39	11.66	10.21

10,000 VOLTS

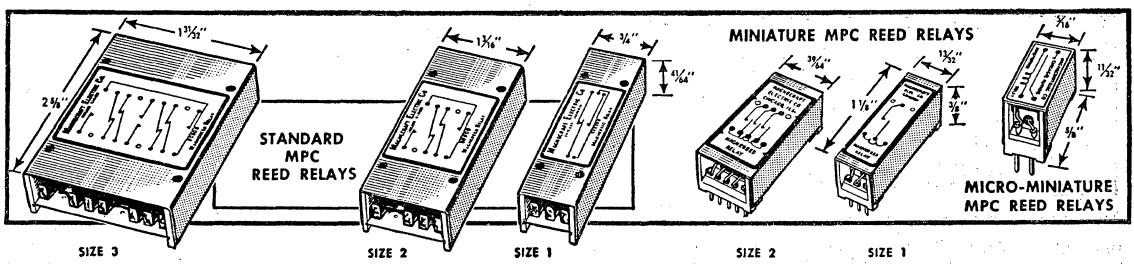
Stock No.	Mfr's Type	VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99
41 D 5752	W102HVX-1	6	45	19.88	17.89	16.90	15.90
41 D 5753	W102HVX-2	12	175	19.88	17.89	16.90	15.90
41 D 5754	W102HVX-3	24	700	19.88	17.89	16.90	15.90

20,000 VOLTS

41 D 5725	102UHVX-1	6	25	33.62	30.26	28.58	26.90
41 D 5726	102UHVX-2	12	100	33.62	30.26	28.58	26.90
41 D 5727	102UHVX-3	24	400	33.62	30.26	28.58	26.90

Phone, Wire or Write for Prices on Relays in Quantities of 500-999

Magnecraft Modular Package Dry Reed Relays



- Snap-On Steel Enclosure Prevents Interaction with Other Relays
- Tough One-Piece Molded Design to Eliminate Damage in Handling
- Reed Relays Supplied in Very Compact Modular Packages
- Terminal Pins on 0.2" Grid Centers for Printed-Circuit Plug-In Mounting
- Switch Mechanism Hermetically Sealed with Inert Gas in Glass Capsule

Ultra reliable dry reed relays with contact leads soldered stress-free to rugged terminal posts. Reed capsule contacts are hermetically sealed with inert gas in glass capsule to completely protect them from dust, contamination, moisture or tampering. Reed leads are gold-plated or tinned for ease in soldering connecting lead wires. Reed lead mounting assembly provides fastening lead to bobbin for stress relief to minimize forces being exerted to glass during soldering. Coil is accurately wound on specially designed one-piece molded bobbin insulated for excellent dielectric characteristics. Tinned coil terminals, molded in bobbin, avoid shorts.

STANDARD MAGNEREED DRY REED RELAYS

SERIES 102MPC SPST N.O. Operate time, less than 4 milliseconds. Release, less than 1 millisecond. Gold contacts—rated 15 watts resistive at 1 amp, or 250 VAC. Life expectancy, 20 million operations at maximum rating. ½-watt nominal DC rating. Overall size, 2⅝x4 1/64x ¾". Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Coil V DC	Coil Ohm	EACH 1-24	25-49	50-74	75-99	100-499	500-999
41 D 4451	102MPCX6	6	70	3.29	2.96	2.79	2.63	2.30	2.14
41 D 4452	102MPCX7	12	250	3.29	2.96	2.79	2.63	2.30	2.14
41 D 4453	102MPCX8	24	1000	3.29	2.96	2.79	2.63	2.30	2.14
41 D 4454	102MPCX9	48	4000	3.46	3.11	2.94	2.77	2.42	2.25

SERIES 102MPC 3PST N.O. ¾-watt nom. DC. Contacts, 15 VA at 1A or 250 VAC non-ind. 2⅝x4 1/64x1 3/16". Wt., 4 oz.

41 D 4851	102MPCX49	12	175	5.63	5.07	4.79	4.51	3.95	3.66
41 D 4852	102MPCX50	24	750	5.77	5.20	4.91	4.62	4.04	3.76

SERIES 102MPC 6PST N.O. 1½-watt nom. DC. Contacts rated 15 VA at 1A or 250 VAC non-ind. 2⅝x4 1/64x1 31/32". Wt., 5 oz.

41 D 4854	102MPCX52	6	25	9.18	8.27	7.81	7.35	6.43	5.97
41 D 4855	102MPCX53	12	100	9.30	8.37	7.91	7.44	6.51	6.05
41 D 4856	102MPCX54	24	375	9.35	8.42	7.95	7.48	6.55	6.08

SERIES 103MPC SPDT. Operate and release time, less than 3 milliseconds. Contact bounce, 4 millisecond max. on release. Gold contacts rated 10 VA, AC resistive; 10 watt DC resistive up to ½ amp and/or 250V. Life, 25 million operations at max. rating. ½-watt nom. DC. 2⅝x4 1/64x1 3/16". Shpg. wt., 3 oz.

41 D 4457	103MPCX2	6	70	5.83	5.25	4.96	4.66	4.08	3.79
41 D 4458	103MPCX3	12	250	5.83	5.25	4.96	4.66	4.08	3.79
41 D 4459	103MPCX4	24	1000	5.83	5.25	4.96	4.66	4.08	3.79
41 D 4460	103MPCX5	48	4000	6.00	5.40	5.10	4.80	4.20	3.90

SERIES 103MPC DPDT. ¾-watt nom. DC. Contacts rated 10 VA at ½ A, or 250 VAC. 2⅝x4 1/64x1 13/16". Wt., 4 oz.

41 D 4858	103MPCX30	6	50	8.33	7.50	7.09	6.67	5.84	5.44
41 D 4859	103MPCX31	12	100	8.33	7.50	7.09	6.67	5.84	5.44
41 D 4860	103MPCX32	24	375	8.47	7.63	7.20	6.78	5.93	5.51

Series 103MPC 4PDT. Size 3. 1½-watt nom. DC. Contacts rated 10 VA at ½ A or 250 VAC. 2⅝x4 1/64x1 31/32". Wt., 5 oz.

41 D 4862	103MPCX34	6	25	14.60	13.14	12.41	11.68	10.22	9.49
41 D 4863	103MPCX35	12	100	14.70	13.23	12.50	11.76	10.29	9.56
41 D 4864	103MPCX36	24	375	14.77	13.29	12.55	11.82	10.34	9.60

SERIES 102RMP POWER REED RELAYS. SPST N.O. Size 1. ½-watt nominal, DC. Contact load rating, 100 VA, 3 A max., or 250 volts max. 2⅝x4 1/64x¾". Shpg. wt., 3 oz.

41 D 4867	102RMPCX2	12	250	7.88	7.09	6.70	6.31	5.52	5.13
41 D 4868	102RMPCX3	24	1000	7.93	7.14	6.74	6.34	5.55	5.15
41 D 4869	102RMPCX4	48	4000	8.18	7.36	6.95	6.54	5.73	5.32

MINIATURE DRY REED RELAYS

SERIES 101 MPC SPST N.O. Operate time, 1 millisecond, av.; release time, .5 millisecond, av. Contact load rating: 12 VA max. at ¼ A or 100 volts max., non-inductive. Contact bounce, .5 millisecond, av. Life expectancy, 5 million operations. ½-watt nominal DC. Low profile, compact design saves space. No taller than commonly used capacitors and resistors . . only ⅜" high. Size, 1⅛x1 3/32x⅜". Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499	500-999
41 D 4870	101MPCX1	6	70	3.60	3.24	3.06	2.88	2.52	2.34
41 D 4871	101MPCX2	12	300	3.60	3.24	3.06	2.88	2.52	2.34
41 D 4872	101MPCX3	24	1100	3.63	3.27	3.09	2.90	2.54	2.36
41 D 4873	101MPCX4	48	4300	3.77	3.39	3.20	3.02	2.64	2.45

SERIES 101MPC 3PST. .7-watt nom. DC. Contacts rated 1.2 VA at ¼ A or 100 VAC. 1⅛x3 9/64x⅜". Wt., 3 oz.

41 D 4875	101MPCX6	12	220	6.75	6.08	5.74	5.40	4.73	4.39
41 D 4876	101MPCX7	24	850	6.77	6.09	5.75	5.42	4.74	4.40

SERIES 104MPCX SPDT. Operate/release time, 1 millisecond, av. Contact bounce: N.O., 0.5 millisecond; NC. 2 milliseconds. Rated 3 VA max. at ¼ A or 28 volts max. Life expectancy, 10 million operations at rated load. ½-watt nom. DC. Contact resistance, 150 milliohms, aver. Size, 1⅛x1 3/32x⅜". Shpg. wt., 2 oz.

41 D 4878	104MPCX1	6	70	6.82	6.14	5.80	5.46	4.77	4.43
41 D 4879	104MPCX2	12	300	6.83	6.15	5.81	5.46	4.78	4.44
41 D 4880	104MPCX3	24	1100	6.85	6.17	5.82	5.48	4.80	4.45

SERIES 104MPCX DPDT. .7-watt nominal. DC. Operate/release time, 1 ms. average. Contact Bounce, less than ½ ms. aver. N.O. contacts; less than 2, NC contacts. 1⅛x3 9/64x⅜". Shpg. wt., 3 oz.

41 D 4883	104MPCX6	12	220	11.63	10.47	9.89	9.30	8.14	7.56
41 D 4884	104MPCX7	24	850	11.65	10.49	9.90	9.32	8.16	7.57

MICROMINIATURE DRY REED RELAYS

SERIES 105MPC SPST N.O. Operate time, 250 microseconds, average. Release time, 500 microseconds, average. Rating: 0.1 VA max. at 10 mA or 12 volts max. 0.3 watts nominal, DC. Contact resistance, 200 milliohms, average. Life expectancy, 10 million operations at rated load. ⅜x1 1/32x5/16". Wt., 2 oz.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499	500-999
41 D 4886	105MPCX1	6	120	5.45	4.91	4.63	4.36	3.82	3.54
41 D 4887	105MPCX2	12	500	5.47	4.92	4.65	4.38	3.83	3.56
41 D 4888	105MPCX3	24	2000	5.58	5.02	4.74	4.46	3.91	3.63

TYPE 103LMPC MAGNETIC LATCHING REED RELAY

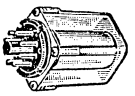
SPDT bi-stable reed relay requires no coil current to hold contacts in either of two latching positions. Available with single-wound coils for switching upon polarity reversal, or double-wound coils having separate polarized windings. Contacts rated 10 VA at 200 V, maximum, or 0.2 amp maximum. Life expectancy: 25-million operations at rated load. Steel cover provides excellent mechanical protection and magnetic shielding. 1⅛x1 3/32x⅜". Size 1 case. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499	500-999
41 D 4408	103LMPCX4	6	250	7.07	6.36	6.01	5.66	4.95	4.60
41 D 4413	103LMPCX9	6	120/120	8.33	7.50	7.08	6.66	5.83	5.41
41 D 4414	103LMPCX10	12	400/460	8.33	7.50	7.08	6.66	5.83	5.41
41 D 4415	103LMPCX11	24	1800/1800	9.00	8.10	7.65	7.20	6.30	5.85

Specify Stock No. and Mfr's Type No. When Ordering

TYPE W103CPX ENCLOSED PLUG-IN MAGNEREED RELAY

Dry reed relay plug-in assembly. Consist of 2 or 3 Type 103 break-before-make relays with common coil, in "High impact" plastic housing. Oper., release times less than 3 ms, each. Nom. power, 300 mW. 2⅛x1⅜x1⅜". Av. shpg. wt., 6 oz.



DPDT TYPES—8-PIN OCTAL PLUGS

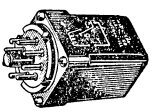
Stock No.	Mfr's Type	mA or VDC	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 4033	103CPX-7	6 V	75	12.92	11.63	10.98	10.34	9.04
41 D 4036	103CPX-8	12 V	300	12.95	11.66	11.01	10.36	9.07
41 D 4039	103CPX-9	24 V	1000	13.01	11.71	11.06	10.41	9.11
41 D 4040	103CPX-10	8 mA	5000	13.57	12.21	11.53	10.86	9.50

3PDT TYPES—11-PIN PLUGS

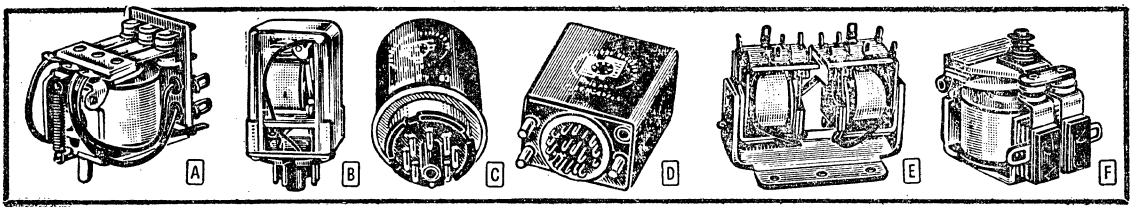
41 D 4042	103CPX-12	12 V	150	16.83	15.15	14.31	13.46	11.78
41 D 4043	103CPX-13	24 V	650	16.95	15.26	14.41	13.56	11.87
41 D 4047	103CPX-14	10 mA	5000	17.50	15.75	14.86	14.00	12.25

CLASS 103LCP LATCHING PLUG-IN RELAY

SPDT bi-stable magnetic latching reed relay. Contact load rating: 10 VA at 0.2 amp max. Plug-in mounting for standard octal-style sockets. Single wound coil: LCPX 7-10, (1⅜x1⅜x2⅛" high.) Double wound coil: dual input, LCPX 11-14, (1⅜x1⅜x2⅛" high.) Life: 25 million operations. Av. shpg. wt., 5 oz.



Stock No.	Mfr's Type W103-	COIL mA	V	Ohms	EACH 1-24	25-49	50-74	75-99	100-499
41 D 5577	LCPX-7	....	6	250	8.30	7.47	7.06	6.64	5.81
41 D 5578	LCPX-8	....	12	1000	8.33	7.50	7.08	6.66	5.83
41 D 5579	LCPX-9	....	24	4000	8.57	7.71	7.28	6.86	6.00
41 D 5580	LCPX-10	4	..	7000	8.80	7.92	7.48	7.04	6.16
41 D 5581	LCPX-11	....	6	120/120	9.87	8.88	8.39	7.90	6.91
41 D 5582	LCPX-12	....	12	460/460	9.97	8.97	8.47	7.98	6.98
41 D 5583	LCPX-13	....	24	1800/1800	10.02	9.02	8.52	8.02	7.01
41 D 5584	LCPX-14	8	..	3000/3000	10.32	9.29	8.77	8.26	7.22



A TYPE W88 ALL-PURPOSE OPEN RELAYS

Versatile, low-cost clapper-type relays provide high reliability and long-life adjustment stability. Silver alloy contacts rated at 10 amperes. Nominal power for AC units, 3VA; DC, 1.5 W plate-circuit types: SPDT, 125 milliwatts; DPDT, 250 milliwatts; 3PDT, 375 milliwatts. *Coil ohms of plate circuit types. Tinned solder terminals; mount by one #6-32 tapped hole with locating lug. Size, 1¼x1⅜16x1¾". Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type W88-	Coil Volts	Action	EACH 1-9	10-24	25-49	50-99	100-499
41 D 4318	AX-4	115 AC	SPDT	3.66	3.29	3.11	2.93	2.56
41 D 4320	X-3	12 DC	SPDT	3.20	2.88	2.72	2.56	2.24
41 D 4321	X-4	24 DC	SPDT	3.28	2.95	2.79	2.62	2.30
41 D 4326	AX-8	115 AC	DPDT	4.27	3.84	3.63	3.42	2.99
41 D 4328	X-7	12 DC	DPDT	3.73	3.36	3.17	2.98	2.61
41 D 4330	X-9	110 DC	DPDT	4.36	3.92	3.71	3.49	3.05
41 D 4342	X-17	2500*	DPDT	4.01	3.61	3.41	3.21	2.81
41 D 4333	AX-11	24 AC	3PDT	4.62	4.16	3.93	3.70	3.23
41 D 4334	AX-12	115 AC	3PDT	4.77	4.29	4.05	3.82	3.34
41 D 4336	X-11	12 DC	3PDT	4.17	3.75	3.54	3.34	2.92
41 D 4337	X-12	24 DC	3PDT	4.21	3.79	3.58	3.37	2.95

B TYPE W88P PLUG-IN ENCLOSED RELAYS

Same as W88 relays above, but enclosed with high-impact plastic cover. SPDT and DPDT units use standard octal plug; 3PDT has 11-pin plug. *ANCPX-type has neon indicator. Size, 2⅛x1⅜x1⅜". Av. shpg. wt., 5 oz.

41 D 4365	ACPX-4	115 AC	SPDT	5.79	5.21	4.92	4.63	4.05
41 D 4369	CPX-3	24 DC	SPDT	5.40	4.86	4.59	4.32	3.78
41 D 4389	CPX-13	7.2 mA	SPDT	5.90	5.31	5.02	4.72	4.13
41 D 4374	ACPX-8	115 AC	DPDT	6.44	5.80	5.47	5.15	4.51
41 D 4375	ANCPX-2*	115 AC	DPDT	7.29	6.56	6.20	5.83	5.47
41 D 4377	CPX-6	12 DC	DPDT	5.85	5.27	4.97	4.68	4.10
41 D 4378	CPX-7	24 DC	DPDT	5.95	5.36	5.06	4.76	4.17
41 D 4379	CPX-8	110 DC	DPDT	6.51	5.86	5.53	5.21	4.56
41 D 4392	CPX-16	10.0 mA	DPDT	6.30	5.67	5.36	5.04	4.41
41 D 4393	CPX-17	7.2 mA	DPDT	6.40	5.76	5.44	5.12	4.48
41 D 4383	ACPX-12	115 AC	3PDT	7.97	7.17	6.77	6.38	5.58
41 D 4386	CPX-10	12 DC	3PDT	7.28	6.55	6.19	5.82	5.10
41 D 4387	CPX-11	24 DC	3PDT	7.38	6.64	6.27	5.90	5.17
41 D 4395	CPX-19	12.3 mA	3PDT	7.70	6.93	6.55	6.16	5.39
41 D 4396	CPX-20	8.7 mA	3PDT	7.80	7.02	6.63	6 24	5.46

C TYPE W88H SEALED DPDT PLUG-IN RELAYS

Silver alloy contacts rated 10 amperes—hermetically sealed for long life. Nominal power: AC units, 3 VA; DC, 1.5 watts. Internal construction similar to that used on top-quality telephone-type relays. 8-pin octal socket. Size, 2½x1¹¹⁄16". Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Coil Volts	Ohm	EACH 1-9	10-24	25-49	50-99	100-249
41 D4477	W88AHPX-24	115AC	.....	8.79	7.91	7.47	7.03	6.59
41 D4479	W88HPX-33	12DC	100	8.19	7.37	6.96	6.55	6.14
41 D4480	W88HPX-34	24DC	400	8.24	7.42	7.00	6.59	6.18

D TYPE W11H SEALED MINIATURE DC RELAYS

5-ampere silver alloy contacts. *4PDT with 14-pin glass insulated envelope terminal header; nominal power, 1.5 W. 2¹⁄16x1¾x1⅝". †6PDT with 20-pin header; nominal power 2.5 W. 2⅜8x1⁴⁷⁄64x1¹⁵⁄16". Three #6-32 mounting studs. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Coil Volts	Ohm	EACH 1-9	10-24	25-49	50-99	100-249
41 D 4095	W11HSX323	24DC*	400	15.97	14.37	13.57	12.78	11.98
41 D 4098	W11HSX327	12DC†	56	19.91	17.92	16.92	15.93	14.93

TYPE W33H SEALED 5-AMP SUBMINIATURE DC RELAY

(Not illus.) Silver alloy contacts. 4PDT with 14-pin header. Nominal power required, 3-watts. Size, 1⁴¹⁄64x1¹¹⁄32x3¹⁄32". Wt., 5 oz.

41 D 4112	W33HSX183	24DC	280	16.70	15.03	14.20	13.36	12.53

E TYPE W88L INTERMITTENT-DUTY LATCHING RELAYS

*4PDT; †6PDT. 10 A silver alloy contacts. Nominal power AC units, 6 VA; DC, 3 W. 1¹⁵⁄16x1¾x2¹¹⁄16". Av. wt., 6 oz.

Stock No.	Mfr's Type W88-	Coil Volts	Ohms	EACH 1-9	10-24	25-49	50-99	100-249	250-499
41 D4349	ALX-3*	24 AC	...	10.60	9.54	9.01	8.48	7.95	7.42
41 D4350	ALX-4*	115 AC	...	10.60	9.54	9.01	8.48	7.95	7.42
41 D4352	LX-2*	12 DC	50	9.65	8.68	8.20	7.72	7.24	6.76
41 D4353	LX-3*	24 DC	200	9.65	8.68	8.20	7.72	7.24	6.76
41 D4356	ALX-6†	24 AC	...	12.80	11.52	10.88	10.24	9.60	8.96
41 D4357	ALX-7†	115 AC	...	12.80	11.52	10.88	10.24	9.60	8.96
41 D4358	LX-5†	6 DC	12	11.75	10.57	9.99	9.40	8.81	8.23
41 D4360	LX-7†	24 DC	200	11.75	10.57	9.99	9.40	8.81	8.23

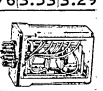
F TYPE W88D HEAVY-DUTY POWER RELAYS

Positive wiping, 50-ampere double-break contacts. SPST, normally open, action. Nominal power: AC units, 3 VA; DC, 1.5 W. Solder terminals; #6-32 mtg. hole, locating lug. 1⁷⁄16x1¼x1¹³⁄16". Wt., 4 oz.

41 D4085	ADX-2	115 AC	...	5.25	4.73	4.46	4.20	3.94	3.68
41 D4088	DX-2	12 DC	100	4.65	4.19	3.95	3.72	3.49	3.26
41 D4089	DX-3	24 DC	400	4.70	4.23	4.00	3.76	3.53	3.29

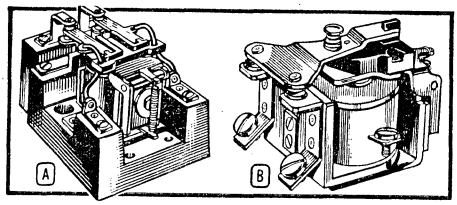
CLASS 88LCP 10-AMP PLUG-IN RELAY

20-pin latching relay. 4PDT. 2⅜x1¾x3⁹⁄16" high. *AC Types, 6 VA. †DC Types, 3 W. Wt., 11 oz.



Stock No.	Mfr's Type 88-	COIL V	Ohm	EACH 1-9	10-24	25-49	50-99	100-499
41 D 5585	ALCPX-10*	6	.....	15.81	14.23	13.44	12.65	11.07
41 D 5586	ALCPX-11*	24	.....	16.00	14.40	13.60	12.80	11.20
41 D 5587	ALCPX-12*	120	.....	16.14	14.53	13.72	12.91	11.30
41 D 5588	LCPX-9†	6	12	15.47	13.92	11.83	12.38	10.82
41 D 5589	LCPX-10†	12	50	15.56	14.00	13.23	12.45	10.89
41 D 5590	LCPX-11†	24	200	15.62	14.06	13.27	12.50	10.93
41 D 5591	LCPX-12†	120	4000	15.79	14.21	13.42	12.63	11.05

Magnecraft Industrial Control Relays



A HEAVY-DUTY POWER RELAYS

Class 99. Designed especially for high current or high-voltage switching, such as elevator control or motor starting. Precision-built steel hinge pin armature bearings with oversize bearing surfaces for long life and contact effectiveness with adjustment stability. Gold-flash oversize silver cadmium oxide contacts. Molded coil bobbin. Heavy-duty molded phenolic base and molded contact barrier. Dielectric strength, 1500 VAC, rms. Screw terminals. Listed as across-the-line starters by Underwriter's Laboratories, Inc.

B pace-Saving 99S and 99SD. Similar to standard Class 99, but have no base. Contacts fastened directly to high dielectric strength glass melamine terminal boards. 1⅞x½x2". Shpg. wt., 6 oz.

Class 99 SPDT Relay. Single pole, double throw contacts (1 form "C") rated 25 amperes. 2½x2½x2½". Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Coil Volts	Coil Ohms	EACH 1-9	10-24	25-49	50-99	100-249
41 D 4130	W99AX-2	115AC	.....	5.68	5.11	4.83	4.54	3.98
41 D 4131	W99AX-3	230AC	.....	5.86	5.27	4.98	4.69	4.10

Class 99 DPST Relay. Double pole, single throw contacts (2 form "A") N.O. rated 25 amps. 2⅝x2½x2½". Av. wt., 9 oz.

41 D 4132	W99AX-9	115AC	.....	6.67	6.00	5.67	5.34	4.67
41 D 4133	W99AX-10	230AC	.....	6.85	6.17	5.82	5.48	4.80
41 D 4134	W99X-10	12DC	70	6.36	5.72	5.41	5.09	4.45
41 D 4135	W99X-11	24DC	290	6.38	5.74	5.42	5.10	4.47

Class 99 DPDT relay. DPDT contacts rated 25A, SPDT aux. contacts rated 5A. Power 3 VA. Screw terminals. 2½x4⅜x2⅝". Wt., 12 oz.

41 D 4008	W99AX-15	115AC	.....	10.43	9.39	8.87	8.34	7.30
41 D 4009	W99AX-16	230AC	.....	10.63	9.57	9.04	8.50	7.44

Class 99 DPDT Relay. Double pole, double throw contacts (2 form "C") rated 25 amps. 2⅝x2½x3⅜". Av. wt., 11 oz.

Stock No.	Mfr's Type	Coil Volts	Coil Ohms	EACH 1-9	10-24	25-49	50-99	100-249
41 D 4136	W99AX-5	115AC	.....	8.43	7.59	7.17	6.74	5.90
41 D 4137	W99AX-6	230AC	.....	8.63	7.77	7.34	6.90	6.04
41 D 4138	W99X-6	12DC	70	8.12	7.31	6.90	6.50	5.68
41 D 4139	W99X-7	24DC	290	8.14	7.33	6.92	6.51	5.70

Class 99 SPST-N.O.-DB Relay. Normally open, double-break contacts (1 form "A") rated 50 amps. 2⅜x2½x2½". Av. wt., 8 oz.

41 D 4140	W99ADX-1	24AC	.....	5.64	5.08	4.79	4.51	3.95
41 D 4141	W99ADX-2	115AC	.....	5.64	5.08	4.79	4.51	3.95
41 D 4142	W99ADX-3	230AC	.....	5.85	5.27	4.97	4.68	4.10
41 D 4143	W99DX-1	6DC	18	5.35	4.82	4.55	4.28	3.75
41 D 4144	W99DX-2	12DC	70	5.35	4.82	4.55	4.28	3.75
41 D 4145	W99DX-3	24DC	290	5.37	4.83	4.56	4.30	3.76
41 D 4146	W99DX-4	110DC	6000	5.74	5.17	4.88	4.59	4.02

B SPACE-SAVING CLASS 99S AND 99SD POWER RELAYS

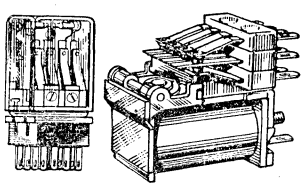
SPDT (1 Form C). Contacts rated 25 amps.

Stock No.	Mfr's Type	Coil Volts	EACH 1-9	10-24	25-49	50-99	100-499	500-999
41 D 4147	W99SAX-1	24AC	7.35	6.62	6.25	5.88	5.15	4.59
41 D 4148	W99SAX-2	115AC	7.40	6.66	6.29	5.92	5.18	4.63
41 D 4149	W99SAX-3	230AC	7.62	6.86	6.48	6.10	5.33	4.76
41 D 4151	W99SX-1	6DC	7.11	6.40	6.04	5.69	4.98	4.44
41 D 4152	W99SX-2	12DC	7.13	6.42	6.06	5.70	4.99	4.46
41 D 4153	W99SX-3	24DC	7.15	6.44	6.08	5.72	5.01	4.47
41 D 4154	W99SX-4	110DC	7.47	6.72	6.35	5.98	5.23	4.67

SPDT-N.O. (1 Form A)-double-break. Contacts rated 50 amps.

Stock No.	Mfr's Type	Coil Volts	EACH 1-9	10-24	25-49	50-99	100-499	500-999
41 D 4155	W99SADX-1	24AC	6.26	5.63	5.32	5.01	4.38	3.91
41 D 4156	W99SADX-2	115AC	6.34	5.71	5.39	5.07	4.44	3.96
41 D 4157	W99SADX-3	230AC	6.56	5.90	5.58	5.25	4.59	4.10
41 D 4158	W99SDX-1	6DC	6.10	5.49	5.19	4.88	4.27	3.81
41 D 4159	W99SDX-2	12DC	6.10	5.49	5.19	4.88	4.27	3.81
41 D 4160	W99SDX-3	24DC	6.14	5.53	5.22	4.91	4.30	3.84
41 D 4161	W99SDX-4	110DC	6.44	5.80	5.47	5.15	4.51	4.03

CLASS 77 MINIATURE-SIZE 4DPT RELAY



Telephone-type relay features miniature-size 4DPT contact combination, 5 A contact rating and greater contact pressure without increasing coil power. Precision-built hinge-pin armature bearings, oversize surfaces. Silver-cadmium oxide contacts, gold flash. Molded resin insulation. Molded, insulated snap-on dust cover. Solder terminals. High dielectric strength. 1 17/64x1 19/32x55/64". Av. shpg. wt., 2 oz.

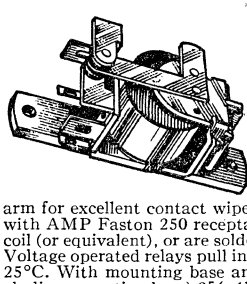
Stock No.	Mfr's Type	Coil Volts	Coil Ohms	EACH 1-9	10-24	25-49	50-99	100-249
41 D 4893	W77CSX-1	6DC	40	5.30	5.04	4.77	4.51	3.58
41 D 4894	W77CSX-2	12DC	160	5.30	5.04	4.77	4.51	3.58
41 D 4895	W77CSX-3	24DC	600	5.40	5.13	4.86	4.58	3.65
41 D 4896	W77CSX-4	48DC	2500	5.55	5.27	5.00	4.72	3.75
41 D 4897	W77CSX-5	110DC	10,000	5.97	5.67	5.37	5.07	4.03

AC TYPE 77 TELEPHONE RELAY AND SOCKETS

AC version of Class 77 relays. 4PDT. 5-amp contact rating. 1 7/64x ¾x1 9/32". Wt., 2 oz. Molded sockets rated at 5 amps. 1 oz.

41 D 4898	W77ACSX1	115AC	.....	5.58	5.30	5.02	4.74	3.77
41 D 4162	70-161-1 Solder socket w/ret.			.58	.52	.49	.46	.44
41 D 4163	70-161-3 Printed Circuit Sock.			.58	.52	.49	.46	.44

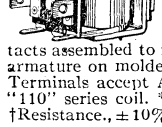
CLASS 88K LOW-COST POWER SWITCHING RELAY



Extra reliability to meet exacting requirements over a wide range of applications. Provides lowest friction and maximum contact effectiveness with stabilized adjustment over long life. Has silver cadmium oxide, gold-flashed contacts rated 15 amps @ 115 VAC/32 VDC. SPDT, 1 form C standard. Contacts assemble to glass insulated terminal board for dielectric strength of 750 VAC rms. Flexible moving contact arm for excellent contact wipe. Connections to terminals are made with AMP Faston 250 receptacles on contacts, and Faston 110 on coil (or equivalent), or are soldered. Nominal power: *3 VA. †1.5 W. Voltage operated relays pull in at 85%, or less, of nominal voltage at 25°C. With mounting base and mounting base insulator. Size (including mounting base) 2⅝x1 15/64x1¼". Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Coil Volts	Coil Ohms	EACH 1-9	10-24	25-49	50-99	100-499
41 D 4488	W88AKX-1*	24AC	.....	4.48	4.03	3.81	3.58	3.14
41 D 4489	W88AKX-2*	115AC	.....	4.65	4.19	3.95	3.72	3.26
41 D 4490	W88AKX-3*	230AC	.....	5.63	5.07	4.79	4.50	3.94
41 D 4491	W88KX-1†	6DC	25	4.31	3.88	3.66	3.45	3.02
41 D 4492	W88KX-2†	12DC	100	4.36	3.92	3.71	3.49	3.05
41 D 4493	W88KX-3†	24DC	400	4.46	4.01	3.79	3.57	3.12
41 D 4494	W88KX-4†	110DC	8000	5.16	4.64	4.39	4.13	3.61

CLASS 88KD LOW-COST 50-AMPERE GENERAL-PURPOSE POWER RELAYS



Economical and versatile relays for industrial switching applications. Heavy-duty silver cadmium oxide, gold-flashed SPST-N.O. double make contacts rated 50 amperes at 115 VAC or 28 VDC, resistive. Stationary contacts assembled to insulated terminal board. Movable contacts and armature on molded phenolic insulator for excellent contact wipe. Terminals accept AMP Faston "250" receptacles on contacts, or "110" series coil. *Pull-in at 80% or less, DC; 85% or less, AC. †Resistance., ±10%. Single mtg. hole. 1 1/16x1 1/16x1½". Wt., 4 oz.

Stock No.	Mfr's Type	Coil V*	Coil Ohms†	EACH 1-9	10-24	25-49	50-99	100-499
41 D 5020	W88KADX-1	24AC	...	4.67	4.20	3.97	3.74	3.27
41 D 5021	W88KADX-2	120AC	...	4.82	4.34	4.10	3.86	3.37
41 D 5022	W88KDX-1	6DC	25	4.14	3.73	3.52	3.31	2.90
41 D 5023	W88KDX-2	12DC	100	4.17	3.75	3.54	3.34	2.92
41 D 5024	W88KDX-3	24DC	400	4.27	3.84	3.63	3.42	2.99
41 D 5025	W88KDX-4	120DC	5000	5.08	4.57	4.32	4.06	3.56

Contact Allied for Prices on Magnecraft Relays in Larger Quantities

Time Delay Relays and Photoelectric Components

MAGNECRAFT TIME DELAY RELAYS

SOLID-STATE ADJUSTABLE TIME DELAY RELAY

Model 211CP. Combines solid-state timing circuit with dependable electromechanical relay to provide DPDT 10-ampere switching. Available in operate-delay and release-delay types, for either AC or DC operation. Timing repeatability: ±5% of setting at nominal voltage @ 25°C. Reset time, 100 ms typical. Three adjustable timing ranges: 1 to 10 sec., 1 to 180 sec., and 2 to 300 sec. Protected from voltage transients up to twice the nominal input voltage for periods up to 8 ms. Operating temperature: —10° to +55°C. Overall size, 2⅞x2⅜x1¾". Av. wt., 8 oz.

OPERATE DELAY TYPES (8-pin socket mounting)

Stock No.	Mfr's Type W211	Input in Volts	Timing Range sec.	EACH 1-9	10-24	25-49	50-99	100-Up
41 D 4398	ACPSOX-5	120 AC	1 to 10	18.50	17.58	16.65	14.80	13.87
41 D 4399	ACPSOX-7	120 AC	1 to 180	18.50	17.58	16.65	14.80	13.87
41 D 4400	ACPSOX-8	120 AC	2 to 300	18.50	17.58	16.65	14.80	13.87
41 D 4401	CPSOX-1	24 DC	1 to 10	18.50	17.58	16.65	14.80	13.87
41 D 4402	CPSOX-3	24 DC	1 to 180	18.50	17.58	16.65	14.80	13.87
41 D 4403	CPSOX-4	24 DC	2 to 300	18.50	17.58	16.65	14.80	13.87

RELEASE DELAY TYPES (11-pin socket mounting)

41 D 4404	ACPSRX-5	120 AC	1 to 10	22.50	21.38	20.25	18.00	16.87
41 D 4405	ACPSRX-7	120 AC	1 to 180	22.50	21.38	20.25	18.00	16.87
41 D 4406	ACPSRX-8	120 AC	2 to 300	22.50	21.38	20.25	18.00	16.87
41 D 5743	CPSRX-1	24 DC	1 to 10	22.50	21.38	20.25	18.00	16.87
41 D 5744	CPSRX-3	24 DC	1 to 180	22.50	21.38	20.25	18.00	16.87
41 D 5745	CPSRX-4	24 DC	2 to 300	22.50	21.38	20.25	18.00	16.87

SOLID-STATE TIME DELAY RELAY WITH 1% REPEATABILITY

- Applications in Process Controls, Heating, Automation
- Rugged Relay for 10-Ampere DPDT Output Switching
- Protected Against Voltage Transients Up to 1000 Volts

Model 212M. Units combine solid-state timing function circuit with rugged electromechanical relay for 10-ampere DPDT output switching. Has ±1% repeatability; extremely fast reset time. Circuit is protected against voltage transients up to 1000 volts. Molded plastic enclosure is designed for space saving surface mounting. It is equipped with screw type terminals, adjustable knob and calibrated dial that is individually calibrated for each time range with dial plate calibrated in seconds. By use of jumper wire across appropriate terminals, the slow operate model may be programmed for three different timing functions: time delay on operate; non-totalizer control and totalizer/pre-set counter. Slow release delay types may be programmed for time delay on release; interval timing and momentary actuation. 4¼x4¼x1¾". Wt., 14 oz.

OPERATE DELAY TYPES

Stock No.	Mfr's Type W212	Input in Volts	Timing Range sec.	EACH 1-9	10-24	25-49	50-99	100-Up
41 D 5746	MASOX-2	120 AC	.5 to 10	36.15	33.79	32.78	30.76	29.47
41 D 5747	MASOX-3	120 AC	5 to 100	37.74	35.29	34.25	32.18	30.80
41 D 5748	MASOX-4	120 AC	50 to 500	43.24	41.60	39.96	37.65	35.06

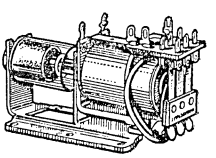
RELEASE DELAY TYPES

41 D 5749	MASRX-2	120 AC	.5 to 10	42.06	40.61	39.16	37.03	34.44
41 D 5750	MASRX-3	120 AC	5 to 100	43.82	42.32	40.82	38.65	35.93
41 D 5751	MASRX-4	120 AC	50 to 500	49.73	46.39	45.18	42.76	41.02

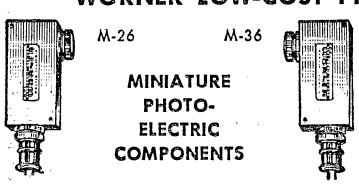
CLASS 110 AIR-DASHPOT ADJUSTABLE TIME DELAY RELAYS

Stock No.	Mfr's Type	Coil Volts	EACH 1-9	10-24	25-49	50-99	100-249
41 D 4191	*W110ACPX-9	115 AC	29.79	26.81	25.32	23.83	22.34
41 D 4194	†W110ACSX-1	115 AC	30.07	27.06	25.56	24.06	22.55
41 D 4197	‡W110AX-9	115 AC	20.91	18.82	17.77	16.73	15.68
41 D 4198	‡W110X-9	24 DC	17.75	15.97	15.09	14.20	13.31
41 D 4199	‡W110X-10	110 DC	18.34	16.51	15.59	14.67	13.75

DPDT silver-cadmium oxide contacts rated 10 amps. Operate delay adjustable from 0.2 to 45 sec. Repeat accuracy of ±10%. Resets in 2 seconds. AC relays have built-in diode rectification. Power: DC, 4 watts; AC, 7 volt-amperes. ‡Open, solder terminals. 7 oz. *Plug-in octal, †screw terminals. Both have metal dust covers. Shpg. wt., 1 lb.



WORNER LOW-COST PHOTOELECTRIC COMPONENTS AND COMPLETE SYSTEMS

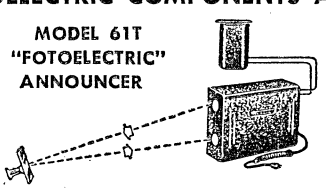


Miniature photoelectric components perfect for use even in areas with severe space limitations. Excellent for high-speed counting. Up to 500 counts per minute when powered by Model 67 Amplifier-Relay, listed right. Units are housed in tough one-piece, expertly machined aluminum cases. Designed for pin-point detection on cross-over beam at distances from 3" to 12". Directional beam supervises objects 1" or larger at distances up to 8-feet. Miniature Models M-36 and M-26 install vertically as illustrated with installation instructions. With 6-ft. cable. Size, 1¼x¾x2½".

MODEL M-36 VERTICAL LIGHT SOURCE. Takes operating voltage from Model 67 Amplifier-Relay unit at right. Shpg. wt., 12 oz.
41 D 7318.....37.23

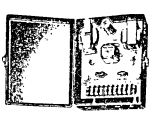
MODEL M-26 VERTICAL PHOTOCELL RECEIVER. Up to 500 counts/min. Wt., 12 oz.
41 D 7319.....41.34

MODEL 61T "FOTOELECTRIC" ANNOUNCER

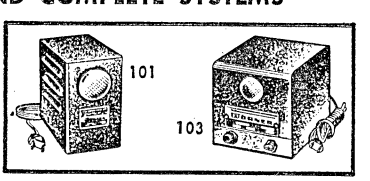


Effective low-cost "electronic receptionist." Light source and photocell in one housing, mirror reflects beam back to unit. When light beam is broken, warning chime sounds. Features reliable all-transistor design. Outfit consists of "Fotoelectric" unit, mirror and chime. Unit may be placed three to ten feet from mirror. Size, 8¼x6½x2¾". For 110-120 V, 50-60 Hz AC.
41 D 7325. Shpg. wt., 9 lbs.....64.80
60 D 9707. Extra Bulb. 5 oz.....32
41 D 7326. Extra Chime. 2 lbs.....6.75

MODEL 67 AMPLIFIER DPDT RELAY



DPDT contacts are rated at 10 amps non-inductive and 5 amps inductive at 110 VAC. For M-36 and M-26. Size, 6x8x5". 110-120 VAC, 50-60 Hz AC. Instructions.
41 D 7323. Shpg. wt.,8 lbs.....97.83



LOW-COST INDOOR UNITS

MODEL 103 PHOTOCELL-AMPLIFIER-RELAY. Combined in a single compact unit. Operates up to 450 times per minute with a 2" object interrupting light beam. Photocell operates relay rated at 12½ amps, 115 volts AC, non-inductive load. Shield protects photocell from extraneous light. Hammerloid-finished steel case has removable cover for servicing. Instructions. Size, 5x5x5½". For 110-120 V, 50-60 Hz AC.
41 D 7349. Shpg. wt., 5 lbs.....46.68

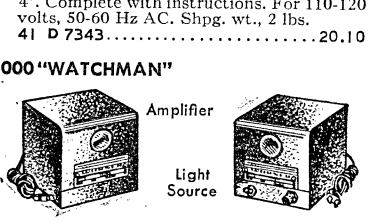
MODEL 101 FIXED LIGHT SOURCE. Use with Model 103, above. Projects fixed beam up to distances of 10 feet. Objects 2" square and larger will interrupt beam and activate solenoid, counter, etc. Heavy-gauge hammerloid-finished steel case. Size, 2½x4½x4". Complete with instructions. For 110-120 volts, 50-60 Hz AC. Shpg. wt., 2 lbs.
41 D 7343.....20.10

MODEL 5100 "WATCHMAN"

(Not illustrated.) Has same features as Model 4000 at right, but has meter jack for plate-circuit test and alarm setting protected by lock. Six-volt output for alarm. For indoor uses up to distances of 100 feet. For 110-120 V, 50-60 Hz AC. Size, 5x5x5½". Shpg. wt., 14 lbs.
41 D 7441 U.....134.67

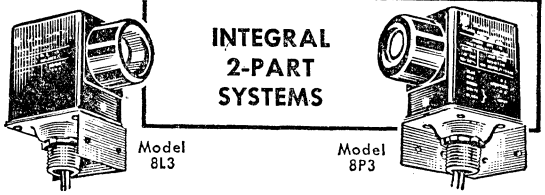
ECONOMY MODEL 4000 "WATCHMAN"

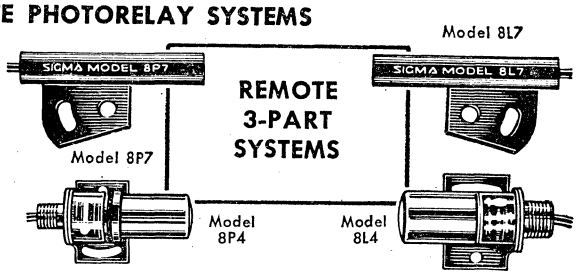
Two-unit photoelectric system for actuating burglar alarms. Light-source has infrared filter for invisible beam. Switch for continuous or momentary alarm. Sensitivity control. Six-volt output for alarm. For indoor use at distances to 50 feet. 5x5x5½". For 110-120 V, 50-60 Hz AC.
41 D 7232 U. Shpg. wt, 11¾ lbs....96.30



Photoelectric Systems and Sensitive Relays

SIGMA — INTEGRAL AND REMOTE PHOTORELAY SYSTEMS





High-Speed Types 8P8 and 8P10. Gives up to 1200 operations per minute with a maximum range of 12 feet. Has resistive rating of 5 amps maximum at 28 volts DC or 115 volts AC, and 2.5 amps at 230 volts AC. Provides up to 100 million mechanical operations. Types 8P8 and 8P10 have SPDT contacts.

General-Purpose Type 8P3. Will provide up to 600 operations per minute. Has a 10-amp resistive rating at 28 volts DC or 115 volts AC, and 5 amps at 230 volts DC. Designed to give up to 10 million mechanical operations. Operates up to 12 feet from light source. Has SPDT contact arrangement.

Light Source 8L3-115. All three systems above may be used with your own light source, or with the 8L3-115 Light Source listed in the table below. Leads are #18 AWG, with an average 18" length. Operating temperature range, +32° to +122°F. 2½x1²⁹⁄₃₂x3¹¹⁄₁₆".

Stock No.	Mfr's Type	Mounting and Size	Wt. Oz.	EACH 1-24
41 D 6192	8P8-115	½" conduit fitting, mounting bracket. 2½x1²⁹⁄₃₂x3⁷⁄₁₆"	13	41.80
41 D 6193	8P10-115	5-pin plug. 2½x1²⁹⁄₃₂x3³⁄₁₆"	8	39.90
41 D 6190	8P3-115	½" conduit fitting, mounting bracket. 2½x1²⁹⁄₃₂x3¹¹⁄₁₆"	13	20.90
41 D 6191	8L3-115	Light source for 8P8-115, 8P10-115, 8P3-115 listed above	13	15.20

Subminiature Receiver 8P7 with 8L7 Light Source. Light gives a 12" beam for 10 operations per second. Lamp life is rated for up to 4000 hours of operation. Leads are #22 AWG, averaging 10" in length. Each unit only 1½" long, and 5⁄16" in diameter. Av. wt., 1 oz.

Miniature Receiver 8P4 with 8L4 Light Source. Provides a maximum operating range of 25 feet, for 10 operations per second. Light source has an adjustable focus. 10" long #18 AWG leads. 3 oz.

8A, 8A3 Amplifier-Relay Control. Solid-state. 8A has plug-in replaceable DPDT relay. 5A @ 28 VDC or 115/230 VAC. 8A3 has 50 ms to 20 sec. time delay. 10A @ 28 VDC res., 5A @ 230 V. Source voltage both units 115/230 VAC. Oper. range, +32° to +122° F. 2 lbs.

NOTE: Each system must include an 8A Amplifier Control, and the appropriate Light Source shown in table below. Amplifier Control Housing optional. Av. 9 lbs. **Write for larger-quantity prices.**

Stock No.	Mfr's Type	Mounting	EACH 1-24
41 D 6196	8P7	Lead wires, mounting bracket	13.80
41 D 6197	8L7	Light source for 8P7 above	10.00
41 D 6194	8P4	⅜" conduit fitting, mtg. bracket	15.20
41 D 6195	8L4	Light source for 8P4 above	13.30
41 D 6198	8A	Amp. relay control, chassis only	57.00
41 D 6200	8A3	Amp. with time delay	76.00
41 D 6199	AT373-1	Control Housing. 11½x10¹¹⁄₁₆x4¼"	15.00

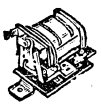
TYPE 8R MINIATURE LOW-COST PHOTORELAYS

120 cycles/minute for 1 million electrical operations, minimum. Rugged plug-in unit. 8RC01A has 5⁄16" light-sensitive aperture, 8RC02A has plastic shield with 3⁄32" aperture for positive operation under high ambient light. —40° to +140°F. ■U.L. Recog. C.S.A.

Stock No.	Mfr's Type	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6108	8RCO1A	17.25	16.39	15.53	13.80	12.08
41 D 6251	8RCO2A	17.25	16.39	15.53	13.80	12.08

TYPES 41 AND 42 SENSITIVE SPECIAL-PURPOSE RELAYS

TYPE 41 SPDT RELAYS



DC types are for on-off or gradually changing signals; shaded-pole AC for high-speed keying. High release for circuits with high idle current. SPDT silver contacts 2 A, except *5 A § 10 A, at 28 VDC or 120 V AC. AC sensitivity: ACS, .2VA; ACG, .4VA; DC sensitivity, 40 mW. Open types, 2¼x1¼x1⁵⁄₁₆". Wt., 3 oz. Enclosed, 1²¹⁄₆₄x1²¹⁄₆₄x2³⁄₆₄". ■U.L. Recog., C.S.A. Listed. †Octal plug. Shpg. wt., 3 oz.

UNENCLOSED AC RELAYS—SOLDER TERMINALS

Stock No.	Mfr's Type and Coil Ohms	VAC or DC mA	EACH 1-24	25-49	50-74	75-99	100-249
41 D 5076	41FZ-10-ACG/BSL	6§	4.30	4.09	3.87	3.44	3.01
41 D 6392	41FZ-35-ACS/SIL	6	4.95	4.70	4.46	3.96	3.47
41 D 5078	41FZ-5000-ACG/BSL	115§	4.50	4.28	4.05	3.60	3.15
41 D 6394	41FZ-10000-ACS/SIL	115	5.50	5.23	4.95	4.40	3.85

UNENCLOSED DC RELAYS—SOLDER TERMINALS

41 D 6397	41F-200-S/SIL	15.0	4.75	4.51	4.28	3.80	3.33
41 D 7009	41F-500-S/SIL	9.0	4.75	4.51	4.28	3.80	3.33
41 D 6398	41F-1000-S/SIL	6.5	4.75	4.51	4.28	3.80	3.33
41 D 6399	41F-5000-S/SIL	3.0	4.95	4.70	4.46	3.96	3.47
41 D 6400	41F-10000-S/SIL	2.0	5.25	4.99	4.73	4.20	3.68

ENCLOSED AC RELAYS—PLUG-IN

41 D 6443	41ROZ-5000-ACG/BSL	115*†	6.35	6.03	5.72	5.08	4.45
41 D 6445	41JOZ-12000-ACS/SIL	150†	13.35	12.68	12.02	10.68	9.35

ENCLOSED DC RELAYS—OCTAL PLUG-IN

41 D 6446	41RO-1000-S/SIL	6.5	6.75	6.41	6.08	5.40	4.73
41 D 6447	41RO-5000-S/SIL	3.0	6.95	6.60	6.26	5.56	4.87
41 D 6448	41RO-10000-S/SIL	2.0	7.25	6.89	6.53	5.80	5.08
41 D 6268	41RO6-1000-S/SIL	6.5	6.75	6.41	6.08	5.40	4.73
41 D 6269	41R06-2500-S/SIL	4.0	6.75	6.41	6.08	5.40	4.73
41 D 6270	41R06-5000-S/SIL	3.0	6.95	6.60	6.26	5.56	4.87

TYPE 42 DPDT RELAYS

Enclosed type have octal plug-in bases and plastic dust covers. Open type have solder terminals. DC sensitivity: (S) 100 mW; (G) 200 mW. AC units, 0.30 VA for ACS type, 0.50 VA for ACG types. Withstand vibration, 10g to 55 Hz; shock 100g (non-operating). Contacts 5 A @ 28 VDC, 120 VAC. exc. †2 A. 1²¹⁄₆₄x1²¹⁄₆₄x2". ■U.L. Recog. C.S.A. 3 oz.

AC RELAYS

Stock No.	Mfr's Type and Coil Ohms	Coil VAC or mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D6401	42ROZ-8-ACG/SIL	6	7.20	6.84	6.48	5.76	5.04
41 D6403	42ROZ-200-ACG/SIL	24	7.20	6.84	6.48	5.76	5.04
41 D6404	42ROZ-4000-ACG/SIL	115	7.20	6.84	6.48	5.76	5.04
41 D6449	42RO6Z-4000-ACG/SIL	115	7.20	6.84	6.48	5.76	5.04
41 D6450	42JOZ-4000-ACG/SIL	115	12.40	11.78	11.16	9.92	8.68
41 D6907	42ROZ-7000-ACS/SIL	115†	8.60	8.17	7.74	6.88	6.02

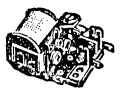
ENCLOSED DC RELAYS

41 D 6408	42RO-200-G/SIL	32	7.20	6.84	6.48	5.76	5.04
41 D 7696	42RO-500-G/SIL	20	7.20	6.84	6.48	5.76	5.04
41 D 6409	42RO-1000-G/SIL	14	7.20	6.84	6.48	5.76	5.04
41 D 6244	42RO-2500-G/SIL	9	7.20	6.84	6.48	5.76	5.04
41 D 6410	42RO-5000-G/SIL	6.5	7.50	7.13	6.75	6.00	5.25
41 D 6411	42RO-10000-G/SIL	4.5	7.70	7.32	6.93	6.16	5.39
41 D 6128	42RO-12000-G/SIL	4.0	8.05	7.65	7.25	6.44	5.64
41 D 6451	42RO6-500-G/SIL	20	7.20	6.84	6.48	5.76	5.04
41 D 6452	42RO6-1000-G/SIL	14	7.20	6.84	6.48	5.76	5.04
41 D 6453	42RO6-1000-S/SIL	10†	7.90	7.51	7.11	6.32	5.53
41 D 6454	42RO6-2500-G/SIL	9	7.20	6.84	6.48	5.76	5.04
41 D 6456	42RO6-10000-G/SIL	4.5	7.70	7.32	6.93	6.16	5.39
41 D 6457	42RO-150-S/SIL	26†	7.90	7.51	7.11	6.32	5.53
41 D 6458	42RO-500-S/SIL	14†	7.90	7.51	7.11	6.32	5.53
41 D 6459	42RO-1000-S/SIL	10†	7.90	7.51	7.11	6.32	5.53
41 D 6460	42RO-2500-S/SIL	6.2†	7.90	7.51	7.11	6.32	5.53
41 D 6461	42RO-5000-S/SIL	4 5†	8.20	7.79	7.38	6.56	5.74
41 D 6462	42RC-10000-S/SIL	3.1†	9.25	8.79	8.33	7.40	6.48

■ Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Special and High-Performance Relays SIGMA

TYPE 4 PLATE-CIRCUIT RELAYS



DC relays for 20 mW applications. For vacuum tube plate circuits, transistor circuits with high idle current and applications requiring high release or stable trip values. 2-amp SPDT contacts. Type 4F unenclosed; for screw mtg.; solder terminal and coil lead conn. 1⅝2x1⅝x1½". Shpg. wt., 3 oz. Type 4R not illus. has aluminum dust cover; 5-pin plug-in mounting. ■U.L. Recog., C.S.A. Listed. For burglary protection equipment. 1½x1½x2⁹⁄₁₆". Wt., 5 oz.

Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6377	4F-1000-S/SIL	4.5	6.85	6.51	6.17	5.48	4.80
41 D 6378	4F-2500-S/SIL	3.0	6.85	6.51	6.17	5.48	4.80
41 D 6379	4F-5000-S/SIL	2.0	7.20	6.84	6.48	5.76	5.04
41 D 5285	4F-8000-S/SIL	1.6	7.45	7.08	6.71	5.96	5.22
41 D 6127	4F-10,000-S/SIL	1.4	7.45	7.08	6.71	5.96	5.22
41 D 6264	4R-1000-S/SIL	4.5	9.35	8.88	8.42	7.48	6.55
41 D 6429	4R-5000-S/SIL	2.0	9.65	9.17	8.69	7.72	6.76
41 D 6467	4R-8000-S/SIL	1.6	9.90	9.41	8.91	7.92	6.93
41 D 6470	4R-10,000-S/SIL	1.4	9.90	9.41	8.91	7.92	6.93

TYPE 5 EXTRA-SENSITIVE RELAYS

SPDT extra-sensitive DC relays. Withstand shocks to 100g. Silver contacts rated 1 A except *.25 A. ■U.L. Recog. for use in burglary protection equipment. C.S.A. Listed. Type 5F has screw mtg.; solder term. 1¹¹⁄₁₆x1¾x1⅝". Shpg. wt., 3 oz. Type 5R, not illus. has aluminum dust cover; 5-pin plug-in mtg. 1½x1½x2¼". 5 oz.

Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6380	5F-1000-S/SIL	2.3	9.70	9.22	8.73	7.76	6.79
41 D 6412	5F-1000-SS/PAL	1.0*	11.05	10.50	9.95	8.84	7.74
41 D 6382	5F-5000-S/SIL	1.0	10.40	9.88	9.36	8.32	7.28
41 D 6383	5F-10,000-S/SIL	.70	11.40	10.83	10.26	9.12	7.98
41 D 6413	5F-10,000-SS/PAL	.30*	12.70	12.07	11.43	10.16	8.89
41 D 6468	5F-16,000-S/SIL	0.55	12.30	11.69	11.07	9.84	8.61
41 D 6469	5R-1000-S/SIL	2.3	12.30	11.69	11.07	9.84	8.61
41 D 6481	5R-2500-S/SIL	1.4	12.30	11.69	11.07	9.84	8.61
41 D 6484	5R-5000-S/SIL	1.0	12.95	12.30	11.66	10.36	9.07
41 D 6869	5R-10,000-S/SIL	.70	13.90	13.21	12.51	11.12	9.73
41 D 6881	5R-16,000-S/SIL	0.55	14.95	14.20	13.46	11.96	10.47

TYPE 26 MINIATURE RELAYS

Rugged DC relays with SPDT action and balanced armature construction. Offer long mechanical life and high release. Operating sensitivity: CDS, 4 mW; S, 5 mW. SIL in Type indicates silver contacts rated 1.0 amp at 28 VDC or 120 VAC; PAL, palladium, 0.5 amp. Withstand shock to 100g (non-operating). Tapped holes for screw mounting. 5 solder terminals. All are unenclosed. Size, 1x1⅞x1¹⁄₁₆". Shpg. wt., 3 oz.

Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6904	26F-1000-S/SIL	2.3	10.92	10.37	9.83	8.74	7.64
41 D 5284	26F-8000-CDS/PAL	0.7	13.35	12.68	12.02	10.68	9.35

TYPE 48 LOW-COST SPDT RELAYS

Low-cost, sensitive relays, excellent for use with burglar, police and fire alarm systems. Operates from minimum of 5- or 10-milliwatt input. Bridge-type contact structure, with solid silver contacts. Compliant armature provides excellent contact wipe. Temperature range, —4°F to +158°F. Contacts rated 2 amps with pickup power of 10 milliwatts. Type 48F is screw mounting open type, with 5 solder terminals. Insulated from chassis. 1⁷⁄₆₄x1⅞x2⁹⁄₃₂". Shpg. wt., 3 oz. Type 48RO comes in a plastic dust cover with octal plug. Overall size, 2³⁄₆₄x1²³⁄₆₄". Shpg. wt., 4 oz.

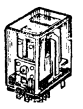
Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4830	48F-1000-G/SIL	3.2	6.20	5.89	5.58	4.96	4.34
41 D 4831	48F-2500-G/SIL	2.0	6.20	5.89	5.58	4.96	4.34
41 D 4834	48RO-1000-G/SIL	3.2	7.25	6.89	6.53	5.80	5.08
41 D 4835	48RO-2500-G/SIL	2.0	7.25	6.89	6.53	5.80	5.08

TYPE 65 COMMERCIAL SPDT RELAYS

Compact commercial relay gives positive reponse to low power signals. High adjustment stability, 5 million oper. mechanical life. Ideal for slide projectors, toys, games. Contacts rated 1 amp. Sensitivity, 90 mW. 65F1 is screw mtg. with solder term. 6³⁄₆₄x1¹⁄₁₆x1³⁄₁₆". 65FP1 has terminals for printed circuit, 1¼x1¹⁄₁₆x1³⁄₁₆". Wt. 1 oz.

Stock No.	Mfr's Type and Coil Volts	Coil Ohms	EACH 1-99	100-499	500-2499
41 D 6612	65F1A-12DC	1640	1.50	1.35	1.05
41 D 6613	65F1A-24DC	6560	1.50	1.35	1.05
41 D 6614	65FP1A-12DC	1640	1.60	1.44	1.12
41 D 6615	65FP1A-24DC	6560	1.60	1.44	1.12

62 UNIVERSAL MINIATURE PLUG-IN RELAYS



Types with std. contacts rated 2 A at 28 VDC/115 VAC; SCO contacts, 5 A at 28 VDC; 4 A at 115 VAC. Bifurcated-contact (T) for dry-circuit switching 2 A at 28 VDC, 1 A at 115 VAC. Sens. 700 mW (6PDT, 1.4 W). Sensitive types (S) 1 A at 28 VDC. Stud mount or plug-in to solder term. socket or choice of 3 PC term. sockets (AD41, AD42, AD43, .100" grid). 1⁷⁄₆₄x 4⁹⁄₆₄" (HxD) 2P, 6¹⁄₆₄" w.; 4P, 1³⁄₁₆" w.; 6P, 1²⁵⁄₆₄" w. 1 oz.

Stock No.	Mfr's Type and Coil Volts	Coil Ohms	Action	EACH 1-24	25-49	50-74	75-99	100-249	250-499
41 D 6600	62R2-12DC	185	DPDT	3.05	2.90	2.75	2.44	2.14	1.98
41 D 6601	62R2-24DC	700	DPDT	3.05	2.90	2.75	2.44	2.14	1.98
41 D 6602	62R2-110DC	15000	DPDT	4.50	4.28	4.05	3.60	3.15	2.93
41 D 6603	62R4-12DC	185	4PDT	3.40	3.23	3.06	2.72	2.38	2.21
41 D 6604	62R4-24DC	700	4PDT	3.40	3.23	3.06	2.72	2.38	2.21
41 D 6605	62R4-110DC	15000	4PDT	5.00	4.75	4.50	4.00	3.50	3.25
41 D 6606	62R6-12DC	90	6PDT	4.40	4.18	3.96	3.52	3.08	2.86
41 D 6607	62R6-24DC	430	6PDT	4.40	4.18	3.96	3.52	3.08	2.86
41 D 6608	62R6-110DC	9000	6PDT	5.60	5.32	5.04	4.48	3.92	3.64
41 D 6855	62R2-6DC-SCO	52	DPDT	3.15	2.99	2.84	2.52	2.21	2.05
41 D 6856	62R2-12DC-SCO	185	DPDT	3.15	2.99	2.84	2.52	2.21	2.05
41 D 6857	62R2-24DC-SCO	700	DPDT	3.15	2.99	2.84	2.52	2.21	2.05
41 D 6858	62R2-48DC-SCO	2500	DPDT	3.25	3.09	2.93	2.60	2.28	2.11
41 D 6859	62R2-110DC-SCO	15K	DPDT	4.60	4.37	4.14	3.68	3.22	2.99
41 D 6860	62R4-6DC-SCO	52	4PDT	3.60	3.42	3.24	2.88	2.52	2.34
41 D 6861	62R4-12DC-SCO	185	4PDT	3.60	3.42	3.24	2.88	2.52	2.34
41 D 6862	62R4-24DC-SCO	700	4PDT	3.60	3.42	3.24	2.88	2.52	2.34
41 D 6863	62R4-48DC-SCO	2500	4PDT	3.80	3.61	3.42	3.04	2.66	2.47
41 D 6864	62R4-110DC-SCO	15K	4PDT	5.20	4.94	4.68	4.16	3.64	3.38
41 D 6865	62R6-6DC-SCO	25	6PDT	4.80	4.56	4.32	3.84	3.36	3.12
41 D 6866	62R6-12DC-SCO	90	6PDT	4.80	4.56	4.32	3.84	3.36	3.12
41 D 6867	62R6-24DC-SCO	430	6PDT	4.80	4.56	4.32	3.84	3.36	3.12
41 D 6868	62R6-48DC-SCO	1550	6PDT	5.00	4.75	4.50	4.00	3.50	3.25
41 D 6874	62R6-110DC-SCO	9000	6PDT	5.80	5.51	5.22	4.64	4.06	3.77
41 D 6836	62R2T-6DC	52	DPDT	3.45	3.28	3.11	2.76	2.42	2.24
41 D 6837	62R2T-12DC	185	DPDT	3.45	3.28	3.11	2.76	2.42	2.24
41 D 6838	62R2T-24DC	700	DPDT	3.45	3.28	3.11	2.76	2.42	2.24
41 D 6839	62R2T-48DC	2500	DPDT	3.55	3.37	3.20	2.84	2.49	2.31
41 D 6840	62R2T-110DC	15K	DPDT	4.90	4.66	4.41	3.92	3.43	3.19
41 D 6841	62R4T-6DC	52	4PDT	4.00	3.80	3.60	3.20	2.80	2.60
41 D 6842	62R4T-12DC	185	4PDT	4.00	3.80	3.60	3.20	2.80	2.60
41 D 6843	62R4T-24DC	700	4PDT	4.00	3.80	3.60	3.20	2.80	2.60
41 D 6844	62R4T-48DC	2500	4PDT	4.10	3.90	3.69	3.28	2.87	2.67
41 D 6845	62R4T-110DC	15K	4PDT	5.40	5.13	4.86	4.32	3.78	3.51
41 D 6850	62R6T-6DC	25	6PDT	4.90	4.66	4.41	3.92	3.43	3.19
41 D 6851	62R6T-12DC	90	6PDT	4.90	4.66	4.41	3.92	3.43	3.19
41 D 6852	62R6T-24DC	430	6PDT	4.90	4.66	4.41	3.92	3.43	3.19
41 D 6853	62R6T-48DC	1550	6PDT	5.00	4.75	4.50	4.00	3.50	3.25
41 D 6854	62R6T-110DC	9000	6PDT	6.30	5.99	5.67	5.04	4.41	4.10

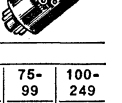
SENSITIVE RELAYS

Stock No.	Type and Coil Ohms	Pickup mW	EACH 1-24	25-49	50-74	75-99	100-249	250-499
41 D 6875	62R2S-2500	85	3.40	3.23	3.06	2.72	2.38	2.21
41 D 6876	62R2S-5000	85	3.80	3.61	3.42	3.04	2.66	2.47
41 D 6877	62R2S-10,000	85	4.20	3.99	3.78	3.36	2.94	2.73
41 D 6878	62R4S-2500	175	3.80	3.61	3.42	3.04	2.66	2.47
41 D 6879	62R4S-5000	175	4.20	3.99	3.78	3.36	2.99	2.73
41 D 6880	62R4S-10,000	175	4.60	4.37	4.14	3.68	3.22	2.99
41 D 6890	62R6S-2500	250	4.90	4.66	4.41	3.92	3.43	3.19
41 D 6891	62R6S-5000	250	5.40	5.13	4.86	4.32	3.78	3.51
41 D 6892	62R6S-10,000	250	5.90	5.61	5.31	4.72	4.13	3.84

SOCKETS

41 D 6609	AD222-Sold. Term. Socket	.55	.52	.50	.44	.39	.36
41 D 6534	AD23 2-P P.C. Socket	.55	.52	.50	.44	.39	.36
41 D 6893	AD41 2-P P.C. Socket	.55	.52	.50	.44	.39	.36
41 D 6610	AD244-Sold. Term. Socket	.65	.62	.59	.52	.46	.42
41 D 6535	AD25 4-P P.C. Socket	.65	.62	.59	.52	.46	.42
41 D 6894	AD42 4-P P.C. Socket	.65	.62	.59	.52	.46	.42
41 D 6611	AD266-Sold. Term. Socket	.95	.90	.85	.76	.67	.62
41 D 6536	AD27 6-P P.C. Socket	.95	.90	.85	.76	.67	.62
41 D 6897	AD43 6-P P.C. Socket	.95	.90	.86	.76	.67	.62

TYPE 72 HIGH-SPEED POLAR RELAYS



For high speed switching, pulse repeating, telegraphy to 500 pulses/sec. Extremely sensitive. SPDT contacts rated .06-A, ind. load. Removable plastic cover. Dual coil. †Current in one coil to trip either direction. 2⁵⁄₆₄x1⁷⁄₁₆". TCP Contacts. Shpg. wt., 4 oz.

Stock No.	Mfr's Type and Coil Ohms	mA DC†	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6247	72AOZ-160-TG	3.6	34.65	32.92	31.19	27.72	24.26
41 D 6912	72AOZ-160-TS	1.4	34.65	32.92	31.19	27.72	24.26
41 D 6249	72AOZ-4000-TS	0.28	35.80	34.01	32.22	28.64	25.06

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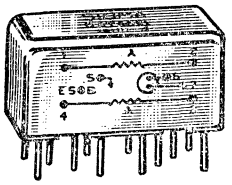
SIGMA Special and General-Purpose Relays



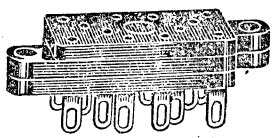
301 Series

AD32-1 Socket

DATACEL® SERIES 301 1, 2, & 4-POLE OPTO-ELECTRONIC RELAYS

Input-output circuit isolation and solid-state construction. Light beam coupling to one, two or four photoconductive cells isolates each circuit electrically. AC or DC use. For high-density printed circuit packaging or solder terminal mounting with socket at left. High reliability and long life for data processing control and digital circuitry. Switching functions include: isolation interface; logic circuits; data sampling; automatic feedback. Temperature range: —40° C to +50° C. Ratings at 25°C: power dissipation, 175 mW each cell except †500, §400, ‡75; output off resistance (R_D), 10 megohms minimum; output voltage, 250 volts AC or DC peak. All are 12-pin except 301R1 Series, 8 pin. *Incandescent lamp except 150-volt types, neon. Size, 1x½x½". Av. shpg. wt., ¼ oz.

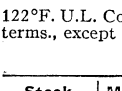
Stock No.	Mfr's Type	Lamp Input* V	Lamp Input* mA	Max. "On" R_L, Ohms	Poles	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6800	301R1-6†	6	40	400	1	2.20	2.09	1.98	1.76	1.54
41 D 6801	301R1-12†	12	19	500	1	2.20	2.09	1.98	1.76	1.54
41 D 6802	301R1-24	24	40	200	1	2.20	2.09	1.98	1.76	1.54
41 D 6803	301R1-150†	150	2	500	1	2.20	2.09	1.98	1.76	1.54
41 D 6804	301R2-6§	6	40	400	2	3.40	3.23	3.06	2.72	2.38
41 D 6805	301R2-12§	12	19	500	2	3.40	3.23	3.06	2.72	2.38
41 D 6806	301R2-24	24	40	200	2	3.40	3.23	3.06	2.72	2.38
41 D 6807	301R2-150§	150	2	500	2	3.40	3.23	3.06	2.72	2.38
41 D 6809	301R4-12	12	38	1000	4	4.80	4.56	4.32	3.84	3.36
41 D 6810	301R4-24‡	24	40	500	4	4.80	4.56	4.32	3.84	3.36



AD32-1 RELAY SOCKET

12 solder terminals for mounting 301 Series relays. 2 mounting holes, .120" diameter spaced 1.3x.260". ¼ oz.

41 D 6811. 1-24.....Each .65
25-49..Each .62 50-74.....Each .59
75-99..Each .52 100-249....Each .46



TYPE 11 LOW-COST RELAYS

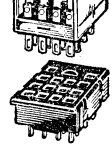
General-purpose DC or shaded pole AC. DC types for on-off circuits with gradually changing current; AC for on-off only. SPDT silver contacts: 1 A at 28 VDC/120 VAC. Up to 10g vibration or 75g shock, non-operating. Sens., DC relays 50 mW; AC relays 0.3 VA. For —40° to 122°F. U.L. Comp. Prog.-Recog., C.S.A. Listed. Screw mtg., solder terms., except *shoulder lug mtg., PC terms. 1 1/16x1 3/16x1 7/32". 1 oz.

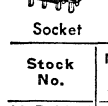
TYPE 11F-G/SIL DC RELAYS

Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-99	100-499
41 D 7681	11F-250-G/SIL	14.0	2.45	2.21
41 D 7683	11F-550-G/SIL	9.5	2.45	2.21
41 D 5068	11F-1000-G/SIL	7.0	2.45	2.21
41 D 5070	11F-1500-G/SIL	5.8	2.45	2.21
41 D 5069	11F-2300-G/SIL	4.6	2.45	2.21
41 D 5074	11F-6000-G/SIL	2.9	2.70	2.43
41 D 5075	11F-9000-G/SIL	2.4	2.95	2.66
41 D 6419	11FP-1000-G/SIL*	7.0	2.55	2.30
41 D 6420	11FP-2300-G/SIL*	4.6	2.55	2.30

TYPE 11FZ-ACS/SIL AC RELAYS

Stock No.	Mfr's Type and Coil Ohms	V AC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 6547	11FZ-25-ACS/SIL	6	3.80	3.61	3.42	3.04	2.66
41 D 6568	11FZ-9000-ACS/SIL	115	4.50	4.28	4.05	3.60	3.15





Socket

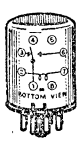
TYPE 67 AC AND DC 4PDT RELAYS

- Full 3 Ampere Rating AC or DC
- Choice of Sockets—Standard or Printed Circuit

Rugged miniature 4PDT relay is available for either AC or DC operation. Similar to Type 62 (pg. 257) but with in-line rather than stacked contacts and choice of sockets for either standard solder terminals or printed circuit terminals. Contacts rated 3 amperes, for both AC and DC types. Sensitivity, 1.2 VA for AC types, 900 milliwatts for DC types. Temperature range, —4°F to +140° F. Comes complete with plastic dust cover, designed for stud mounting with 14-prong plug. ■U.L. Recog. 1/10 hp. Order type AD28 or AD29 socket (below). 1 5/16x1 7/64x55/64". Japan (see note **). 1¼ oz.

Stock No.	Mfr's Type and Coil Volts	Coil Ohms	EACH 1-24	25-49	50-74	75-99	100-249	250-499
41 D 6616	67R4-12AC	43	5.00	4.75	4.50	4.00	3.50	3.25
41 D 6617	67R4-24AC	160	5.00	4.75	4.50	4.00	3.50	3.25
41 D 6618	67R4-115 AC	3900	5.40	5.13	4.86	4.32	3.78	3.51
41 D 6619	67R4-6DC	40	4.40	4.18	3.96	3.52	3.08	2.86
41 D 6620	67R4-12DC	160	4.40	4.18	3.96	3.52	3.08	2.86
41 D 6621	67R4-24DC	650	4.40	4.18	3.96	3.52	3.08	2.86
41 D 6622	67R4-48DC	2600	4.60	4.37	4.14	3.68	3.22	2.99
41 D 6623	67R4-110DC	11000	5.10	4.85	4.59	4.08	3.57	3.32
41 D 6624	AD28Sdr.Term.Skt.		.60	.57	.54	.48	.42	.39
41 D 6625	AD29 P.C. Skt.		.60	.57	.54	.48	.42	.39

TYPE 59 SPDT SNAP-SWITCH DC RELAYS

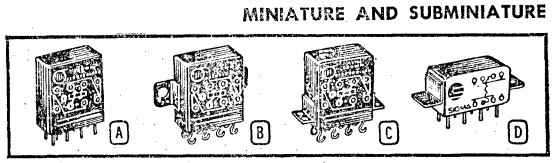


Dependable snap action relay for commercial use where space is limited. Snap-switch contact assembly provides positive operation whether input signal changes slowly or abruptly. Pin-hinge armature construction for mechanical life of 1 million oper. Contacts rated 2 A. Sens, 300 mW. Type 59A has dust cover, octal plug; 5/16" x 1 19/32". 1½ oz. 59F open, screw mtg., 29/32x1 1/8x1 3/64". ■U.L. Rec. C.S.A. 13 oz.**

**Designed and Made to Sigma Specs in Japan.

Stock No.	Mfr's Type and Coil Voltage	Coil Ohms	EACH 1-99	100-499	500-2499
41 D 6515	59A01D-6DC	120	3.55	3.19	2.48
41 D 6516	59A01D-12DC	465	3.55	3.19	2.48
41 D 6517	59A01D-24DC	1800	3.55	3.19	2.48
41 D 6519	59F1D-12DC	465	2.05	1.84	1.43
41 D 6520	59F1D-24DC	1800	2.05	1.84	1.43

MINIATURE AND SUBMINIATURE (HALF-SIZE) CRYSTAL CAN RELAYS



Exceed MIL-R-5757D. Coil 26.5 VDC nominal except §12 VDC. Contacts rated 2 A. Hermetically sealed. Excellent vibration and shock resistance. 10 terminals except †9, ‡8. Letter "R" in Type No. have solder terminals, others pin. Temp. range: —65° C to +125° C.

Series 32 DPDT Latching. Stays latched, either position, until reset by reverse current. *Dual coil. 0.8x.0.9x0.4". Wt., .65 oz.

Series 33 DPDT. High-reliability subminiature relay with 100 mW pickup power. Size, 0.8x0.9x0.4". Wt., .65 oz.

Series 35 DPDT. High-sensitivity relay for on-off switching. True crystal-can, all-welded. Size, 0.8x0.9x0.4". Wt., .7 oz

Series 36 DPDT. Long-life reliability in an all-welded, half-size subminiature relay. 36RJP same but govt. no. M5757/9-001. Size, 0.8x0.41x0.41". Wt., .35 oz.

SERIES 32 DPDT LATCHING (Max. Pickup 9 mA DC)

Stock No.	Mfr's Type and Coil Ohms	Fig.	EACH 1-24	25-49	50-74	75-99	100-249	250-499
41 D 6668	32JD-1200-GD/SIL	A	26.50	25.18	23.85	21.20	18.55	17.23
41 D 6670	32RJPD-1200-GD/SIL	B*	26.50	25.18	23.85	21.20	18.55	17.23

SERIES 33 DPDT (Max. Pickup 9.2 mA DC)

41 D 6672	33J-1200-VG/SIL	A†	22.00	20.90	19.80	17.60	15.40	14.30
41 D 6674	33RJL-1200-VG/SIL	C#	22.00	20.90	19.80	17.60	15.40	14.30
41 D 6675	33RJP-1200-VG/SIL	B#	22.00	20.90	19.80	17.60	15.40	14.30

SERIES 35 DPDT (Max. Pickup 13.5 mA DC (‡6.5 mA) 8 term.)

41 D 6573	35JP2-1000-VG/SCN‡	B§	18.00	17.10	16.20	14.40	12.60	11.70
41 D 6574	35RJL-4000-VG/SCN	C	18.00	17.10	16.20	14.40	12.60	11.70
41 D 6575	35RJP2-4000-VG/SCN	B	18.00	17.10	16.20	14.40	12.60	11.70

SERIES 36 DPDT HALF SIZE (Max. Pickup 13.5 mA DC 8 term.)

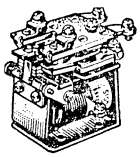
41 D 6576	36J-700-G/SMN	D/A	10.10	9.60	9.09	8.08	7.07	6.57
41 D 6577	36JP2-700-G/SMN	D/B	10.60	10.07	9.54	8.48	7.42	6.89
41 D 6579	36RJP12-98961	D/B	10.60	10.07	9.54	8.48	7.42	6.89

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Relays and Light Controls

SIGMA POWER AND LOW-COST AC AND DC RELAYS

TYPE 55 AC/DC POWER RELAYS



Rugged and reliable open type relays for continuous heavy duty use. Available in DPDT, 3PDT and 4PDT types. Multiple switching of resistive loads up to 15 amperes at 230 VAC, or up to 10 amperes at 28 VDC. Handle up to 60-ampere inrush current without contact welding. Mechanical life expectance, at least 5 million operations. Temperature range, +14°F to +158°F. All types are screw mounted, with solder terminals. Size: Type 55F2 DPDT, 2 1/16 x 2 1/16 x 2 15/64"; Type 55F3 3PDT, 2 11/64 x 1 15/16 x 1 15/16"; Type 55F4 4PDT, 2 55/64 x 2 3/32 x 2 1/32". **From Japan. Av. shpg. wt., 7 oz.

Stock No.	Mfr's Type and Coil Volts	Coil Ohm	Action	EACH 1-24	25-49	50-74	75-99	100-249	250-499
41 D 6626	55F2-115AC	635	DPDT	7.50	7.13	6.75	6.00	5.25	4.88
41 D 6629	55F2-24DC	327	DPDT	7.25	6.89	6.53	5.80	5.08	4.71
41 D 6631	55F3-115AC	635	3PDT	8.50	8.08	7.65	6.80	5.95	5.53
41 D 6636	55F3-24DC	327	3PDT	8.25	7.84	7.43	6.60	5.78	5.36
41 D 6638	55F4-115AC	635	4PDT	10.00	9.50	9.00	8.00	7.00	6.50
41 D 6640	55F4-12DC	80	4PDT	9.50	9.03	8.55	7.60	6.65	6.18
41 D 6644	55F4-24DC	327	4PDT	9.50	9.03	8.55	7.60	6.65	6.18

TYPE 22 MINIATURE HERMETICALLY SEALED DC RELAYS

Balanced armature construction. Resist 10 g to 300 Hz vibration, 100 g shock. Ideal for airborne and ground based military equipment. Non-polarized. Offers high 33% drop out of pickup current. Sensitivity: SPDT, 20 mW; DPDT, 40 mW. Silver contacts rated 2 A at 28 VDC or 120 VAC. —65°C to +125°C. 1 25/32 x 1 x 1". Wt., 3 oz.

SPDT ACTION—HOOK SOLDER TERMINALS

Stock No.	Mfr's Type and Coil Ohms	mA DC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 7686	22RJC-500-G/SIL	6.3	13.65	12.97	12.29	10.92	9.56
41 D 6384	22RJC-1000-G/SIL	4.5	13.65	12.97	12.29	10.92	9.56
41 D 6385	22RJC-2500-G/SIL	2.8	14.20	13.49	12.78	11.36	9.94
41 D 6386	22RJC-5000-G/SIL	2.0	14.70	13.97	13.23	11.76	10.29
41 D 6387	22RJC-8000-G/SIL	1.6	15.25	14.49	13.73	12.20	10.68

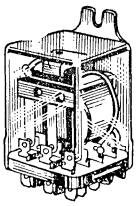
DPDT ACTION—HOOK SOLDER TERMINALS

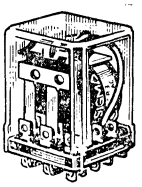
41 D 7689	22RJCC-500-G/SIL	9.0	15.25	14.49	13.73	12.20	10.68
41 D 6388	22RJCC-1000-G/SIL	6.3	15.25	14.49	13.73	12.20	10.68
41 D 6389	22RJCC-2500-G/SIL	4.0	15.75	14.96	14.18	12.60	11.03
41 D 6390	22RJCC-5000-G/SIL	2.8	16.30	15.49	14.67	13.04	11.41
41 D 6391	22RJCC-8000-G/SIL	2.3	16.80	15.96	15.12	13.44	11.76

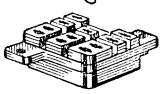
DPDT ACTION—9-PIN PLUG-IN TYPES

41 D 7702	22JNCC-2500-G/SIL	4.0	16.10	15.30	14.49	12.88	11.77
41 D 7703	22JNCC-5000-G/SIL	2.8	16.65	15.82	14.99	13.32	11.66
41 D 6870	22KNCC-1000-G/SIL	6.3	17.35	16.48	15.62	13.88	12.15
41 D 6871	22KNCC-5000-G/SIL	2.8	18.50	17.58	16.65	14.80	12.95
41 D 6872	22KNCC-8000-G/SIL	2.3	19.05	18.10	17.15	15.24	13.34
41 D 6873	AT155 Socket Assembly.....		Each .45				

GENERAL-PURPOSE AC AND DC RELAYS







- For Production-Line Switching of Light to Medium Loads
- Mechanical Life of 10 Million Operations
- Heat-Resistant Sockets
- Contacts Rated 10 Amps

For high-efficiency, production line switching of light to medium power loads. .187" terminals may be soldered, quick-connect fastened, or plugged into standard relay sockets. Electrical life; 1 million operations at 28 VDC; 500,000 operations at 115 VAC. Mechanical life: 10 million operations. 10-ampere rated contacts, 1.2 watts nominal power. Temperature range: Min., —49°F; Max., AC: 1 and 2-pole, +131°F; DC, +158°F. Order solder terminal sockets or PC terminal sockets below. In table below: 68R1, SPDT; 68R2, DPDT; 68R3, 3PDT; 68R34, 3PDT with flanged case. ■U.L. Recognized. **From Japan. Wt., 3 oz.

AC TYPES

Stock No.	Mfr's Type	COIL DATA Nom. VAC	Ohms	Pickup mA. VAC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 5537	68R1-115AC-SCO	115	2250	98	3.20	3.04	2.88	2.56	2.24
41 D 5538	68R1-230AC-SCO	230	9110	196	3.50	3.33	3.15	2.80	2.45
41 D 5539	68R2-6AC-SCO	6	6	5.1	3.90	3.71	3.51	3.12	2.73
41 D 5540	68R2-115AC-SCO	115	2250	98	3.90	3.71	3.51	3.12	2.73
41 D 5541	68R2-230AC-SCO	230	9110	196	4.20	3.99	3.78	3.36	2.94
41 D 5542	68R3-115AC-SCO	115	2000	98	4.40	4.18	3.96	3.52	3.08
41 D 5543	68R3-230AC-SCO	230	7500	196	4.80	4.56	4.23	3.84	3.36

DC TYPES

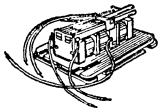
Stock	Mfr's	COIL DATA Nom. VDC	Ohms	Pickup Max. VDC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 5531	68R1-12DC-SCO	12	120	9	3.10	2.95	2.79	2.48	2.17
41 D 5532	68R2-12DC-SCO	12	120	9	3.50	3.33	3.15	2.80	2.45
41 D 5533	68R2-24DC-SCO	24	470	18	3.50	3.33	3.15	2.80	2.45
41 D 5534	68R3-12DC-SCO	12	120	9	4.00	3.80	3.60	3.20	2.80
41 D 5535	68R3-24DC-SCO	24	470	18	4.00	3.80	3.60	3.20	2.80
41 D 5536	68R3-110DC-SCO	110	10K	83	4.40	4.18	3.96	3.52	3.08
41 D 5549	AD40	Solder Terminal Socket			.70	.67	.63	.56	.49
41 D 5550	AD51	PC Terminal Socket			.80	.76	.72	.64	.56

AC AND DC TYPES

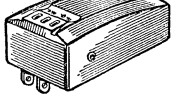
Flanged case for direct-chassis mounting.

41 D 5544	68R34-115AC-SCO	115 (AC)	2K	98	4.40	4.18	3.96	3.52	3.08
41 D 5545	68R34-230AC-SCO	230 (AC)	7.5K	196	4.80	4.56	4.32	3.84	3.36
41 D 5546	68R34-12DC-SCO	12	120	9	4.00	3.80	3.60	3.20	2.80
41 D 5547	68R34-24DC-SCO	24	470	18	4.00	3.80	3.60	3.20	2.80
41 D 5548	68R34-110DC-SCO	110	10K	83	4.40	4.18	3.96	3.52	3.08

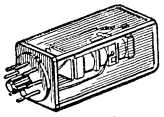
ALCO ISOLATION REMOTE RELAYS



FR-101, 102



FRE-103



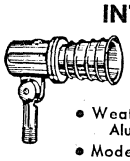
FRP-104

FR 101 and 102. Provide low voltage for high voltage circuits. Combine step-down transformer and sensitive AC relays in a single laminated-core construction. 110 VAC required for operation, but relay portion is activated by shorting the safe low voltage provided by the step-down transformer. Plastic cover. Max. load, 5 A @ 117 V. Oper. V, 95-125 V. Curr. consumed, 40 mA. Isolated V., under 30 V. 6" leads. Size with cover 2 1/8 x 1 3/4 x 1 1/4".

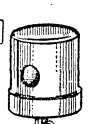
FRE-103 Plug-In. Similar to SPDT type FR-102, but with plug for standard wall outlet and 3-way receptacle to select normally open or normally closed controlling circuit. Miniature jack on side serves as plug-in for remote controlling unit. **FRP-104 Octal Plug.** Standard octal base plug added. Plastic dust cover. Free booklet containing 28 design ideas. Japan. Wt., 5 oz.

Stock No.	Type	Description	EACH 1-99	100-499	500-999
41 D 4292	FR-101	SPST-Basic	3.85	2.95	2.57
41 D 4293	FR-102	SPDT-Basic	4.45	3.51	2.97
41 D 4294	FRE-103	SPDT-Plug-In	4.95	3.79	3.30
41 D 4295	FRP-104	SPDT-Octal	5.45	4.18	3.63

INTERMATIC INDOOR-OUTDOOR PHOTOELECTRIC LIGHT-CONTROL DEVICES



A



B

- Weather-Resistant Aluminum Housings
- Modern, Dependable Printed Circuits
- Operate From Artificial or Natural Light

Turn lights on at dusk, off at dawn automatically. Modern printed circuits, housed in aluminum. Self-cleaning lens and moisture-proof photocell. Handle tungsten, mercury vapor, or fluorescent lights.

A MODEL K1611. Complete photocell and Par lamp holder in one unit. External switch leg provides instantaneous control of other light clusters. 1000 watts. For 125 V, 60 Hz AC. Shpg. wt., 1 lb.
58 D 8337.....11.02

B SERIES K1100. Adjustable stem permits mounting at almost any angle up to 80°. With light-selective louvers. 2 fc on, 5 fc off. Handle tungsten, mercury vapor, or fluorescent lights. 1500 watts, 125 V, 60 Hz AC. Shpg. wt., ½ lb.
58 D 8341. K1121. 105-130 V.....13.62
58 D 8797. K1122. 208-240 V.....13.62

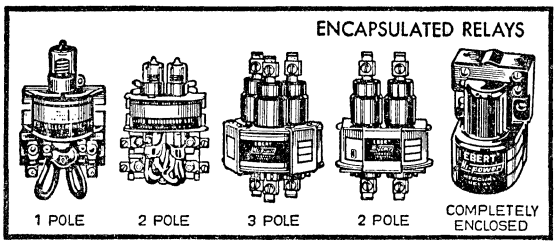
MODEL K1111. As above, but 650 watts.
58 D 8345. K1111. 105-130 V.....12.32
58 D 8798. K1112. 208-240 V.....12.32

**Designed and Made to Sigma Specifications in Japan

Ebert Mercury Relays, Amtron Solid-State Relays

EBERT RELAYS

MERCURY PLUNGER RELAYS



MINIATURE POWER RELAYS—20 AMPS—120 VAC

Compact units capable of handling loads nearly twice that of ordinary armature-type units of equal size. Hermetically sealed, mercury-to-mercury contacts. No contacts to pit, stick or corrode. Full rating with inductive or resistive loads. Coil current, .042 amp, single pole; .080 amp, 2-pole. MR-10, 3x1⅞x1½"; MR-12, 4x1⅞x 1½"; MR-14, 4½x3x1⅞". For 120 V, 50-60 Hz AC. 1¼ lbs.

Stock No.	Type	Description	EACH	2-49, EA.	50-99, EA.
41 D5467Z	MR-10	Single pole, N.O	10.89	8.36	7.76
41 D5468Z	MR-12	Single pole, N.C.	11.99	9.19	8.47
41 D5469Z	MR-14	2-pole, both N.O.	20.63	16.34	14.63
41 D5470Z	MR-14	2-pole,1N.O./1N.C.	21.07	16.99	15.29

STANDARD DUTY—35 AMPS—120 VAC

Rated 35 amps (per pole) at 120 VAC. Coil Operating Current EM-1, .050 amp; EM-4, .120 amp; EM-7, .220 amp. EM-1, 4¾x 2⅝x2½"; EM-4, 5⅜x3⅜x2½"; EM-7, 6¼x4x3⅜". For 120 V, 50-60 Hz AC. ■U.L. Recog. Av. shpg. wt., 2 lbs.

Stock No.	Type	Description	EACH	2-9, EA.	10-49, EA.
41 D 5471 Z	EM-1	Single pole, N.O.	15.35	11.28	10.45
41 D 5472 Z	EM-4	2-pole, both N.O.	25.30	19.80	18.59
41 D 5473 Z	EM-4	2-pole, 1 N.O./1N.C.	27.28	21.56	20.19
41 D 5474 Z	EM-7	3-pole, all N.O.	33.27	26.07	24.42

HEAVY-DUTY—60 AMPS—120 VAC

Type HD-1 rated 60 amps for 120 V and 35 amps for 240 V, 60 Hz AC. Type HD-4 2-pole relay; each pole, 60 amps at 120 V, and 35 amps at 240 V. Type HD-7 3-pole relay; each pole, 60 amps at 120 V, and 35 amps at 240 V. For 120 V, 60 Hz AC only. ■U.L. Recog. Sizes: *2⅜x5¼x3¾"; †2⅜x5¾x3¾"; §3⅜x6⅝x4". 3 lbs.

41 D 5475 Z	HD-1	Single pole, N.O.*	17.32	13.64	12.81
41 D 5476 Z	HD-4	2-pole, both N.O.†	31.95	24.31	23.05
41 D 5477 Z	HD-7	3-pole, all N.O.§	42.57	32.72	31.07

"100" RELAY—100 AMPS—120 VAC

Front-mounted load and coil terminals. Rated 100 amps at 120 V, AC or 12 kW resistive load capacity. Coil operating current, .260 amps. 7x3½x3⅜". For 120 V 60 Hz AC. 4 lbs.

41 D 5478 Z	100	Single pole, N.O.	35.75	27.22	25.85

"HI-POWER" ENCAPSULATED RELAYS

High performance relays have hermetically sealed steel shells with ceramic lined electrode chamber, epoxy insulation. Similar to above relays, but with higher current capacity, maximum reliability. Impervious to physical or thermal shock, moisture and dirt. Types S and T completely encapsulated. Rated to switch loads up to 550 volts AC. Specify coil voltage.

TYPE A—25 AMPS MINIATURE POWER—120 VAC

Sizes: A-1, 4¼x3x2¼"; A-11, 4¼x4¼x2½". 2 lbs.

Stock No.	Mfr's Type	Description	EACH 1-9	10-99	100-249
41 D 5479 Z	A-1	Single pole, N.O.	13.80	12.50	11.90
41 D 5480 Z	A-11	2-pole, both N.O.	24.65	22.20	21.10

TYPE B—50 AMPS STANDARD DUTY—120 VAC

B-1, 4¾x3x2¼"; B-11, 4¾x4¼x2½"; B-111, 4¾x4¼x3½". 3 lbs.

41 D 5481 Z	B-1	Single pole, N.O.	17.50	15.95	15.20
41 D 5482 Z	B-11	2-pole, both N.O.	29.75	26.90	25.55
41 D 5483 Z	B-111	3-pole, both N.O.	41.05	36.95	35.10

TYPE H—100 AMPS HEAVY DUTY—120 VAC

Sizes: H-1, 7½x4x3½"; H-11, 7½x6½x4". 6 lbs.

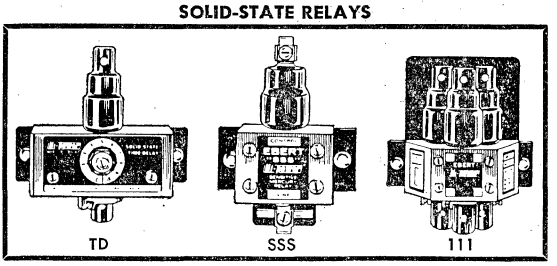
41 D 5484 Z	H-1	Single pole, N.O.	47.70	42.95	40.80
41 D 5485 Z	H-11	2-pole, both N.O.	78.90	71.00	67.45

TYPE S (25 AMP) AND T (50 AMP) COMPLETELY ENCAPSULATED

Epoxy case, sealed; molded term. S-1, 3½x1¾x1⅝"; T-1, 3⅞x2x 1⅞". Shpg., wt., 1 lb.

41 D 5486 Z	S-1	Single pole, N.O.	16.30	14.70	14.00
41 D 5487 Z	T-1	Single pole, N.O.	19.90	17.95	17.10

SOLID-STATE RELAYS



TD HIGH-POWER TIME DELAY RELAYS

Single-pole, N.O. Mercury-to-mercury contacts. Delay circuit resets upon completion of delay. Load contacts are totally isolated from delay circuit and are capable of switching loads to 550 VAC. Range, —10° to +65° C. Repeatability, ±2%. Hermetically sealed. Sizes: TD-A, 4¾6x3x2¼"; TD-B, 4¾x3x2¼"; TD-H, 6¾x4x3⅝". Delay operates from 120 VAC. *In seconds. Av. shpg. wt., 2 lbs.

25 AMPS AT 120 VAC/15 AMPS AT 550 VAC

Stock No.	Mfr's Type	*Time Range	EACH 1-9	10-99	100-Up
41 D 5350 Z	TD-A-1-.1-15S-120VAC	.1-15	30.80	29.50	28.90
41 D 5351 Z	TD-A-1-.1-60S-120VAC	.1-60	30.80	29.50	28.90
41 D 5352 Z	TD-A-1-.1-120S-120VAC	.1-120	30.80	29.50	28.90

50 AMPS AT 120 VAC/25 AMPS AT 550 VAC

41 D 5353 Z	TD-B-1-.1-15S-120VAC	.1-15	34.50	32.95	32.30
41 D 5354 Z	TD-B-1-.1-60S-120VAC	.1-60	34.50	32.95	32.30
41 D 5355 Z	TD-B-1-.1-120S-120VAC	.1-120	34.50	32.95	32.30

100 AMPS AT 120 VAC/70 AMPS AT 550 VAC

41 D 5356 Z	TD-H-1-.1-15S-120VAC	.1-15	64.40	59.95	57.80
41 D 5357 Z	TD-H-1-.1-60S-120VAC	.1-60	64.40	59.95	57.80
41 D 5358 Z	TD-H-1-.1-120S-120VAC	.1-120	64.40	59.95	57.80

SSS HI-SENSITIVE MERCURY CONTACT RELAYS

For uses requiring close differential or highly sensitive controls. Single-pole, N.O., energized by current of less than 0.250 mA. Fully encapsulated for total isolation. *25A @ 120VAC/15A @ 550 VAC. †50A @ 120VAC/25A @ 550VAC. ‡100A @ 120VAC/70A @ 550 VAC. Av. shpg. wt., 1½ lbs.

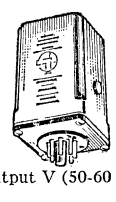
Stock No.	Mfr's Type	Cont. Rating	Size	EACH 1-9	10-99	100-Up
41 D 5310 Z	A-1-SSS-120VAC	*	4⅜6x3x2¼"	23.80	22.50	21.90
41 D 5311 Z	B-1-SSS-120VAC	†	4¾x3x2¼"	27.50	25.95	25.20
41 D 5312 Z	H-1-SSS-120VAC	‡	6¾x4x3⅝"	57.50	52.95	50.80

111 HIGH-RELIABILITY TEMPERATURE CONTROL RELAYS

For all close-differential or chattering temperature controls. Provides smooth, continuous load operation regardless of erratic control signals from thermal or other low-current devices. Three-pole N.O. units. Explanation of contact ratings above. Av. wt., 2 lbs.

41 D 5313 Z	A-111-A-2-120VAC	*	4⅜6x4⅝6x3⅞"	50.85	47.30	45.70
41 D 5314 Z	B-111-A-2-120VAC	†	4¾x4⅝6x3⅞"	56.05	51.95	50.10
41 D 5316 Z	H-111-A-2-120VAC	‡	6¾x6½x4¼"§	135.00	123.00	117.60

AMTRON ER SERIES HIGH-SPEED SPST N. O. SOLID-STATE RELAYS



Solid-state ER Series solid-state relays can be used as direct replacement for standard octal base electro-mechanical relays. High-speed contact action is SPST N.O. long-life design. No moving parts, no contact bounce. Accommodate inductive loads such as solenoids in valves and actuators. †Nominal, ±20%. AC types for 50/60 Hz; DC, 10 mA. Output isolated from input for maximum circuit control. Output load, 2.5 amperes resistive or inductive. Size, 2x2x3" (less plug pins). *Designates switching output V (50-60 Hz). Av. shpg. wt., 6 oz.

Stock No.	Type/ Input V†	*	EACH 1-9	10-24	25-49	50-99
41 D 7381	ER115-12VAC	115	22.50	21.60	19.80	18.90
41 D 7382	ER115-24VAC	115	22.50	21.60	19.80	18.90
41 D 7383	ER115-115VAC	115	22.50	21.60	19.80	18.90
41 D 7384	ER230-12VAC	230	24.50	23.60	21.80	20.90
41 D 7387	ER115-12VDC	115	27.00	25.88	24.75	23.63
41 D 7388	ER115-24VDC	115	27.00	25.88	24.75	23.63
41 D 7389	ER115-110VDC	115	27.00	25.88	24.75	23.63

■Recognized Under Component Program of Underwriter's Laboratories, Inc.

Dormeyer Solenoids

Figures A and B are Super-D box-frame solenoids: quiet, cool operation; greater heat dissipation; high seating pull; anti-residual spring; phenolic bobbin; high temperature rating. Figures C and D are Super-U folded-frame light-duty solenoids for use where quiet seating pull is not vital. Figures E and F are C-1 general-purpose solenoids: zinc-dichromate coating; moisture-resistant or moisture-proof coils; high temperature rating. Fig. G is Super-T laminated solenoid: zinc-dichromate coating; bakelite bobbin; stainless-steel anti-residual spring. Figure H is C-1 machine-tool laminated solenoid for heavy-duty service; zinc-dichromate coating. Figure J types are compact, low-cost tubulars. simplified stud mount with anti-turn feature; low-residual force: stainless-steel plunger cavity; friction reducing coating on plungers; Fig. K, push-type version of Fig. J, with built-in return-spring.

AC TYPES (Specify Mfr's Type No., Volts, and Duty)

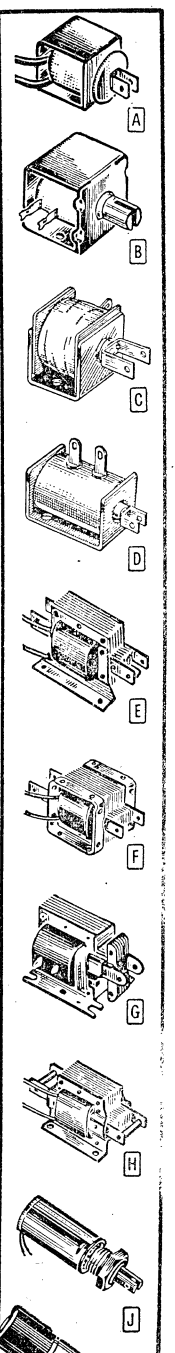
*Intermittent. †Continuous. §Push-Pull. Av. shpg. wt., 1½ lbs.

Stock No.	Mfr's Type	Fig.	V	Ohms	A	Max. Stroke (In.)	Max. Lift (Oz.)	HxWxD	EACH 1-24	25-49	50-99	100-249	250-499	500-999
41 D 7894	B18-507-A-3	A	*115	964	.07	¼	19	¾x¾x4 9/64"	2.91	2.72	2.18	1.81	1.38	1.17
41 D 7895	B18-7-A-3	A	†115	1500	.04	¼	13	¾x¾x4 9/64"	2.91	2.72	2.18	1.81	1.38	1.17
41 D 7896	B20-501-A-1	B	*115	338	.12	½	32	15/16x1 3/16x1 9/64"	3.15	2.97	2.37	1.98	1.50	1.26
41 D 7897	B20-1-A-1	B	†115	580	.03	½	13	15/16x1 3/16x1 9/64"	3.15	2.97	2.37	1.98	1.50	1.26
41 D 7898	B21-1-A-1	B	†115	234	.10	⅝	32	1 5/16x1 5/16x1 13/64"	3.44	3.22	2.59	2.15	1.63	1.38
41 D 7900	B22-1-A-1	B	†115	119	.12	1	29	1 15/32x1 5/16x1 39/64"	4.50	4.22	3.39	2.81	2.14	1.80
41 D 7902	B24-1-A-1	B	†115	173	.11	1¼	16	15/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7904	C9-519-A-14	C	*115	74	.37	½	80	1 13/32x1 3/8x1 1/16"	2.45	2.14	1.84	1.53	1.18	1.03
41 D 7906	C9-19-A-14	C	†115	172	.13	½	50	1 13/32x1 3/8x1 1/16"	2.50	2.18	1.88	1.56	1.21	1.05
41 D 7907	C15-519-A-14	C	*115	220	.18	½	55	1x1 1/16x1 9/64"	2.26	1.97	1.69	1.41	1.08	.95
41 D 7908	388-1	C	†115	113	.245	½	72	1 13/32x1 3/8x1 27/32"	2.50	2.19	1.88	1.58	1.21	1.05
41 D 7909	389-1	C	*115	79	.360	½	80	1 13/32x1 3/8x1 27/32"	2.45	2.15	1.84	1.54	1.18	1.02
41 D 7910	430-1	D	†115	500	.083	½	16	7/8x¾x1 5/8"	2.22	1.93	1.65	1.39	1.06	.89
41 D 7911	431-1	D	*115	291	.174	½	35	7/8x¾x1 5/8"	2.17	1.90	1.63	1.37	1.04	.87
41 D 7912	1-1	E	*115	21	.55	1	144	2 3/32x1 25/32x2 1/2"	5.87	5.50	4.41	3.69	2.79	2.35
41 D 7913	6-1	E	†115	51	.23	1	64	2 3/32x1 25/32x2 1/2"	5.87	5.50	4.41	3.69	2.79	2.35
41 D 7914	11-1	E	*115	1.7	2.7	1½	800	3 1/16x2 1/4x3 5/8"	10.49	9.84	7.86	6.59	4.99	4.19
41 D 7915	10-1	E	†115	6.4	.63	1½	288	3 1/16x2 1/4x3 5/8"	10.49	9.84	7.86	6.59	4.99	4.19
41 D 7916	447-1	E	*115	1	4.2	2	800	3 1/16x2 5/8x3 5/8"	12.57	11.79	9.42	7.85	5.99	5.03
41 D 7917	158-1	E	†115	3.54	.8	2	256	3 1/16x2 5/8x3 5/8"	12.57	11.79	9.42	7.85	5.99	5.03
41 D 7918	§16-1	E	*115	23	.56	1	112	2 3/32x1 25/32x2 1/2"	6.92	6.49	5.18	4.34	3.30	2.77
41 D 7919	§14-1	E	†115	56	.21	1	96	2 3/32x1 25/32x2 1/2"	6.92	6.49	5.18	4.34	3.30	2.77
41 D 7920	§149-1	F	*115	1.94	2.9	2	768	3 1/4x2 1/16x3 1/4"	15.77	14.78	11.83	9.86	7.48	6.31
41 D 7921	§45-1	F	†115	7.1	.68	2	320	3 1/4x2 1/16x3 1/4"	15.77	14.78	11.83	9.86	7.48	6.31
41 D 7922	§446-1	F	*115	1.07	3.8	2	608	3 1/4x3 1/16x3 1/4"	18.60	17.43	13.95	11.62	8.86	7.43
41 D 7923	§229-1	F	†115	3.95	1.42	2	224	3 1/4x3 1/16x3 1/4"	18.60	17.43	13.95	11.62	8.86	7.43
41 D 7924	1000-M-1	G	†115	88	13	¾	80	1 7/16x1 7/16x2 1/4"	4.95	4.63	3.71	3.10	2.47	2.08
41 D 7925	1500-M-1	G	*115	57.2	.38	¾	112	1 7/16x1 7/16x2 1/4"	4.95	4.63	3.71	3.10	2.47	2.08
41 D 7926	1001-M-1	G	†220	35.4	.065	¾	80	1 7/16x1 7/16x2 1/4"	5.12	4.80	3.83	3.20	2.56	2.15
41 D 7927	2005-M-1	G	†115	20.5	.41	1 1/16	176	2 1/16x1 13/16x3"	6.06	5.73	4.62	3.80	3.03	2.58
41 D 7928	2255-M-1	G	*115	18.3	.54	1 1/16	192	2 1/16x1 13/16x3"	5.89	5.60	4.49	3.69	2.92	2.46
41 D 7929	2006-M-1	G	†220	81.6	.20	1 1/16	176	2 1/16x1 13/16x3"	6.23	5.89	4.76	3.91	3.12	2.65
41 D 7930	2536-M-1	G	†115	14.9	.45	1 1/16	256	2 1/16x2 1/16x3"	7.34	6.86	5.49	4.60	3.65	3.06
41 D 7931	2786-M-1	G	*115	11.7	.77	1 1/16	392	2 1/16x2 1/16x3"	6.89	6.43	5.15	4.34	3.45	2.91
41 D 7932	3000-M-1	G	†115	6.2	.60	1 3/8	352	2 15/16x2 3/8x3 13/16"	9.21	8.62	6.93	5.81	4.61	3.93
41 D 7933	3500-M-1	G	*115	4.8	1.15	1 3/8	416	2 15/16x2 3/8x3 13/16"	8.56	7.98	6.35	5.38	4.26	3.61
41 D 7934	3001-M-1	G	†220	26.1	.30	1 3/8	352	2 15/16x2 3/8x3 13/16"	9.39	8.79	7.07	5.91	4.69	3.99
41 D 7935	§7110-2A	H	*110	14.9	.85	1 3/32	208	2 3/32x2 3/16x4 3/16"	11.29	10.58	8.47	7.07	5.37	4.52

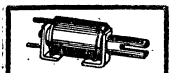
DC TYPES (Specify Mfr's Type No., Volts, and Duty)

*Intermittent. †Continuous. ‡Pulse. Av. shpg. wt., 1½ lbs.

41 D 7936	B18-760-A-3	A	*12	24.2	.50	¼	14	¾x¾x5 9/64"	2.91	2.72	2.18	1.81	1.38	1.17
41 D 7937	B18-259-A-3	B	†24	119	.2	¼	11	¾x¾x5 9/64"	2.91	2.72	2.18	1.81	1.38	1.17
41 D 7938	B21-754-A-1	B	*12	7	1.7	⅝	72	1 5/16x1 5/16x1 13/64"	3.44	3.22	2.59	2.15	1.63	1.38
41 D 7939	B22-754-A-1	B	*12	5.3	2.3	1	144	1 15/32x1 5/16x1 39/64"	4.50	4.22	3.39	2.81	2.14	1.80
41 D 7940	B24-255-A-1	B	†6	4	1.5	1¼	60	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7941	B24-755-A-1	B	*6	1.6	3.8	1¼	96	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7942	B24-754-A-1	B	*12	6.3	1.9	1¼	96	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7943	B24-253-A-1	B	†24	60	.4	1¼	60	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7944	B24-753-A-1	B	*24	25.4	.95	1¼	96	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7945	B24-251-A-1	B	†115	1348	.09	1¼	60	1 5/16x1 5/16x2"	4.25	4.00	3.18	2.66	2.04	1.70
41 D 7946	B25-754-A-1	B	*12	5.7	2.1	2	104	1 15/32x1 5/16x2 1/2"	6.14	5.76	4.62	3.84	2.93	2.46
41 D 7947	C8-772-A-14	C	*12	14.8	.81	½	26	1 3/16x¾x1 1/8"	1.97	1.72	1.48	1.24	.96	.83
41 D 7948	C8-271-A-14	C	†24	126	.19	½	13	1 3/16x¾x1 1/8"	2.05	1.80	1.55	1.31	.99	.86
41 D 7949	C8-269-A-14	C	†115	2400	.05	½	13	1 3/16x¾x1 1/8"	2.11	1.85	1.59	1.32	1.02	.89
41 D 7950	C8-769-A-14	C	*115	1500	.08	½	26	1 3/16x¾x1 1/8"	2.01	1.75	1.50	1.26	.97	.84
41 D 7952	P2-1L	J	†12	39	.33	¼	11	1x1½" dia.	4.74	4.17	3.59	3.00	2.29	2.03
41 D 7953	P2-2L	J	†24	167.5	.15	¼	11	1x1½" dia.	4.86	4.29	3.69	3.08	2.35	2.08
41 D 7954	P2-101L	J	*12	30.5	.42	¼	15	1x1½" dia.	4.74	4.17	3.59	3.00	2.29	2.03
41 D 7955	P2-201L	J	‡12	6.85	1.85	5/16	24	1x1½" dia.	4.74	4.17	3.59	3.00	2.29	2.03
41 D 7956	P2-202L	J	‡24	30.5	.83	5/16	24	1x1½" dia.	4.86	4.29	3.69	3.08	2.35	2.08
41 D 7957	P4-1L	J	†12	23.25	.55	½	45	1½x¾" dia.	5.63	4.97	4.26	3.57	2.72	2.40
41 D 7958	P4-2L	J	†24	99	.26	½	45	1½x¾" dia.	5.75	5.07	4.36	3.64	2.78	2.46
41 D 7959	P4-101L	J	*12	15.25	.83	⅝	55	1½x¾" dia.	5.63	4.97	4.26	3.57	2.72	2.40
41 D 7960	P4-202L	J	‡24	15.25	1.7	⅝	70	1½x¾" dia.	5.75	5.07	4.36	3.64	2.78	2.46
41 D 7961	P6-1L	J	†12	19.5	.65	⅝	100	2x1" dia.	6.76	5.96	5.11	4.27	3.27	2.89
41 D 7962	P6-2L	J	†24	82	.31	⅝	100	2x1" dia.	6.88	6.07	5.21	4.36	3.32	2.94
41 D 7963	P6-101L	J	*12	8.4	1.5	⅝	125	2x1" dia.	6.76	5.96	5.11	4.27	3.27	2.89
41 D 7964	P6-202L	J	‡24	14.25	1.8	⅝	150	2x1" dia.	6.88	6.07	5.21	4.36	3.32	2.94
41 D 7965	P8-1L	K	†12	39	.33	¼	6	2x½" dia.	6.13	5.39	4.62	3.86	2.93	2.58
41 D 7966	P8-2L	K	†24	167.5	.15	¼	6	2x½" dia.	6.30	5.55	4.76	3.96	3.01	2.66
41 D 7967	P8-101L	K	*12	30.5	.42	¼	11	2x½" dia.	6.13	5.39	4.62	3.86	2.93	2.58
41 D 7968	P8-201L	K	‡12	6.9	1.85	¼	20	2x½" dia.	6.13	5.39	4.62	3.86	2.93	2.58
41 D 7969	P8-202L	K	‡24	30.5	.83	¼	20	2x½" dia.	6.30	5.55	4.76	3.96	3.01	2.66
41 D 7970	P10-1L	K	†12	23.3	.55	¼	40	2.6x¾" dia.	7.29	6.43	5.50	4.60	3.50	3.08
41 D 7971	P10-2L	K	†24	101.5	.26	¼	40	2.6x¾" dia.	7.47	6.57	5.64	4.70	3.58	3.15
41 D 7972	P10-101L	K	*12	15.3	.83	¼	48	2.6x¾" dia.	7.29	6.43	5.50	4.60	3.50	3.08



Guardian Solenoids and Solenoid Switches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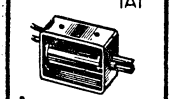
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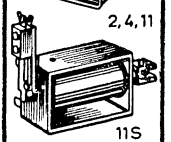
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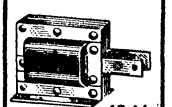
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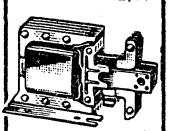
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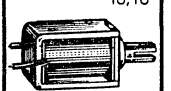
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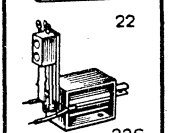
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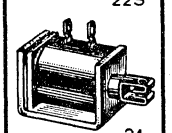
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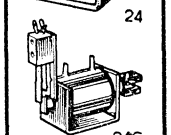
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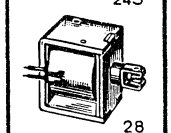
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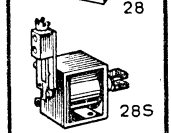
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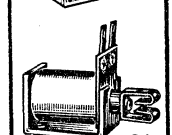
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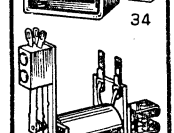
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INDUSTRIAL AC AND DC SOLENOIDS

Solenoids and solenoid switches available for AC or DC; intermittent or continuous duty operation. Intermittent-duty coils should not be energized for more than 5 consecutive minutes or be permitted to rise more than 85°C above 25°C ambient without time for cooling between cycles. Continuous-duty types will not have a temperature rise of more than 85°C at rated voltage and ambient. **Guardian solenoid switches** (Suffix "S" in Mfr's Type No.) have SPDT molded switch rated 10 A at 115 VAC, are for use where switching SPDT contacts is required, without addition of a relay in circuit. Intermittent duty Solenoid Switch can give continuous duty performance with the use of an external resistor in conjunction with the switch. HD in Mfr's Type No. indicates heavy-duty. **Be sure to specify "Intermittent" or "Continuous" duty when ordering.**

AC TYPES (SPECIFY TYPE NO., VOLTS AND DUTY)

DUTY: *INTERMITTENT OR †CONTINUOUS

Stock No.	Mfr's Type	Volts	Ohms	Stroke and Lift, Ounces @ Inches Min.	Stroke and Lift, Ounces @ Inches Max.	Size, Inches (HxWxL)	Shpg. Wt., Oz.	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 5890	1A1*	115	300	8 @ 1/8"	2 @ 1/2"	1 1/16x1 5/16x1 3/4	4 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5891	1A1†	115	675	3 @ 1/8"	.5 @ 3/4"	1 1/16x1 5/16x1 3/4	4 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5154	2*	115	60	33 @ 1/8"	4.5 @ 7/8"	1 5/8x1 7/16x1 9/16	10	3.68	3.31	3.13	2.94	2.58	2.39
41 D 5155	2†	115	166	10 @ 1/8"	1.5 @ 7/8"	1 5/8x1 7/16x1 9/16	10	3.68	3.31	3.13	2.94	2.58	2.39
41 D 6076	2HD*	115	36	38 @ 1/8"	16 @ 3/4"	1 11/16x1 7/16x1 13/16	13	8.66	7.79	7.36	6.93	6.66	5.63
41 D 6077	2HD†	115	113	17 @ 1/8"	4 @ 3/4"	1 11/16x1 7/16x1 13/16	13	8.66	7.79	7.36	6.93	6.66	5.63
41 D 5341	3HD*	115	25	96 @ 1/16"	13 @ 7/8"	1 5/8x1 7/16x1 25/32	14	6.00	5.40	5.10	4.80	4.50	3.90
41 D 5342	3HD†	115	100	24 @ 1/16"	2 @ 7/8"	2 19/32x1 7/16x1 25/32	14	6.00	5.40	5.10	4.80	4.50	3.90
41 D 5892	4*	115	37	23 @ 1/8"	22 @ 1"	1 5/8x1 7/16x2	14 1/2	4.20	3.78	3.57	3.36	2.94	2.73
41 D 5893	4†	115	133	8 @ 1/8"	6 @ 1"	1 5/8x1 7/16x2	14 1/2	4.20	3.78	3.57	3.36	2.94	2.73
41 D 7547	11*	24	3.5	25 @ 1/8"	6 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 7548	11†	24	8	12 @ 1/8"	1 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5830	11S*	115	85	25 @ 1/8"	6 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	4.15	3.73	3.53	3.32	2.90	2.70
41 D 7549	11*	115	85	25 @ 1/8"	6 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 7550	11†	115	200	12 @ 1/8"	1 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5831	11S†	115	200	12 @ 1/8"	1 @ 1"	1 3/16x1 27/32x1 5/16	7 1/2	4.15	3.73	3.53	3.32	2.90	2.70
41 D 5828	12*	115	100	32 @ 1/8"	4 @ 1"	1 7/16x1 3/16x1 5/8	6	4.46	4.01	3.79	3.57	3.12	2.90
41 D 5829	12 †	115	150	22 @ 1/8"	6 @ 3/4"	1 7/16x1 3/16x1 5/8	6	4.46	4.01	3.79	3.57	3.12	2.90
41 D 5894	14*	115	11	110 @ 1/8"	50 @ 1 1/2"	2 1/16x1 15/16x2 7/16	19	6.04	5.44	5.13	4.83	4.23	3.93
41 D 5895	14†	115	18	60 @ 1/8"	35 @ 1 1/2"	2 1/16x1 15/16x2 7/16	19	6.04	5.44	5.13	4.83	4.23	3.93
41 D 5156	16*	115	41	90 @ 1/8"	30 @ 3/4"	1 7/16x1 1/4x1 5/8	7 1/2	3.68	3.31	3.13	2.94	2.58	2.39
41 D 5885	16†	115	85	50 @ 1/8"	10 @ 3/4"	1 7/16x1 1/4x1 5/8	7 1/2	3.68	3.31	3.13	2.94	2.58	2.39
41 D 6320	16†	230	350	50 @ 1/8"	10 @ 3/4"	1 7/16x1 1/4x1 5/8	7 1/2	3.94	3.55	3.35	3.15	2.76	2.56
41 D 5157	18*	115	8.8	280 @ 1/8"	80 @ 1"	2 1/16x1 13/16x2 1/2	16 1/2	4.99	4.49	4.24	3.99	3.49	3.24
41 D 5886	18†	115	19.7	145 @ 1/8"	40 @ 1"	2 1/16x1 13/16x2 1/2	16 1/2	4.99	4.49	4.24	3.99	3.49	3.24
41 D 7552	18*	230	45	280 @ 1/8"	80 @ 1"	2 1/16x1 13/16x2 1/2	16 1/2	5.25	4.73	4.46	4.20	3.68	3.41
41 D 6321	18†	230	78	145 @ 1/8"	40 @ 1"	2 1/16x1 13/16x2 1/2	16 1/2	5.25	4.73	4.46	4.20	3.68	3.41
41 D 7554	24†	115	500	10 @ 1/16"	2 @ 5/8"	1x2 7/32x1 1/4	3	3.41	3.07	2.90	2.73	2.39	2.22
41 D 5833	24S†	115	500	10 1/2 @ 1/16"	2 @ 5/8"	1x2 7/32x1 1/4	3	4.41	3.97	3.75	3.52	3.09	2.87
41 D 6089	28†	24	17.4	20 @ 1/16"	2.5 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 6092	28*	115	220	35 @ 1/16"	5 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	3.41	3.07	2.90	2.73	2.39	2.22
41 D 6093	28†	115	400	20 @ 1/16"	2.5 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	3.41	3.07	2.90	2.73	2.39	2.22
41 D 5835	28S†	115	400	20 @ 1/16"	2.5 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	3.94	3.54	3.30	3.15	2.75	2.56
41 D 6075	34†	115	865	7 @ 1/16"	.5 @ 1/2"	1 7/64x 3/4x1 1/8	2 1/2	2.31	2.08	1.96	1.85	1.62	1.50
41 D 5837	34S†	115	865	7 @ 1/16"	.5 @ 1/2"	1 7/64x 3/4x1 1/8	2 1/2	3.31	2.98	2.81	2.65	2.32	2.15

DC TYPES (SPECIFY TYPE NO., VOLTS AND DUTY)

DUTY: *INTERMITTENT OR †CONTINUOUS

Stock No.	Mfr's Type	Volts	Ohms	Stroke and Lift, Ounces @ Inches Min.	Stroke and Lift, Ounces @ Inches Max.	Size, Inches (HxWxL)	Shpg. Wt., Oz.	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 7406	2HD*	24	20	100 @ 1/8"	5 @ 3/4"	1 11/16x1 7/16x1 25/32	13	8.93	8.04	7.59	7.14	6.25	5.81
41 D 7407	2HD†	24	64	50 @ 1/8"	1 @ 5/8"	1 11/16x1 7/16x1 25/32	13	8.93	8.04	7.59	7.14	6.25	5.81
41 D 5339	3HD*	24	21	160 @ 1/16"	8 @ 3/4"	2 19/32x1 7/16x1 5/8	14	6.00	5.40	5.10	4.80	4.50	3.90
41 D 5340	3HD†	24	52	100 @ 1/16"	3 @ 3/4"	2 19/32x1 7/16x1 5/8	14	6.00	5.40	5.10	4.80	4.50	3.90
41 D 7559	4*	24	15	110 @ 1/8"	4 @ 1"	1 5/8x1 7/16x2 1/16	14 1/2	4.20	3.78	3.57	3.36	2.94	2.73
41 D 7560	4†	24	54	55 @ 1/8"	2.5 @ 7/8"	1 5/8x1 7/16x2 1/16	14 1/2	4.20	3.78	3.57	3.36	2.94	2.73
41 D 7561	4*	115	346	110 @ 1/8"	4 @ 1"	1 5/8x1 7/16x2 1/16	14 1/2	4.46	4.01	3.79	3.57	3.12	2.90
41 D 7408	4HD*	24	15	156 @ 1/8"	21 @ 3/4"	1 5/8x1 7/16x2 3/16	15	6.41	5.77	5.35	5.13	4.49	4.17
41 D 7409	4HD†	24	50	70 @ 1/8"	1 @ 3/4"	1 5/8x1 7/16x2 3/16	15	6.41	5.77	5.35	5.13	4.49	4.17
41 D 5595	11*	6	2	34 @ 1/8"	2 @ 7/8"	1 3/16x1 5/16x1 7/8	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 6318	11†	6	4.5	25 @ 1/8"	1 @ 7/8"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5596	11*	24	32	34 @ 1/8"	2 @ 7/8"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 6319	11†	24	72	25 @ 1/8"	1 @ 7/8"	1 3/16x1 27/32x1 5/16	7 1/2	3.15	2.84	2.68	2.52	2.21	2.05
41 D 5851	11S†	24	72	25 @ 1/8"	2 @ 3/4"	1 3/16x1 27/32x1 5/16	7 1/2	4.15	3.73	3.53	3.32	2.90	2.70
41 D 7563	22*	6	4	24 @ 1/16"	1 @ 3/8"	3/4x3/4x1 1/4	2 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 7564	22†	6	9	13 @ 1/16"	.5 @ 3/8"	3/4x3/4x1 1/4	2 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 7565	22*	24	60	24 @ 1/16"	1 @ 3/8"	3/4x3/4x1 1/4	2 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 7566	22†	24	144	13 @ 1/16"	.5 @ 3/8"	3/4x3/4x1 1/4	2 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 5853	22S†	24	144	13 @ 1/16"	.5 @ 3/8"	2 1/32x 3/4x1 9/16	2 1/2	3.94	3.54	3.30	3.15	2.75	2.56
41 D 6094	28*	6	3.3	35 @ 1/16"	2 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 6096	28*	12	13	35 @ 1/16"	2 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 6097	28†	12	27	24 @ 1/16"	1 @ 3/8"	1 3/16x1 5/16x1 1/8	3 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 6098	28*	24	50	35 @ 1/16"	2 @ 1/2"	1 3/16x1 5/16x1 1/8	3 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 6099	28†	24	104	24 @ 1/16"	1 @ 3/8"	1 3/16x1 5/16x1 1/8	3 1/2	2.94	2.65	2.50	2.35	2.06	1.91
41 D 5854	28S*	24	50	35 @ 1/16"	2 @ 1/2"	2 1/4x1 5/16x1 9/16	3 1/2	3.94	3.54	3.30	3.15	2.75	2.56
41 D 5855	28S†	24	104	24 @ 1/16"	1 @ 3/8"	2 1/4x1 5/16x1 9/16	3 1/2	3.94	3.54	3.30	3.15	2.75	2.56
41 D 7402	34*	6	4	17 @ 1/16"	1 @ 7/16"	1 7/64x 3/4x1 1/8	2 1/2	2.31	2.08	1.96	1.85	1.62	1.50
41 D 5856	34S*	24	66	17 @ 1/16"	1 @ 7/16"	2 5/64x 3/4x 9/16	2 1/2	3.31	2.98	2.81	2.65	2.32	2.15
41 D 5857	34S†	24	145	8 1/2 @ 1/16"	.5 @ 1/4"	2 5/64x 3/4x 9/16	2 1/2	3.31	2.98	2.81	2.65	2.32	2.15

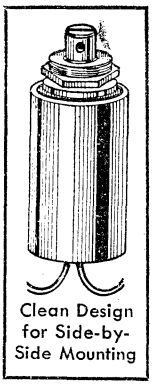
Call Your Nearest Allied Facility for Quick, Friendly Service

Guardian Solenoids, Step, Latching Relays

24 VDC TUBULAR TYPE SOLENOIDS

Rugged and reliable tubular type solenoids for 24 VDC continuous or intermittent duty, with pull-type operation that lifts up to 11 lbs. Intermittent duty coils should not be energized for more than 5 consecutive minutes or permitted to rise more than 85°C above 25°C ambient temperature without time for cooling between operations. Continuous duty types will not have temperature rise of more than 85°C above 25°C ambient at rated voltage. Clean design permits side-by-side mounting. Threaded bushing for mounting in hole; nut furnished. Life at rated load, 10,000,000 operations minimum. Write for 500-999 prices.

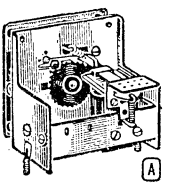
Stock No.	Mfr's Type	Duty	Ohms	Stroke and Lift Ounces @ Inches Min.	Stroke and Lift Ounces @ Inches Max.	Size L. x Dia.	Shpg. Wt., Oz.	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5045	T3.5X9	Int.	58	11 @ 1/32	.5 @ 1/2	1 1/8x7/16"	2	3.10	2.79	2.64	2.48	2.17
41 D 5046	T3.5X9	Cont.	295	8 @ 1/32	.25 @ 5/16	1 1/8x7/16"	2	3.20	2.88	2.72	2.57	2.24
41 D 5047	T4X7	Int.	82	12 @ 1/32	.5 @ 1/4	7/8x1/2"	7	4.20	3.78	3.57	3.36	2.94
41 D 5048	T4X7	Cont.	240	4 @ 1/32	.25 @ 5/32	7/8x1/2"	7	4.30	3.87	3.65	3.44	3.01
41 D 5049	T4X12	Int.	48	15 @ 1/32	.5 @ 5/8	1 1/2x1/2"	9	4.50	4.05	3.83	3.60	3.15
41 D 5050	T4X12	Cont.	220	6 @ 1/32	.25 @ 5/16	1 1/2x1/2"	9	4.60	4.14	3.91	3.68	3.22
41 D 5051	T4X16	Int.	29	17 @ 1/32	.5 @ 1 3/16	2x1/2"	15	4.80	4.32	4.08	3.84	3.36
41 D 5052	T4X16	Cont.	145	10 @ 1/32	.5 @ 7/8	2x1/2"	15	4.90	4.41	4.16	3.92	3.43
41 D 5062	T6X12	Int.	48	35 @ 1/16	1 @ 5/8	1 1/2x3/4"	14	5.00	4.50	4.25	4.00	3.50
41 D 5063	T6X12	Cont.	125	20 @ 1/16	1 @ 1/2	1 1/2x3/4"	14	5.10	4.59	4.33	4.08	3.57
41 D 5053	T8X9	Int.	30	50 @ 1/16	1 @ 9/16	1 1/8x1"	16	5.15	4.63	4.38	4.12	3.60
41 D 5054	T8X9	Cont.	130	15 @ 1/16	1 @ 3/8	1 1/8x1"	16	5.20	4.68	4.42	4.16	3.64
41 D 5055	T8X16	Int.	15	80 @ 1/16	2 @ 1 1/4	2x1"	1	5.40	4.86	4.59	4.32	3.78
41 D 5056	T8X16	Cont.	95	40 @ 1/16	2 @ 1 1/16	2x1"	1	5.50	4.95	4.65	4.40	3.85
41 D 5057	T12X13	Int.	14	150 @ 1/8	4 @ 7/8	1 5/8x1 1/2"	26	6.50	5.85	5.52	5.20	4.55
41 D 5058	T12X13	Cont.	90	48 @ 1/8	1 @ 3/4	1 5/8x1 1/2"	26	6.70	6.03	5.69	5.36	4.69
41 D 5060	T12X19	Int.	9.5	175 @ 1/8	6 @ 1 1/2	2 3/8x1 1/2"	26	7.10	6.39	6.03	5.68	4.97
41 D 5061	T12X19	Cont.	59	80 @ 1/8	1 @ 1 1/4	2 3/8x1 1/2"	26	7.20	6.48	6.12	5.76	5.04



Clean Design for Side-by-Side Mounting

AC AND DC STEPPING RELAYS

Specially designed stepping relays for accurate sequence selecting, pulse multiplying/dividing, circuit selecting, automatic/remote homing, counting and latching. All are 120 VAC except for §24 VDC type. All are direct drive units with switching completed on energization. Bridging contacts are rated at 1½ amperes, 115 volts 60 Hz noninductive load. All are rated at 10% duty cycle out of each hour; maximum single period, 5 minutes. Will operate at 15% below or 10% above rated voltage. IR-PC and IR-MC are continuous-rotation types, constructed with micro-finished shaft and oilite shaft bearings. IR-PER and MER are electrical-reset types, with steel box-type frame. IR-MAS is add-and-subtract stepper. IR-PAS is bidirectional stepper. *Active contacts, including zero position. †Zero-position switch only. Wt., 2 lbs.



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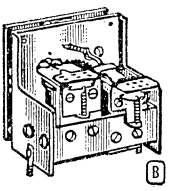

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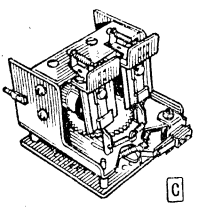

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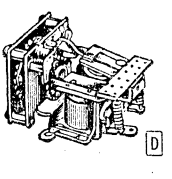
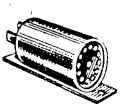


D

Stock No.	Mfr's Type	Fig.	No. Pts.	*Contacts	Size (HxWxD)	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7542	IR-PC	A	40	40	3 1/32x3 3/8x3 3/8"	19.95	17.96	16.96	15.96	13.97
41 D 7543	IR-MC	.....	24	24	2 3/16x3x3 1/4"	14.75	13.28	12.54	11.80	10.32
41 D 7544	IR-PER	B	40	36	3 9/16x3 3/8x3"	26.25	23.63	22.31	21.00	18.37
41 D 5858	IR-PAS	C	40	40	3 9/16x3 3/8x3 1/4"	26.25	23.63	22.31	21.00	18.37
41 D 5282	MER	D	24	22	2 3/16x3 5/16x2 3/16"	15.75	14.18	13.39	12.60	11.03
41 D 5283	§MER	D	24	22	2 3/16x3 5/16x2 3/16"	15.75	14.18	13.39	12.60	11.03
41 D 7545	IR-MAS	.....	30	†	1 15/16x3 1/8x3 1/4"	17.35	15.62	14.75	13.88	12.15

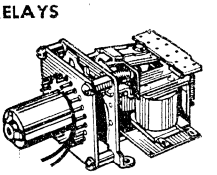
ROTOMITE DC STEPPING RELAYS



Small size enables use in business machines, vending, counting, sorting, model trains, etc. Completely enclosed. Contact ratings at 115 V, 60 Hz: 3 amps resistive, 1 amp inductive; rotate continuously up to 20 steps per second. Expected life over 1 million operations. 2x1 3/16" dia. 5 oz.

Stock No.	Type IR-705-	No. Pos.	V DC	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7705	12P-6D	12	6	6.60	5.94	5.61	5.28	4.62
41 D 7706	12P-12D	12	12	6.60	5.94	5.61	5.28	4.62
41 D 7708	12P-24D	12	24	6.60	5.94	5.61	5.28	4.62

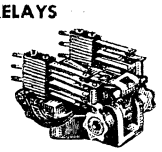
MER SOL STEPPING RELAYS



Same features as MER stepping relays listed above, but with an added solenoid to increase switching versatility. Energizing the solenoid physically moves the wipers away from the selector deck permitting advance or reset of wipers without contacting selector deck. Adds many switching advantages as well as increasing contact capacity and electrical life. Because of greatly reduced friction during reset, solenoid should be energized whenever reset coil is energized. Rated 20.8 watts, 20.9 VA. 20 steps per second. 24 points, with 22 active contacts. Overall size, (HWD), 2 3/16x3 5/16x4 3/8". Shpg. wt., 14 oz.

Stock No.	Mfr's Type MER-	Volts	EACH 1-24	25-49	50-99	100-249	250-Up
41 D 5859	SOL-120AC	120 AC	22.50	20.25	19.13	18.00	15.75
41 D 5860	SOL-24DC	24 DC	22.50	20.25	19.13	18.00	15.75

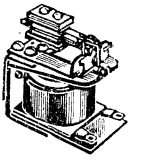
660 SERIES IMPULSE RATCHET RELAYS



Small, rugged ratchet type impulse relays for on/off control of lighting, motors, etc. Strong cast-aluminum base will not flex when mounted on an irregular surface. Equipped with balanced bearings, cam and drive mechanism. Available up to 4PDT. Highly reliable; expected life over 1,000,000 steps. Each impulse reverses contacts. Up to 10 steps per second possible. Heavy-duty silver contacts rated 12½ amperes at 115 V, 60 Hz AC resistive. Intermittent-duty coil for 110-120 V, 50-60 Hz AC. Size, 2 1/16x3x1 3/4". **Coil voltage is indicated by last digits of Mfr's Type.** Av. shpg. wt., 8 oz.

Stock No.	Type and Coil Voltage	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7850	660-C-24AC	SPDT	6.85	6.17	5.82	5.48	4.80
41 D 7631	660-C-115AC	SPDT	6.85	6.17	5.82	5.48	4.80
41 D 7632	660-2C-115AC	DPDT	7.40	6.66	6.29	5.92	5.18
41 D 7853	665-2C-24DC	DPDT	7.40	6.66	6.29	5.92	5.18
41 D 7854	660-4C-24AC	4PDT	10.75	9.68	9.14	8.60	7.53
41 D 7855	660-4C-115AC	4PDT	10.75	9.68	9.14	8.60	7.53
41 D 7856	665-4C-24DC	4PDT	10.75	9.68	9.14	8.60	7.53

MIDGET LATCHING RELAYS

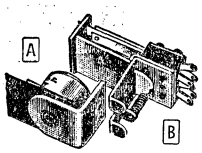


Single-coil construction. Designed for positive on-off control of positioning devices, remote controls, lighting circuits and similar industrial applications. Contacts are rated 5 amperes. Snap-action switch mechanism operates on impulses as short as 20 milliseconds. Contacts hold in the last position of switch when coil is de-energized. For 115 V, 60 Hz AC. Size, 1 5/8x1 1/8x 2 1/16". Shpg. wt., 4 oz.

Stock No.	Type IR-	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7540	640L-A115	SPST	4.45	4.01	3.78	3.56	3.12
41 D 7541	640L-C115	SPDT	4.75	4.28	4.04	3.80	3.33

Guardian General-Purpose Relays

RELAY ASSEMBLIES, CONTACT SWITCH ASSEMBLIES, ALL-PURPOSE RELAYS



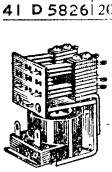
200 SERIES RELAY ASSEMBLIES

Separate coils (A) and contact assemblies (B) for custom-designing your own relays. (Use Contact Switch Parts below to add poles.) Rated at 115 VAC, noninductive. Standard contact assembly size, 2⅞x1⅛x 1¾". †Midget; size, 2⅛6x1⅛x1½". Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5709	200-6A	6 AC	1.85	1.67	1.57	1.48	1.30
41 D 5710	200-12A	12 AC	1.85	1.67	1.57	1.48	1.30
41 D 5711	200-24A	24 AC	1.85	1.67	1.57	1.48	1.30
41 D 5712	200-115A	115 AC	2.15	1.94	1.83	1.72	1.51
41 D 5888	200-230A	230 AC	2.85	2.57	2.42	2.28	2.00
41 D 5713	200-6D	6 DC	2.00	1.80	1.70	1.60	1.40
41 D 5714	200-12D	12 DC	2.00	1.80	1.70	1.60	1.40
41 D 5715	200-24D	24 DC	2.00	1.80	1.70	1.60	1.40
41 D 5717	200-110D	110 DC	2.65	2.39	2.25	2.12	1.86

B CONTACT SWITCH ASSEMBLIES

Stock No.	Mfr's Type	Contacts Action	Amps	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5707	200-1	SPDT	8	1.60	1.44	1.36	1.28	1.12
41 D 5708	200-2	DPDT	8	2.10	1.89	1.79	1.68	1.47
41 D 5724	200-4	DPDT	12.5	2.35	2.12	2.00	1.88	1.64
41 D 5889	200-5	4PDT	8	3.70	3.33	3.15	2.96	2.59
41 D 5718	200-M1†	SPDT	10	1.50	1.35	1.28	1.20	1.05
41 D 5719	200-M2†	DPDT	10	1.85	1.67	1.57	1.48	1.30
41 D 5826	200-M5†	4PDT	8	3.00	2.70	2.55	2.40	2.10

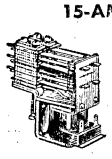


ALL-PURPOSE RELAYS

Specially designed to provide unusually heavy power control for their compact size. All are rated 10 amperes at 115 V. 60 Hz AC, except 4PDT types, rated 8 amperes. 1-hole base mounting. Last digits of Type indicate coil voltage. SPST normally open. U.L. Component-Program Recognized. 1¹¹⁄₁₆x1½x1". 4 oz.

Stock No.	Mfr's Type and Voltage	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7570	640-A-6AC	SPST	2.90	2.61	2.47	2.32	2.03
41 D 7574	640-A-24AC	SPST	2.90	2.61	2.47	2.32	2.03
41 D 7578	640-A-115AC	SPST	2.90	2.61	2.47	2.32	2.03
41 D 7575	640-C-24AC	SPDT	3.15	2.84	2.68	2.52	2.21
41 D 7579	640-C-115AC	SPDT	3.15	2.84	2.68	2.52	2.21
41 D 7572	640-2C-6AC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7576	640-2C-24AC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7580	640-2C-115AC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7585	645-2C-6DC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7589	645-2C-12DC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7593	645-2C-24DC	DPDT	3.40	3.06	2.89	2.72	2.38
41 D 7577	640-4C-24AC	4PDT	5.00	4.50	4.25	4.00	3.50
41 D 7581	640-4C-115AC	4PDT	5.00	4.50	4.25	4.00	3.50
41 D 7594	645-4C-24DC	4PDT	5.00	4.50	4.25	4.00	3.50
41 D 7598	645-4C-110DC	4PDT	5.25	4.73	4.46	4.20	3.68

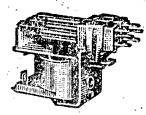
15-AMPERE ALL-PURPOSE COMPACT RELAYS



- AC and DC Types
- Up to 4PDT
- One Type Can Fill Almost All Needs

Compact, reliable, low cost units. Factory adjusted and tested, ready for use. Silver contacts rated at 15 amperes, 115 V, 60 Hz non-inductive load. AC coils listed will operate at —15% rated voltage; won't overheat at +20% voltage; DC coils, +10%, —20%. Power required: AC—6 VA, 60 Hz AC; DC—1.5 watts min. and 3 watts max. Single screw center-hole mounting (8-32 tap). Solder lug terminals. Last digits in Mfr's Type indicate coil voltage. Size, 2⁹⁄₁₆x2²⁹⁄₃₂x1¾₃₂". AC-type. U.L. Component-Program Recognized. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Action	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7079	240-A-115AC	SPST	3.15	2.84	2.68	2.52	2.21
41 D 7081	245-A-12DC	SPST	3.15	2.84	2.68	2.52	2.21
41 D 7082	245-A-24DC	SPST	3.15	2.84	2.68	2.52	2.21
41 D 7084	240-2C-24AC	DPDT	3.95	3.56	3.36	3.16	2.77
41 D 7085	240-2C-115AC	DPDT	3.95	3.56	3.36	3.16	2.77
41 D 7087	245-2C-12DC	DPDT	3.95	3.56	3.36	3.16	2.77
41 D 7091	240-4C-115AC	4PDT	5.80	5.22	4.93	4.64	4.06
41 D 7093	245-4C-12DC	4PDT	5.80	5.22	4.93	4.64	4.06
41 D 7094	245-4C-24DC	4PDT	5.80	5.22	4.93	4.64	4.06



SERIES 900-905 DPDT 10-A RELAYS

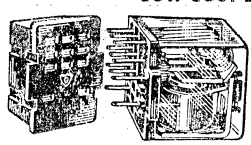
Low-cost DPDT relays featuring a trouble-free design that is based upon a minimum number of parts. All contacts are rated 10 amperes at 115 volts. AC resistive. One-piece switch mounting clips and return springs, molded bobbins and coil covers, keyed and locked lifters. Size, 1¹¹⁄₁₆x2¹¹⁄₁₆x1⁵⁄₆₄". Av. shpg. wt., 5 oz.

Stock No.	Coil Volts	Stock No.	Coil Volts	EACH 1-9	10-24	25-49
.....	.....	41 D 5332	6 DC	1.90	1.80	1.65
41 D 5319	115 AC	41 D 5337	12 DC	1.90	1.80	1.65
.....	.....	41 D 5338	24 DC	1.90	1.80	1.65

Bulk Pkg. of 50. Get bigger savings when you buy Series 900 Relays in bulk packages of 50 each. Relays in bulk packages come nested in convenient "Form Fitted" assembly line trays. Pkg. wt., 19 lbs.

Stock No.	Coil Volts	PKG. OF 50 EACH	2-Up	Stock No.	Coil Volts	PKG. OF 50 EACH	2-Up
41 D 5345	24 AC	76.50	67.00	41 D 5348	6 DC	76.50	67.00
41 D 5346	115 AC	76.50	67.00	41 D 5395	12 DC	76.50	67.00
41 D 5347	230 AC	76.50	67.00	41 D 5396	24 DC	76.50	67.00

LOW-COST ENCLOSED RELAYS



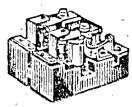
Feature terminals that can be used as solder lug, socket plug-in, or with AMP 110 Fasten quick-connect series. Contacts rated 10 amps at 115 VAC, non-inductive. 1-piece switch reduces contact resistance. 1⁵⁄₃₂x1¹¹⁄₁₆x1²⁵⁄₆₄". Less socket, below. Shpg. wt., 3 oz.

DPDT ACTION

Stock No.	Type IR-	Coil Volts	EACH 1-24	25-49	50-99	100-249	250-499	500-749
41 D 7410	1220-2C-6A	6 AC	4.00	3.60	3.40	3.20	2.80	2.60
41 D 7413	1220-2C-24A	24 AC	4.00	3.60	3.40	3.20	2.80	2.60
41 D 7416	1220-2C-120A	120 AC	4.00	3.60	3.40	3.20	2.80	2.60
41 D 7412	1225-2C-12D	12 DC	4.00	3.60	3.40	3.20	2.80	2.60
41 D 7414	1225-2C-24D	24 DC	4.00	3.60	3.40	3.20	2.80	2.60
3PDT ACTION								
41 D 7422	1220-3C-24A	24 AC	4.50	4.05	3.83	3.60	3.15	2.93
41 D 7425	1220-3C-120A	120 AC	4.50	4.05	3.83	3.60	3.15	2.93
41 D 7426	1220-3C-240A	240 AC	4.75	4.28	4.04	3.80	3.33	3.09
41 D 7420	1225-3C-12D	12 DC	4.50	4.05	3.83	3.60	3.15	2.93
41 D 7423	1225-3C-24D	24 DC	4.50	4.05	3.83	3.60	3.15	2.93

Phenolic Relay Sockets. For use with solder lug or AMP Fasten 110 terminals. Shpg. wt., 2 oz.
41 D 7427. 1-9.....Each .60 10-Up.....Each .55

2100 AND 2110 SERIES AC POWER RELAYS



Heavy-duty. For motor starting, heater loads and other uses. Contacts rated at 25 amps, continuous duty at 230 VAC with 75% power factor load. Require 9.5 volt-amperes. Series 2100, 3⅜x 2½x2³⁄₁₆". Series 2110 (N.O.), 2¹¹⁄₁₆x2½x2³⁄₁₆". Mfr's Type indicates contact action and coil voltage. Av. shpg. wt., 12 oz.

Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
41 D 6186	2110U-DPST-24	5.75	5.18	4.89	4.60	4.03
41 D 6187	2110U-DPST-115	5.75	5.18	4.89	4.60	4.03
41 D 6188	2110U-DPST-230	6.10	5.49	5.19	4.98	4.37
41 D 5084	2100U-DPDT-24	6.75	6.08	5.74	5.40	4.73
41 D 5085	2100U-DPDT-115	6.75	6.08	5.74	5.40	4.73
41 D 5086	2100U-DPDT-230	7.25	6.53	6.16	5.80	5.08

CS-2100 Switch Parts. Assemblies for above 2100 Series DPDT relays. "Left" or "right"—as viewed at armature end, contacts up. Shpg. wt., 5 oz.

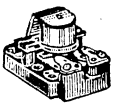
Stock No.	Description	EACH 1-24	25-49	50-99	100-249	250-499
41 D 5563	Left Assembly	1.95	1.76	1.66	1.56	1.37
41 D 5564	Right Assembly	1.95	1.76	1.66	1.56	1.37

ATTENTION PURCHASING AGENTS

Allied can make immediate shipment of Guardian relays in industrial quantities and at OEM prices. For prices on quantities larger than shown, simply contact the Allied facility nearest you for prompt, complete information.

Guardian Special and Solid-State Relays

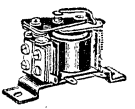
SERIES 2300 ECONOMY AC POWER RELAYS



DPDT contacts are rated 15 amperes non-inductive, or 1 hp at 115/230 volts, AC. Inverted coil construction protects armature and contacts. Screw-type terminals easily accessible for top or bottom connections. **Coil voltage indicated by last digits of Mfr's Type.** Two 3/16" mounting holes on 1 7/8" centers. Overall size, 3 5/16x2 1/2x2 1/16". C.S.A. Listed. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type and Voltage	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7699	2300U-DPDT-24	6.25	5.63	5.31	5.00	4.38
41 D 7700	2300U-DPDT-115	6.25	5.63	5.31	5.00	4.38

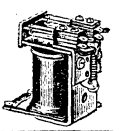
HEAVY-DUTY SPST AC RELAYS



For switching currents up to 20 amperes @ 230 volts, 60 Hz AC, noninductive load. Phenolic contact mounting block has 5/16" dual contacts. Phenolic is tested at 1500 V breakdown to ground. Silver-alloy contacts are SPST, N.O. With hardware. 3x1 7/8x1 3/4". 6 oz.

Stock No.	Type and Coil Volts	Coil Ohms	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7568	IR-220-A115AC	600	5.05	4.55	4.29	4.04	3.54
41 D 7569	IR-220-A230AC	2500	5.55	5.00	4.72	4.44	3.89

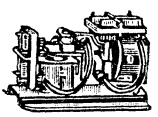
PLATE CIRCUIT RELAYS



General-purpose DPDT plate circuit relay with extra long coil for greater sensitivity. Adaptable to voltage operating as well as sensitive plate circuit control. Coil impregnated for reliability and long life. Average power requirement, 0.2 watt. Fine silver contacts rated 10 amps. 2 1/8x2x1 1/2". Wt., 6 oz.

Stock No.	Mfr's Type	Coil Ohms	mA DC	EACH 1-24	25-49	50-99	100-249	250-499
41 D 7599	IR-625-2.5	2500	9	4.45	4.01	3.78	3.56	3.12
41 D 7600	IR-625-5	5000	6.3	4.75	4.28	4.04	3.80	3.33
41 D 7601	IR-625-10	10,000	4.5	5.80	5.22	4.93	4.64	4.06

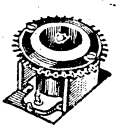
AC INTERLOCKING RELAY



Type IR-1200/1200-4C-115. Two interlocking AC relays in sturdy metal frame bracket. Used to maintain circuits continuously without coil power consumption. Electrically pulse-operated with mechanical hold and electrical release. Has 4PDT 10-ampere contacts. For 115 volts, 60 Hz AC. Size, 1 1/16x1 3/4x2 7/8". Shpg. wt., 6 oz.

41 D 7539. 1-24.....Each 10.40
25-49.....Each 9.36 50-99.....Each 8.84
100-249.....Each 8.32 250-499.....Each 7.28

32-POLE DC RELAY



Type IR-805-32P 32-Pole DC Relay. Group-selector 24-volt DC relay simultaneously makes up to 32 circuits common on energization. Effectively insulated from ground. Rugged phenolic plunger housing for long life. Coil resistance, 72 ohms. For operation from 24 volts DC. Size, 2 7/32x11 7/32x 2 1/8". Av. shpg. wt., 6 oz.

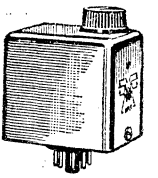
41 D 7602. 1-24.....Each 5.00
25-49.....Each 4.50 50-99.....Each 4.25
100-249.....Each 4.00 250-499.....Each 3.50

SOLID-STATE AC AND DC TIME DELAY RELAYS

Solve problems of operation control, recycling, safety delays, programmed sequences. Welded 3PDT encapsulated timing module handles 10 A resistive load. Has 15-turn pot with accuracy of ±5% over combined voltage and temperature range (—40°F, +150°F), for setting and resetting. Recycle time is 50 milliseconds; repeatability, ±1%. DC units are polarity protected. Faston 110 mounting, see socket, page 264. Chart included shows No. turns for required delay. 3x1.678x1.391". 5 oz.

Stock No.	Mfr's Type	Coil Volts	Delay Sec.	EACH 1-49	50-99	100-249
41 D 5144	TD-63C15	115VAC	1-15	29.70	26.73	24.06
41 D 5145	TD-33C15	24DC	1-15	24.20	21.88	19.69
41 D 5146	TD-63C60	115VAC	10-60	30.06	27.54	24.79
41 D 5147	TD-33C60	24VDC	10-60	25.19	22.67	20.40
41 D 5148	TD-63C180	115VAC	50-180	36.85	33.16	29.84

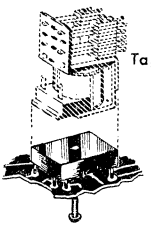
LOW-COST TIME DELAY RELAY



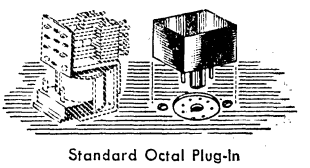
2PDT 5-ampere relay operating from 115 VAC ±10% 50-60 Hz. Recycle time, 100 milliseconds; repeatability, 5% of nominal setting; accuracy, 10% of nominal setting. 10-turn pot adjusts from 0.5 to 30 seconds. Temperature range, —10°F to +100°F. Plug-in octal mounting. Chart included with relay shows number of turns for required time delay. Size 3x2.062x 2.625". Shpg. wt., 8 oz.

41 D 5150. Type TDO-62C30-115A.....1-49, Each 16.32
50-99, Each.....15.69 100-249, Each.....14.12

UNIVERSAL TIME DELAY MODULES



Tapered Base for PC Mounting



Standard Octal Plug-In

• Permits Replacing Defective Relays without Replacing Entire Timing Circuit

Universal time delay module offering complete flexibility in the selection of relays, delays and coil voltages. Accepts Guardian Series Relays 240, 640, 1200, 1220, and 2100. Tapered base accepts relays directly for PC mounting; standard octal base mounts in octal socket, with relay wired in the conventional manner. Module acts as relay driver, use with external terminal adjustment with resistor for desired time delay. In Mfr's Type No., -O indicates On-Attract; -R indicates On-Release. Full instructions. Av. wt., 2 1/2 oz.

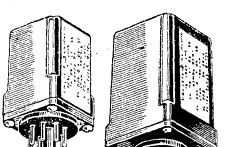
TAPERED BASE FOR PC MOUNTING

Stock No.	Mfr's Type IR-	Time Range Sec.	Volts	EACH 1-49	50-99	100-249
41 D 5359	TMT-O-100-24DC	.5-100	24DC	11.59	11.10	10.41
41 D 5360	TMT-R-100-24DC	.5-100	24DC	15.60	14.94	14.01
41 D 5361	TMT-O-300-24DC	100-300	24DC	14.76	14.14	13.26
41 D 5362	TMT-R-300-24DC	100-300	24DC	18.72	17.94	16.82
41 D 5363	TMT-O-100-115AC	.5-100	115AC	11.59	11.10	10.41
41 D 5364	TMT-R-100-115AC	.5-100	115AC	15.60	14.94	14.01
41 D 5365	TMT-O-300-115AC	100-300	115AC	14.76	14.14	13.26
41 D 5366	TMT-R-300-115AC	100-300	115AC	18.72	17.94	16.82

STANDARD OCTAL BASE

41 D 5367	TMP-O-100-24DC	.5-100	24DC	12.91	12.37	11.60
41 D 5368	TMP-R-100-24DC	.5-100	24DC	17.48	16.75	15.71
41 D 5369	TMP-O-300-24DC	100-300	24DC	15.25	14.61	13.70
41 D 5370	TMP-R-300-24DC	100-300	24DC	19.86	19.02	17.84
41 D 5371	TMP-O-100-115AC	.5-100	115AC	12.91	12.37	11.60
41 D 5372	TMP-R-100-115AC	.5-100	115AC	17.48	16.75	15.71
41 D 5373	TMP-O-300-115AC	100-300	115AC	15.25	14.61	13.70
41 D 5374	TMP-R-300-115AC	100-300	115AC	19.86	19.02	17.84

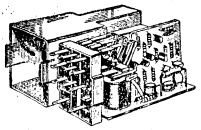
SERIES 6100 AND 6300 SOLID-STATE RELAYS



Feature externally adjustable pull-in voltage level from 80-130 volts AC or DC, with close differential between pull-in and dropout. Universal control voltage (AC or DC) with complete circuit isolation from load switching circuit. Internal filtering prevents random turn-on of "off" contacts. Controls lamp, inductive or normal resistive loads from 10 mA to 3 amps at 115 V, 60 Hz AC. Takes quick-connect (listed below) and Amphenol octal sockets listed on page 330. **Series 6100.** 1 amp, with quick-connect terminals. 1 19/32x1 23/32x2" high, including tabs. **Series 6110:** 1 amp, octal plug-in. 1 3/8x1 5/8x2 23/32" high, with plug. **Series 6300:** 3-amp quick-connect. 1.578x1.783x3.312". **Series 6310:** 3 amp, octal plug-in. 1 19/32x1 23/32x3 3/8". Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Terminals	Contacts Form	Amps	EACH 1-49	50-99	100-Up
41 D 6941	6100-THA	QC	A	1	17.95	16.16	15.26
41 D 6942	6100-THC	QC	C	1	22.95	20.66	19.51
41 D 6943	6110-OHA	Octal	A	1	18.50	16.65	15.73
41 D 6944	6110-OHC	Octal	C	1	23.50	21.50	19.98
41 D 6945	6300-THA	QC	A	3	20.45	18.40	17.38
41 D 6946	6300-THC	QC	C	3	27.45	24.71	23.33
41 D 6947	6310-OHA	Octal	A	3	20.95	18.86	17.81
41 D 6948	6310-OHC	Octal	C	3	28.95	26.06	24.61
41 D 7427	1220	QC Sockets. Each 1-9 .60 10-Up .55					

Sensor Devices and Solid-State Timers



GUARDIAN PROTECTIVE SENSOR DEVICES

Fast-acting voltage, frequency and phase rotation sensors with accurate repeat cycle characteristic of solid-state input sensors combined with 3PDT, 10 A relay output. Plastic dust cover. Accepts PC socket, chassis-mount, clip or chassis-mounted socket. Temp. range, 0° to +50°C. Life, 10,000 operations min. Relay contacts rated 10 A resistive at 115 VAC. Transient protection: 600 V, 3-phase; 2500 V, others. Electrical latch or unlatch by wiring 24 VDC or 115 VAC enclosed relays (41 D 7414 and 41 D 7416, page 264).

3-PHASE, 4-WIRE VOLTAGE SENSING DEVICE

Unit detects, when sufficient voltage is applied, from 3-phase source of 95 VAC, or if there is loss or drop in line averaging 50 VAC. Use as a warning or lockout device to protect 3-phase motors and systems. Designed for pull and drop out; will repeat close values, taking into account unevenly loaded lines which cause drastic rise and fall in other lines. Wt., 5 oz.

Stock No.	Mfr's Type	AC Volts	EACH
41 D 5030	IR-AV2-611	115, 60 Hz	34.20
41 D 5031	IR-AV2-621	115, 400 Hz	34.20

OVER-VOLTAGE SENSING DEVICE

Output relay energizes as input voltage rises to adjusted sense-point. De-energizes as input voltage drops to approx. 2.5V below sense-point. Adj. sense-point permits use as either under or over voltage detector. Sense-point adj. thru top of relay cover. 400 Hz; 24 V, AC or DC versions available, allow 3 wks. Wt., 5 oz.

Stock No.	Mfr's Type	Volts	Adj. Range	EACH
41 D 5032	IR-VS1-610	115 VAC, 60 Hz	90-130 VAC	42.90

UNDER-VOLTAGE SENSING DEVICE

Output relay energizes at its low-voltage pull-in point. Independent of control circuit. Remains energized until voltages rise to adjusted sense-point. 400 Hz version available. Shpg. wt., 5 oz.

41 D 5035	IR-VS2-610	115 VAC, 60 Hz	90-130 VAC	42.90

CLOSE DIFFERENTIAL VOLTAGE-SENSING DEVICE

Output relay energizes and de-energizes as input rises to sense-point and drops to release point. Non-latching output operation; return voltage to normal, unit energizes. Adjusts through cover. *60 Hz. 400 Hz version available, allow 3 wks. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Volts	Sense Pt. Adj. Range	Diff. Adj. Range	EA.
41 D 5038	IR-VS3-610	115 VAC*	105-130 VAC	2.5-15 VAC	54.80

4-WIRE PHASE ROTATION SENSOR DEVICE

With ABC phase rotation, output relay is energized by 75 VAC balanced phase inputs. If rotation becomes improper, or if phase inputs are lost, relay de-energizes. Restore relationships, relay re-energizes. Non-latching. 400 Hz version available. 5 oz.

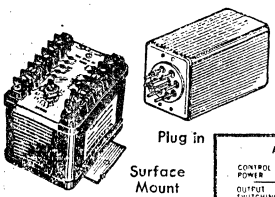
Stock No.	Mfr's Type	AC Volts	EACH
41 D 5041	IR-PR1-610	115, 60 Hz	39.95

FREQUENCY SENSOR ADJUSTABLE SENSE-POINT DEVICE

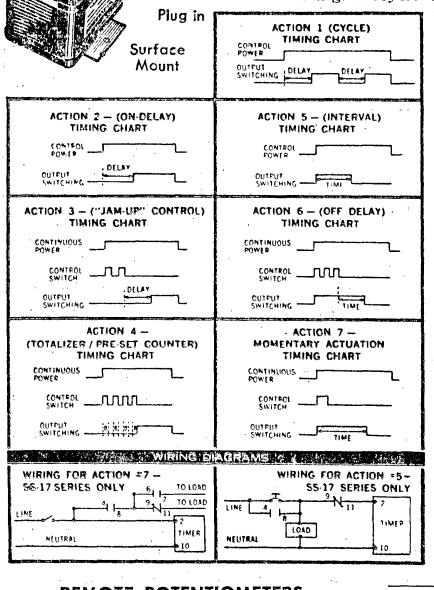
Under or over-frequency detector. Output relay energizes as freq. rises to sense-point, de-energizes when frequency drops to approximately 1.5% of sense-point. Also, AC generator speed detect., destruct. freq. trip-out, AC power loss detector. Wt., 5 oz.

Stock No.	Mfr's Type	AC Volts	Adj. Range	EACH
41 D 5043	IR-FS1-610	115, 60 Hz	45-66 Hz	55.20
41 D 5044	IR-FS1-620	115, 400 Hz	360-440 Hz	55.20

INTERMATIC SOLID-STATE TIME DELAY RELAYS



Designed for all variable on-delay and off-delay timing requirements. Silicon semiconductors and tantalum capacitor for high accuracy and stability. Time ranges: 0.05 to 500 seconds. ±1% repeatability. Dial accuracy, ±5% of nominal setting. Recycle time, 50 msec. Ambient temperature range: 0° to +130°F. Max. power consumption, 4½ watts. Fully protected against voltage transients and polarity changes. See charts at left for circuit action. SS-10 and SS-11 timers below are 11-pin glass-to-metal plug-in, or surface mount. *115 AC, †24 DC. Av. wt., 14 oz.



SERIES SS-15 AND SS-16 SURFACE-MOUNT TIMERS

For machine tool, process, flow and motor control, welding equipment, etc. Housed in steel surface mount case. All terminals on top for easy wiring, locking type adjustment bushing with slot for timing control. 3⅝x3⅞x3⅝". Input: 120 VAC. Output switching: DPDT, 10 amps. §Action, see chart at left.

SERIES SS-15 (ON DELAY) §2, 3, 4

Stock No.	Type SS-	Range (Secs.)	EACH
41 D 6954	15222-B	.05-.5	34.42
41 D 6955	15222-C	.5-5	34.42
41 D 6956	15222-D	5-50	34.42
41 D 6957	15222-E	50-500	39.62

SERIES SS-16 (OFF DELAY) §5, 6, 7

Stock No.	Type SS-	Range (Secs.)	EACH
41 D 6958	16822-B	.05-.5	39.62
41 D 6959	16822-C	.5-5	39.62
41 D 6960	16822-D	5-50	39.62
41 D 6961	16822-E	50-500	46.12

SERIES SS-17 AND SS-18 SURFACE MOUNT TIMERS WITH EXTRA RELAY

Have additional relay for instantaneous contacts which act as extension or control switch. Locking type bushing for adjusting time periods. Input 120 VAC. Output switching: one N.O., one N.C. timed contact; one N.O., one N.C. instantaneous contact, 10 amps. §Action, see left.

SERIES SS-17 (ON DELAY) §2, 5, 7

41 D 6962	17212-C	.5-5	46.77
41 D 6963	17212-D	5-50	46.77

SERIES SS-18 (OFF DELAY) §6

41 D 6964	18612-C	.5-5	46.77
41 D 6965	18612-D	5-50	46.77

SERIES SS-20 AND SS-21 8-PIN PLUG-IN TIMERS

Low-cost. ±2% accuracy. Fit standard octal socket. Input: 120 VAC, except *24 VDC. Output: SPDT, 5 amps. 4¾x2x2". §Action, see chart at left.

SERIES SS-20 (ON DELAY) §2

41 D 6950	20262-Y	.5-30	17.52
41 D 6952	20263-Y*	.5-30	18.82

SERIES SS-21 (OFF DELAY) §6

41 D 6951	21662Y	.5-30	18.82
41 D 6953	21663Y*	.5-30	20.12

REMOTE POTENTIOMETERS

Selection of remote potentiometers for positive remote control of all timers on this page. Select the potentiometer for your needs by time range that corresponds to your timer. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Range (Secs.)	EACH
41 D 6968	99B	.05-.5	1.30
41 D 6969	99C	.5-5	1.30
41 D 6970	99D	5-50	1.30
41 D 6971	99E	50-500	1.30
41 D 6972	99V	.5-30	1.30

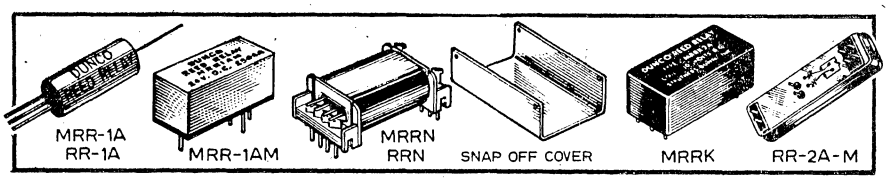
SS-10 SERIES §2, 3, 4

Stock No.	Type SS10-	Range msec	Mtg.	EACH 1-5	EACH 6-Up
41 D 7115	222B*	.05-5	Plug	34.42	31.77
41 D 7116	223B†	.50-.5	Plug	35.72	32.97
41 D 7117	222C*	.5-5	Plug	34.42	31.77
41 D 7118	223C†	.5-5	Plug	35.72	32.97
41 D 7119	222D*	5-50	Plug	34.42	31.77
41 D 7121	222E*	50-500	Plug	39.62	36.57
41 D 7132	222B1*	.05-.5	Sur.	34.42	31.77
41 D 7134	222C1*	.5-5	Sur.	34.42	31.77
41 D 7136	222D1*	5-50	Sur.	34.42	31.77
41 D 7138	222E1*	50-500	Sur.	39.62	36.57

SS-11 SERIES §5, 6, 7

Stock No.	Type SS-11	Range msec	Mtg.	EACH 1-5	EACH 6-Up
41 D 7123	822B*	.05-.5	Plug	39.62	36.57
41 D 7124	823B†	.05-.5	Plug	40.92	37.77
41 D 7125	822C*	.5-5	Plug	39.62	36.57
41 D 7126	823C†	.5-5	Plug	40.92	37.77
41 D 7127	822D*	5-50	Plug	39.62	36.57
41 D 7128	823D†	5-50	Plug	40.92	37.77
41 D 7129	822E*	50-500	Plug	46.12	42.57
41 D 7140	822B1*	.05-.5	Sur.	39.62	36.57
41 D 7142	822C1*	.5-5	Sur.	39.62	36.57
41 D 7144	822D1*	5-50	Sur.	39.62	36.57
41 D 7146	822E1*	50-500	Sur.	46.12	42.57

Struthers-Dunn Reed and Industrial Relays



REED MAXIMUM RATINGS
Standard Types: Max. Cont.: 15 W; 1 A; 250 V. Con. Res.: .05 ohm. Breakdown: 400 VAC rms. Miniature: 4 WDC, 12 AC; 125 mA; 250 V. Con. Res.: 0.2 ohm. Bkdn: 250 VAC rms. A—NO; B—NC; C—SPDT

MINIATURE MRR REED RELAYS

Ratings shown in box at right. Atmosphere is dry, inert gas. 10,000,000 operations at max. ratings. Type No. Suffix indicates contact form: 1A—1 Form A; 1A1B—1 Form A and 1 Form B, etc. 2 oz.

Epoxy-Encapsulated Series MRR. Magnetically shielded coils. 125 mW/pole nom. Fast operate time, 2.5 ms. max. 3,000,000 operations at maximum.

Stock No.	Mfr's Type and Contact Form	Coil V	Ohms	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4227	MRR-1A	6	288	4.20	3.99	3.78	3.36	2.94
41 D 4228	MRR-1A	12	1152	4.20	3.99	3.78	3.36	2.94
41 D 4206	MRR-1A	24	4600	6.20	5.89	5.58	4.96	4.34
41 D 4229	MRR-2A	6	144	6.20	5.89	5.58	4.96	4.34
41 D 4230	MRR-2A	12	576	6.20	5.89	5.58	4.96	4.34
41 D 4208	MRR-2A	24	2300	7.70	7.32	6.93	6.16	5.39
41 D 4231	MRR-4A	6	74	10.60	10.07	9.54	8.48	7.42
41 D 4232	MRR-4A	12	288	10.60	10.07	9.54	8.48	7.42
41 D 4209	MRR-4A	24	1152	10.60	10.07	9.54	8.48	7.42

Printed Circuit Series MRR-M. Magnetically-shielded coils. Long life, fast-operating time, low-power. Leads on .1 grid space. Contact rating, 4 watts. Av. shpg. wt., 2 oz.

41 D 4273	MRR-1A-M	6	144	5.70	5.42	5.13	4.56	3.99
41 D 4274	MRR-1A-M	12	576	5.70	5.42	5.13	4.56	3.99
41 D 4275	MRR-1A-M	24	2304	5.70	5.42	5.13	4.56	3.99
41 D 4276	MRR-1B-M	6	144	5.90	5.61	5.31	4.72	4.13
41 D 4277	MRR-1B-M	12	576	5.90	5.61	5.31	4.72	4.13
41 D 4278	MRR-1B-M	24	2304	5.90	5.61	5.31	4.72	4.13
41 D 4280	MRR-1A1B-M	12	288	7.70	7.32	6.93	6.16	5.39
41 D 4281	MRR-1A1B-M	24	1152	7.70	7.32	6.93	6.16	5.39
41 D 4283	MRR-2A-M	12	288	6.80	6.46	6.12	5.44	4.76
41 D 4284	MRR-2A-M	24	1152	6.80	6.46	6.12	5.44	4.76

Printed Circuit Board Series MRRN. Has magnetically shielded coils; fast operate time, low power. Open-type construction, all welded connections. .1 grid space. Long operating life.

41 D 4838	MRRN-1A	6	70	3.30	3.14	2.97	2.64	2.31
41 D 4839	MRRN-1A	12	300	3.30	3.14	2.97	2.64	2.31
41 D 4840	MRRN-1A	24	1100	3.70	3.52	3.33	2.96	2.59
41 D 4841	MRRN-2A	6	70	4.70	4.47	4.23	3.76	3.29
41 D 4842	MRRN-2A	12	300	4.70	4.47	4.23	3.76	3.29
41 D 4843	MRRN-2A	24	1100	5.00	4.75	4.50	4.00	3.50
41 D 4844	MRRN-4A	6	40	8.00	7.60	7.20	6.40	5.60
41 D 4845	MRRN-4A	12	160	8.00	7.60	7.20	6.40	5.60
41 D 4846	MRRN-4A	24	640	8.00	7.60	7.20	6.40	5.60

Printed Circuit Board Type MRRK. Miniature thermoplastic case; sealed to withstand all washing solutions. Magnetic shielded coil. Contacts rated 10 VA; 250 V max @ 0.040 amp; 0.5 amp max. @ 20 V. Form C rated 3 VA at 12 V. .48x.66x1.29".

41 D 4528	MRRK-1A1B	12	400	5.60	5.32	5.04	4.48	3.92
41 D 4529	MRRK-1A1B	24	1600	5.60	5.32	5.04	4.48	3.92
41 D 4531	MRRK-2A	12	400	5.20	4.94	4.68	4.16	3.64
41 D 4532	MRRK-2A	24	1600	5.40	5.13	4.86	4.32	3.78
41 D 4534	MRRK-2B	12	400	5.80	5.51	5.22	4.64	4.06
41 D 4535	MRRK-2B	24	1600	5.80	5.51	5.22	4.64	4.06
41 D 4537	MRRK-3A	12	400	7.00	6.65	6.30	5.60	4.90
41 D 4538	MRRK-3A	24	1600	7.00	6.65	6.30	5.60	4.90
41 D 4527	MRRK-1C	12	400	7.00	6.65	6.30	5.60	4.90
41 D 4530	MRRK-1C	24	1600	7.00	6.65	6.30	5.60	4.90
41 D 4533	MRRK-2C	12	400	10.00	9.50	9.00	8.00	7.00
41 D 4536	MRRK-2C	24	1600	10.00	9.50	9.00	8.00	7.00

SUBMINIATURE PRINTED CIRCUIT REED RELAYS

Fast-operating, electromagnetically-shielded, encapsulated reed relays. Low-profile, only .350" high. Type MRRS1A, one Form A; MRRS2A, 2 Form A; MRRS4A, 4 Form A. Normally open. Contacts rated 10 watts. Operate time, 2.5 ms. 0 to +50°C ambient. 4 oz.

Stock No.	Mfr's Type	Coil DC Volts Nom.	Coil DC Volts Oper.	Ohms	EACH 1-24	25-49	50-74	75-99	100-249
41 D 7303	MRRS1A	12	9.6	576	4.40	4.18	3.96	3.52	3.08
41 D 7304	MRRS1A	24	19.2	2300	4.40	4.18	3.96	3.52	3.08
41 D 4288	MRRS2A	12	9.6	380	6.10	5.80	5.49	4.88	4.27
41 D 4289	MRRS2A	24	19.2	1340	6.10	5.80	5.49	4.88	4.27
41 D 4290	MRRS4A	12	9.6	125	7.70	7.31	6.93	6.16	5.39
41 D 4291	MRRS4A	24	19.2	500	7.70	7.31	6.93	6.16	5.39

STANDARD RR REED RELAYS

Operations: 20,000,000 @ max. rating; 100,000,000 @ ½ max. rating. 200,000,000 @ dry circuit levels. .5 W/pole min. Contact Form indicated by Mfr's Type No. Ex.: Suffix 1A indicates 1 Form A contact, suffix 2A2B indicates 2 Form A and 2 Form B contacts. **Molded Axial-Lead Shielded Reeds.** Operate in 1.5 to 2.5 ms. 4 oz.

Stock No.	Mfr's Type and Contact Form	Coil V	Ohms	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4216	RR-1A	6	90	3.20	3.04	2.88	2.56	2.24
41 D 4218	RR-1A	12	360	3.20	3.04	2.88	2.56	2.24
41 D 4219	RR-1A	24	1440	3.20	3.04	2.88	2.56	2.24
41 D 4221	RR-2A	6	36	5.00	4.75	4.50	4.00	3.50
41 D 4222	RR-2A	12	145	5.00	4.75	4.50	4.00	3.50
41 D 4223	RR-2A	24	580	5.00	4.75	4.50	4.00	3.50
41 D 4225	RR-4A-F	12	95	8.60	8.17	7.74	6.88	6.02
41 D 4226	RR-4A-F	24	380	8.60	8.17	7.74	6.88	6.02

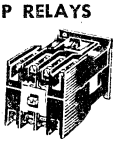
Printed Circuit Shielded Reeds. Enclosed in steel housing. 0°C to +50°C. Shock test, 50g. Insulation res., 1000 Megohms. 8 oz.

41 D 4247	RR-1A1B-M	12	144	7.00	6.65	6.30	5.60	4.90
41 D 4248	RR-1A1B-M	24	576	7.00	6.65	6.30	5.60	4.90
41 D 4251	RR-2A2B-M	24	288	12.30	11.69	11.07	9.84	8.61
41 D 4260	RR-1C-M	6	288	12.70	12.07	11.43	10.16	8.89
41 D 4261	RR-1C-M	12	1152	12.70	12.07	11.43	10.16	8.89
41 D 4262	RR-1C-M	24	4600	12.70	12.07	11.43	10.16	8.89
41 D 4267	RRLM-1C-M102	12	480	12.70	12.07	11.43	10.16	8.89
41 D 4268	RRLM-1C-M102	24	1920	12.70	12.07	11.43	10.16	8.89

Printed Circuit Board Series RRN. Open-type dry reed. Magnetically shielded coils; low power, fast operate time. 0.2" grid centers. 250 volts, 1 amp, 15 VA except *0.5 amp, 10 VA. Av. wt., 4 oz.

Stock No.	Mfr's Type and Contact Form	Coil V DC	Ohms	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4550	RRN-1A	12	250	3.00	2.85	2.70	2.40	2.10
41 D 4551	RRN-1A	24	1000	3.00	2.85	2.70	2.40	2.10
41 D 4552	RRN-2A	12	250	4.60	4.37	4.14	3.68	3.22
41 D 4553	RRN-2A	24	1000	4.60	4.37	4.14	3.68	3.22
41 D 4554	RRN-4A	12	150	7.00	6.65	6.30	5.60	4.80
41 D 4555	RRN-4A	24	600	7.00	6.65	6.30	5.60	4.80
41 D 4556	RRN-1C*	12	250	5.80	5.51	5.22	4.64	4.06
41 D 4557	RRN-1C*	24	1000	5.80	5.51	5.22	4.64	4.06

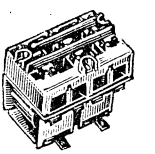
SC301 SERIES INDUSTRIAL 600-VOLT 10-AMP RELAYS



600-volt spacing in 300-volt size. Feature simple design and contact flexibility. Contacts rated 10 amps. Make/break ratings: make 60 A, break 6A @ 120 VAC. Carries 10 A @ 120, 240, or 480 VAC. Double-break contacts with 115 or 230 volt, 60 Hz AC coil. Converts from N.O. to N.C. Sizes: 4-pole, 2¾x2¾x 4 3/16". 8-pole, 2¾x2¾x5 25/64". Shpg. wt., 2 lbs.

Stock No.	Mfr's Type	Double-Break Contacts	Coil Volts	EACH
41 D 6882	SC301-4-4S0	4 N.O.	115	10.80
41 D 6884	SC301-4-2S2	2 N.O., 2 N.C.	115	10.80
41 D 6885	SC301-4-2S2	2 N.O., 2 N.C.	230	10.80
41 D 6886	SC301-8-8S0	8 N.O.	115	15.12
41 D 6888	SC301-8-4S4	4 N.O., 4 N.C.	115	15.12

A275KXX AND A275KXX91 REVERSING CONTACTORS



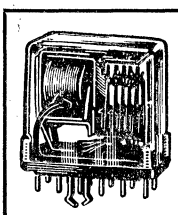
TYPE A275KXX. Uses 50% less coil power than solenoid types. Two 3-pole contactors on common frame, mechanically interlocked to prevent simultaneous closure, 1 hp at 120, 240, 480 VAC; 1, 2 or 3 phase with all contacts switching. 3 5/16x2 3/16x2 7/8". ■U.L. Recog. C.S.A. Listed. 1 lb. TYPE A275KXX91. Similar, but single pole double-throw auxiliary contacts on each armature. 3⅝x2¾x2⅞". Wt., 3 lbs.

Stock No.	Mfr's Type	Coil (VAC)	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4738	A275KXX	24	18.20	17.29	16.38	14.56	12.74
41 D 4739	A275KXX	120	18.20	17.29	16.38	14.56	12.74
41 D 4740	A275KXX	240	18.20	17.29	16.38	14.56	12.74
41 D 7367	A275KXX91	24	21.80	20.71	19.62	17.44	15.26
41 D 7368	A275KXX91	120	21.80	20.71	19.62	17.44	15.26
41 D 7369	A275KXX91	240	21.80	20.71	19.62	17.44	15.26

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Struthers-Dunn Plug-In Relays

FOR SIMPLIFIED INDUSTRIAL CONTROL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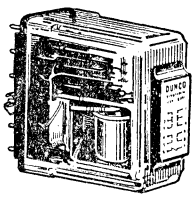
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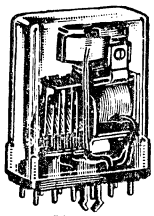
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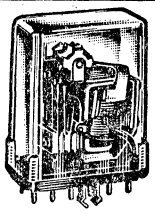
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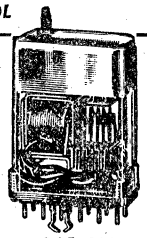
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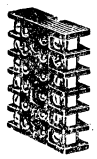
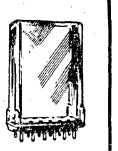

33377 27390 Sockets


CX3736 CX3671 Enclosures

TYPE 219 FRAME INDUSTRIAL CONTROL RELAYS

Contacts, 10 A. For machine tool and other applications. Handle loads such as relay coils, solenoids, heaters. Operate and release time, 15 msec. max. Oper. at 85% nom. V; withstand 10% overvoltage. ABAP have 1 N.O., 1 N.C. 2 DT contacts. Suffix M—with actuator for manual check of circuit continuity without energizing coil; L—neon lamp shows if coil energized; LM—manual actuator and lamp. 2 19/32x2 5/8x1 15/32". 7 oz.

Stock No.	Mfr's Type 219-	DPDT Contacts Plus	Volts	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4200	XBXP	.....	115AC	12.10	11.50	10.89	9.68	6.47
41 D 4766	BBXP	2 N.O.	24AC	14.50	13.78	13.05	11.60	10.15
41 D 4201	BBXP	2 N.O.	115AC	14.50	13.78	13.05	11.60	10.15
41 D 4764	BBXP	2 N.O.	24DC	14.50	13.78	13.05	11.60	10.15
41 D 4765	BBXP	2 N.O.	115DC	14.50	13.78	13.05	11.60	10.15
41 D 4769	ABAP	N.O.;N.C.	24AC	14.50	13.78	13.05	11.60	10.15
41 D 4202	ABAP	N.O.;N.C.	115AC	14.50	13.78	13.05	11.60	10.15
41 D 4767	ABAP	N.O.;N.C.	24DC	14.50	13.78	13.05	11.60	10.15
41 D 7277	BBXPL	2 N.O.	115AC	15.60	14.82	14.04	12.48	10.92
41 D 7278	BBXPLM	2 N.O.	115AC	16.70	15.87	15.03	13.36	11.69
41 D 7279	XBXPM	.....	115AC	13.20	12.54	11.88	10.56	9.24
41 D 7281	XBXPLM	.....	115AC	14.30	13.59	12.87	11.44	10.01

TYPE 219 FRAME 14-PIN PLUG-IN RELAYS

General-purpose 4 and 6-pole relays for 150-volt industrial control. 14-pin keyed plugs, clear thermoplastic covers. Contacts designed for maximum reliability at loads up to 10 amps. For 115 VAC; other voltages available. 1 1/2x2 19/32x3 1/16" high. Socket (below) has screw terminals, captive clamping plates for easy wiring. 7 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4543	219XDXP	4PDT	16.50	15.68	14.85	13.20	11.55
41 D 4544	219DXBP	4PNO/2PNC	16.50	15.68	14.85	13.20	11.55
41 D 4545	219FXXP	6PNO	16.50	15.68	14.85	13.20	11.55

TYPE 349 CLOSE-DIFFERENTIAL PLUG-IN RELAYS

Consists of 219BBXP relay controlled by an adjustable solid-state voltage sensing module. Ideal for emergency engine-generator starting systems. Enclosed. 3-V differential. 115 VAC. *Adjustable 2-14 V. †3-phase. 3 3/4x2 5/8x1 15/32". 11 oz.

Stock No.	Mfr's Type	DPDT Cont. Plus	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4696	349BBXP	2 N.O.	77.00	73.15	69.30	61.60	53.90
41 D 4697	349ABXP*	1 N.O.	77.00	73.15	69.30	61.60	53.90
41 D 4698	349XBXP†	.....	87.00	82.65	78.30	69.60	60.90

TYPE 235 AND 236 AXXP TIME-DELAY 115 VAC RELAYS

All use Type 219 standard relay plus static timing element. Timing performed by solid state network which triggers relay end of preset time. Time delay is screwdriver-adjustable over relays entire time range. Contacts: Type 235 "on" delay, SPDT plus 1 N.O. Type 236 "on" delay DPDT-1 N.O., 1% timing accuracy with variation of voltage and temperature. 3 3/4x2 5/8x1 15/32". 11 oz.

Stock No.	Mfr's Type	Range, Seconds	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4211	235AAXP	0.2 to 18	57.80	54.91	52.02	46.24	40.46
41 D 4212	235AAXP	2.0 to 180	57.80	54.91	52.02	46.24	40.46
41 D 4694	236ABXP	0.2 to 20	57.80	54.91	52.02	46.24	40.46
41 D 4695	236ABXP	2.0 to 200	57.80	59.91	52.02	46.24	40.46

12-PIN AND 14-PIN SOCKETS FOR ABOVE RELAYS

Front-connected screws have clamp plates for up to two No. 14 wires. Base 2 3/16x2 5/8"; height, 7 7/32". Shpg. wt., 3 oz.

41 D 4213. 12-Pin (Type 27390)..... 2.20

41 D 4546. 14-Pin (Type 33377)..... 2.50

TYPE 255 FRAME LATCH RELAYS

Plug-in mechanical latch, electrical reset relays. Combine standard Type 219 frame (left) with latching frame; for contact reliability over 10 million operations. Same specs as Type 219. Base, 2 5/8x 1 15/32"; height, 3 3/4" (less pins). 10 oz.

Stock No.	Type 255-	Contact Form	Volts	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4204	XBXP	DPDT	115 AC	24.20	22.99	21.78	19.36	16.94
41 D 4772	XCXP	3PDT	24 AC	26.60	25.27	23.94	21.28	18.62
41 D 4205	XCXP	3PDT	115 AC	26.60	25.27	23.94	21.28	18.62
41 D 4770	XCXP	3PDT	24 DC	26.60	25.27	23.94	21.28	18.62
41 D 4771	XCXP	3PDT	115 DC	26.60	25.27	23.94	21.28	18.62
41 D 4207	BXBP	2NO;2NC	115 AC	26.60	25.27	23.94	21.28	18.62

211XBXP FRAME SEQUENCE DPDT RELAY

DPDT relay that provides exceptional sequence versatility, and features a double cam movement on each step. Cam rotates half a step when coil is energized and completes step when de-energized. 8-tooth ratchet. Contacts transfer on each impulse; are rated 5 amperes @ 115 V, AC and 0.5 ampere 115 V, DC. Coils, 60 Hz. Base 1 15/32x2 5/8"; height, 3 3/4" (less pins). Shpg. wt., 9 oz.

Stock No.	Volts	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4210	115 AC	25.10	23.85	22.59	20.08	17.57
41 D 4762	115 DC	25.10	23.85	22.59	20.08	17.57

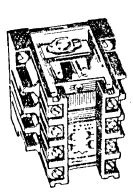
PLASTIC RELAY ENCLOSURES

Clear thermplastic case with phenolic base, 2 5/8x1 15/32". Twelve or fourteen usable pins, with 10-A rating. Polarized mounting clip. Fits 27390 socket, or 33377 left. Sizes do not include pins. 4 oz.

41 D 4214. Type CX 3671. 12-Pin. 2 19/32" high..... Ea. 2.45

41 D 4215. Type CX 3672. 12-Pin. 3 3/4" high..... Ea. 2.55

41 D 4217. Type CX 3736. 14-Pin. 2 19/32" high..... Ea. 2.50



319 FRAME 300-VOLT PANEL-MOUNT

Compact enclosed relays use same magnet and contact assemblies as Type 219, but have 14 screw terminals front-connected and separated by molded barriers. Mount in panel space only 2 1/16x2 1/2x2 7/8" deep. For high reliability in machine and other 300-volt industrial service. Manual actuator permits operation of contacts from outside of case for testing. For loads up to 10 amps. 115 VAC; other voltages available. Clear cover. 8 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4547	319XDX	4PDT	14.50	13.78	13.05	11.60	10.15
41 D 4548	319DXB	4PNO/2PNC	14.50	13.78	13.05	11.60	10.15
41 D 4549	319FXX	6PNO	14.50	13.78	13.05	11.60	10.15

STANDARD MIDGET RELAYS

For control circuits, operation of small motors, heaters, lights. Contact resistive ratings: 6 amps at 24 or 115 VAC, or 24 VDC; 3 amps at 230 VDC; 0.5 amps at 115 VDC. Inrush on motor or lamp loads should not exceed 20 amps. All have insulation spacing in accordance with U.L. requirements for 300 volts. All metal parts, have cadmium plating and chromate finish. Size, B1 series, 1 7/8x2 3/4"; A1XCX, 2 1/2x3 1/2". Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	V AC	Contact Action	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4776	B1HXX	115	DB-N.O.	8.90	8.46	8.01	7.12	6.23
41 D 4779	B1XAX	115	SPDT	9.80	9.31	8.82	7.84	6.86
41 D 4782	B1XBX	115	DPDT	12.60	11.97	11.34	10.08	8.82
41 D 4785	A1XCX	115	3PDT	16.90	16.06	15.21	13.52	11.83

Allied Is Headquarters for Industrial Components at Factory Prices

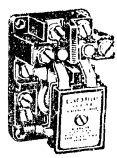
Industrial, Military and Thermal Relays

STRUTHERS-DUNN INDUSTRIAL POWER RELAYS

Single-coil with heavy duty contacts that transfer when coil is energized. For supervisory, interlocking, power transfer. Coils rated 15 VA AC, 7 watts DC. Contact ratings: Single-break type, 30 amps at 24, 115, 230 VAC or 24 VDC; 3 amps at 115 VDC; ¾ amp at 230 VDC; double-break, 30 amps at 24, 115, 230 VAC or 24 VDC; 6 amps at 115 VDC; 3 amps at 230 VDC. *U.L. Recog. Stud terminals. Type 84XBX, 3x6¼"; others, 3x4¼". 1 lb.

Stock No.	Mfr's Type	V AC	Contact Action	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4805	*8BXX	115	DP-N.O.	20.60	19.57	18.54	16.48	14.42
41 D 4806	*8BXX	230	DP-N.O.	20.60	19.57	18.54	16.48	14.42
41 D 4807	*8AXA	115	1N.O.-1N.C.	20.60	19.57	18.54	16.48	14.42
41 D 4809	84XBX	115	DPDT	26.50	25.18	23.85	21.20	18.55

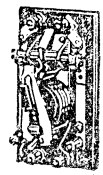
415XBX SMALL POWER RELAY



For control of instruments, motors, valves, heating elements, etc. Heavy duty DPDT action with silver cadmium oxide, single-break contacts arranged for optimum wiping action. Coil is epoxy encapsulated for environmental protection. 115 V, 50-60 Hz AC. Continuous rated 15 A @ 115 VAC, resistive; 10 A @ 230 VAC, resistive Base, 1⅞x2¾"; height, 1¾". Shpg. wt., 8 oz.

41 D 4203, 1-24 ..... Each 7.20
25-49 ..... Each 6.84 50-74 ..... Each 6.48
75-99 ..... Each 5.76 100-249 ..... Each 5.04

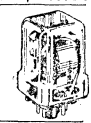
STRUTHERS-DUNN RATCHET SEQUENCE RELAYS



DPST cam-operated contacts continuously repeat predetermined sequence, stepped from one position to the next by impulse to the coil. B11 Miniature Types. B11BXX relay contacts open and close together; B11AXA contacts open and close alternately. Contacts rated 6 A @ 115 VAC or 24 VDC; 0.5 A @ 115 VDC. Six #6-32 stud terminals, front-connected. 2x 3⅛". Shpg. wt., 1 lb. C85AXA Power Type. Contacts 20 A @ 115 VAC, 24 VDC; 10 A @ 230 A; 1 A @ 115 VDC; ¼ A @ 230 VDC. 8-tooth ratchet. Coil 18 VA AC, 14 W DC. 3x5". Shpg. wt., 1 lb.

Stock No.	Mfr's Type	V AC	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4799	B11BXX	115	24.20	22.99	21.78	19.36	16.94
41 D 4801	B11AXA	115	24.20	22.99	21.78	19.36	16.94
41 D 4819	C85AXA	115	39.40	36.48	34.56	30.72	26.88

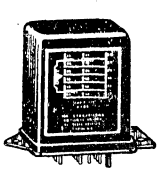
214 FRAME AC, DC RELAYS



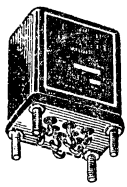
Silver contacts rated 10 amperes at 115 VAC with gold-flashing for reliable continuity at low levels. AC relays operate in range of 85-110% nominal voltage, DC relays 80-110%. 2¾x1⅞x1⅜". Av. wt., 5 oz.

Stock No.	Mfr's Type	Coil Volts	Action	EACH 1-24	25-49	50-74	75-99	100-249
41 D 4757	214XBX48P	115 AC	DPDT	5.00	4.75	4.50	4.00	3.50
41 D 4758	214XBX48P	24 DC	DPDT	5.00	4.75	4.50	4.00	3.50
41 D 4759	214XCX48P	115 AC	3PDT	6.00	5.70	5.40	4.80	4.20
41 D 4760	214XCX48P	24 DC	3PDT	6.00	5.70	5.40	4.80	4.20

STRUTHERS-DUNN AEROSPACE AND MILITARY RELAYS



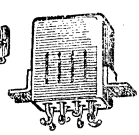
FC(L) 400, 406-4



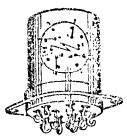
FC 400, 402-1, 406-1,-2

FCM-410-P; 410-1, 3

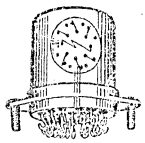
FC-1



FC-215



FC-4-250



FC-6-250

Meet or exceed all applicable military specs. for shock, vibration, etc. Temp. Ranges: MIL-R-5757: —65°C to +125°C; MIL-R-6106: —70°C to +120°C.

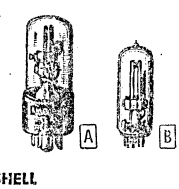
Stock No.	Type FC-	Government Designation	Cont. Argmt.	A	Coil Volts	Terminal Type	Operate/Release Ms Max.	Wt., Oz.	EACH 1-9	10-499	500-999	1000-Up
41 D 4305	400-1	MS-25271-D1(MIL-R-6106)	4PDT	10	28DC	Solder-Hook	20	6	21.20	18.20	17.60	16.75
41 D 4306	400-2	MS-25271-A1(MIL-R-6106)	4PDT	10	115AC	Solder-Hook	20	6	28.15	25.15	24.55	23.85
41 D 4309	406-1	MS-25269-D1(MIL-R-6106)	6PDT	5	28DC	Solder-Hook	20	6	23.65	20.65	20.05	19.30
41 D 4312	406-4	MS-25329-A1(MIL-R-6106)	6PDT	5	115AC	Plug-In	20	6	31.35	28.35	27.75	27.00
41 D 7095	M-410-P	MIL-R-6106E, BS	4PDT	10	28DC	Plug-In	.015	3.2	28.00	25.00	24.50	.....
41 D 7096	402-1	MS-25273-D1	2PDT	10	28DC	Solder-Hook	.020	5	17.90	14.90	14.30	13.45
41 D 4541	L400-1	MS-25468-D1	4PDT	10	28DC	Solder-Hook	.025	6	26.20	23.30	22.70	.....
41 D 4542	L400-2	MS-25468-A1	4PDT	10	115AC	Solder-Hook	.025	6	33.15	30.15	29.65	.....
41 D 4539	M410-1	MS-27709-1	4PDT	10	28DC	Solder-Hook	.015/.010	6	30.80	27.50	27.00	26.25
41 D 4540	M410-2	MS-27709-2	4PDT	10	28DC	Plug-In	.015/.010	6	30.80	27.50	27.00	26.25

Stock No.	Type FC-	Government Designation	Cont. Argmt.	A	Coil Volts	Terminal Type	Operate/Release Ms Max.	Wt., Oz.	EACH 1-9	10-49	50-99	100-249	250-499
41 D 4300	1	MIL-R-5757	2PDT	2	28DC	Solder-Hook	10	1	18.40	15.40	14.30	13.20	12.10
41 D 4301	1-P	MIL-R-5757	2PDT	2	28DC	Plug-In	10	1	18.40	15.40	14.30	13.20	12.10
41 D 4302	4-250	RY4LB3B3L01(MIL-R-5757/7)	4PDT	2	28DC	Solder-Hook	10	3	21.30	18.30	17.70	17.20	16.10
41 D 4303	6-250	RY4LC3B3L01(MIL-R-5757/1)	6PDT	2	28DC	Solder-Hook	15	3.5	22.40	19.40	18.80	18.30	17.20
41 D 4304	215	MIL-R-5757	2PDT	10	28DC	Solder-Hook	15	2	16.20	13.20	12.70	12.10	11.60

AMPERITE THERMAL DELAY RELAYS

Relay heaters operate from either AC or DC power—contacts close for NO types (Normally Open) or open for C types (Normally Closed) after heaters have been energized for delay period shown in table, below. Hermetically sealed in glass envelope with octal mounting base or 9-pin miniature tube shell. Heater draws 2 watts and may be operated continuously. SPST contact ratings: 3 amps @ 115 VAC; 1 amp @ 220 VAC.

Voltage breakdown ratings: contacts, 800 volts; heater-to contact, 800 volts; except *250 volts contact and 500 volts heater-to-contact ratings for units with delays of 10 seconds or less. Ambient temperature range: —55° to +70° C. Tolerance: ±30%. Octal base size: 1⅝" diameter; 2⅞" high less prongs. 9-pin miniature: ¾" diameter; 2⅝" high. Specify Type Number as well as Stock Number when ordering. Octal, 4 oz.; 9-pin, 2 oz.



A B

A OCTAL BASE TUBE SHELL

Delay Seconds	Type NO. Normally Open 6.3 V	26 V	115 V	Type C. Normally Closed 6.3 V	26 V	115 V
2*	6N02	26N02	115N02	6C2	26C2	115C2
3*	.....	26N03	115N03	.....	26C3	115C3
5*	6N05	26N05	115N05	6C5	26C5	115C5
10*	6N010	26N010	115N010	6C10	26C10	115C10
15	6N015	26N015	115N015	.....	26C15	115C15
20	6N020	26N020	115N020	.....	.....	115C20
30	6N030	26N030	115N030	6C30	26C30	115C30
45	6N045	.....	115N045	.....	.....	115C45
60	6N060	26N060	115N060	6C60	.....	115C60
120	6N0120	26N0120	115N0120	.....	.....	115C120
180	6N0180	26N0180	115N0180	6C180	26C180	115C180

41 D 5295 C ..... Each 2.40

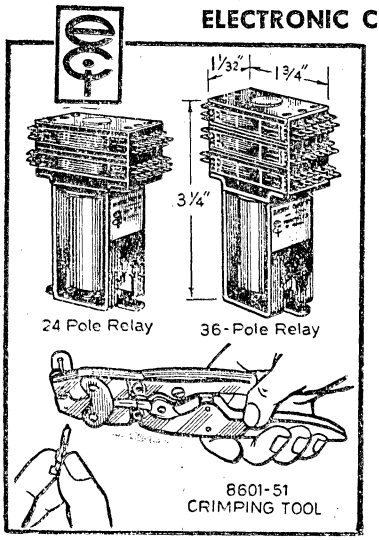
B MINIATURE 9-PIN TUBE SHELL

Delay Seconds	Type NO. Normally Open 6.3 V	26 V	115 V	Type C. Normally Closed 6.3 V	26 V	115 V
2*	6N02T	26N02T	115N02T	6C2T	26C2T	115C2T
3*	.....	26N03T	115N03T	.....	26C3T	115C3T
5*	6N05T	26N05T	115N05T	6C5T	26C5T	115C5T
10*	6N010T	26N010T	115N010T	6C10T	26C10T	115C10T
15	6N015T	.....	.....	.....	26C15T	115C15T
20	.....	26N020T	115N020T	6C20T	26C20T	115C20T
30	6N030T	26N030T	115N030T	6C30T	.....	115C30T
45	6N045T	.....	115N045T	.....	.....	.....
60	.....	26N060T	115N060T	6C60T	26C60T	115C60T
90	.....	.....	.....	.....	.....	115C90T
120	.....	26N0120T	115N0120T	6C120T	.....	115C120T

41 D 5296 C ..... Each 2.40

Multi-Pole, Flatpack and TO-5 Case Relays

ELECTRONIC CONTROLS, INC. SERIES 801 AND 401 RELAYS

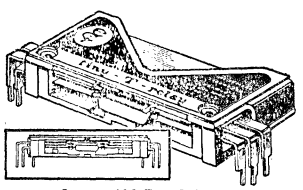


Switches up to 48 circuits simultaneously. Contact rating: non-inductive; 150 watts, 3 A make/break, 500 W, 5 A carry. Contact Life: min. 20,000,000 cycles @ 100 mils to min. of 100,000 @ 3 A, 150 watts res. Gold-bonded fine silver contacts arranged in "C" combinations. Operate/release times less than 30 ms. Temp. range —55°C to +85° C. Terminals may be soldered or wires may be crimped to snap-on terminals (below) for connection of STR size 22, 24, 26 wire. Av. relay wt., 10 oz. Av. connector wt., 2 oz.

Stock No.	Mfr's Type	Coil			Watts @ Nom. Volts	Cont. Arr.	EACH			
		VDC	Ohms	Amps			1-24	25-49	50-74	75-99
41 D 4616	801-4C24	24	193.0	.124	2.98	4PDT	9.23	8.77	8.33	7.94
41 D 4618	801-8C24	24	193.0	.124	2.98	8PDT	13.21	12.55	11.92	11.36
41 D 4620	801-12C12	12	49.1	.244	2.96	12PDT	16.79	15.95	15.15	14.44
41 D 4621	801-12C24	24	193.0	.124	2.98	12PDT	15.26	14.50	13.77	13.12
41 D 4622	801-12C110	110	3963.0	.028	3.05	12PDT	15.26	14.50	13.77	13.12
41 D 4623	801-24C12	12	45.0	.267	3.19	24PDT	30.20	28.69	27.26	25.97
41 D 4624	801-24C24	24	174.0	.138	3.32	24PDT	27.44	26.07	24.76	23.60
41 D 4625	801-24C28	28	227.0	.123	3.44	24PDT	27.44	26.07	24.76	23.60
41 D 4626	801-24C110	110	3450.0	.032	3.54	24PDT	27.44	26.07	24.76	23.60
41 D 4627	801-36C12	12	28.0	.429	5.16	36PDT	40.68	38.65	36.71	34.98
41 D 4628	801-36C24	24	111.0	.216	5.15	36PDT	36.98	35.13	33.37	31.80
41 D 4629	801-36C28	28	150.0	.187	5.23	36PDT	36.98	35.13	33.37	31.80
41 D 4630	801-36C110	110	2355.0	.047	5.18	36PDT	36.98	35.13	33.37	31.80
41 D 4590	801-48C12	12	22	.545	6.54	48PDT	51.29	48.73	46.29	44.11
41 D 4591	801-48C24	24	94	.255	6.12	48PDT	51.29	48.73	46.29	44.11

41 D 5524. 8601 T-Bar Connector. 1-99.....Each 1.35 100-449.....Each 1.25
41 D 5522. 8601-51 Crimping Tool.....47.50
41 D 5523. 8601-61 Extraction Tool.....7.50

MINIATURE FLATPACK RELAYS



Series 401 Tiny-T Relays

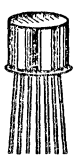
Multiple non-reed relay for fast switching of microamps to 3-amp loads. Low height (.360") and standard tin-plated .100x.100 grid terminal layout for printed-circuit applications. Ideal for use in computers, business machines, automatic testers, process controls, and many other applications. Actuator and contact assembly is enclosed in plastic housing. No sliding or bearing surfaces or pivots to wear out. Minimum mechanical life, over 100,000,000 operations. Contact life, 100,000,000 cycles at 100 milliwatts; 200,000 cycles at 150 watts, 3 amps resistive; 100,000 cycles at 5 amps, 115 VAC resistive. Contacts are gold bonded over fine silver. Type 401-4A is rated at 0.042 amp; Type 401-4C is rated at 0.063 amp. Overall size, .360x2.30x.910". Shpg. wt., 1 oz.

SPECIFICATIONS

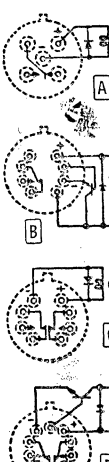
Coil Power at Nominal Voltage: Type 4A, 1 watt; Type 4C, 1½ watts. **Contact Rating:** μV to 1000 VAC, resistive load 3 amps at 115 VAC; 5 amps 500 watts carry. **Contact Arrangement:** 4 poles, "A" single throw n.o.; "C" double throw n.o.; 1000 volt interrupt contact rating on "A" forms. **Contact Life:** 100,000,000 cycles at 100 mW; 200,000 cycles at 150 watts, 3 A resistive; 100,000 cycles at 5 A, 115 VAC resistive; 10 milliohms or less contact resistance. **Operating Time:** 8 ms. **Release Time:** 5 ms.

Stock No.	Mfr's Type	Coil		EACH			
		VDC	Ohms	1-24	25-49	50-99	100-249
41 D 5527	401-4A12	12	576	5.35	5.08	4.83	3.86
41 D 5525	401-4A24	24	576	5.35	5.08	4.83	3.86
41 D 5529	401-4A48	48	576	5.35	5.08	4.83	3.86
41 D 5528	401-4C12	12	380	6.85	6.51	6.18	4.95
41 D 5526	401-4C24	24	380	6.85	6.51	6.18	4.95
41 D 5530	401-4C48	48	380	6.85	6.51	6.18	4.95

TELEDYNE TO-5 SIZE RELAYS



Performance-tested relays ideal for high-isolation switching and RF applications. Feature all-welded construction; TO-5 transistor type enclosure, hermetically sealed. Meet MIL-R-5757D. Type 712 is industrial version, useful in many applications. Suffix D of Type No. indicates internal 1N5315 diode for arc suppression; Suffix T indicates internal 2N222A transistor driver chip. *SPDT contacts. †DPDT contacts. Life: 10,000,000 operations at low level: 1,000,000 at 0.5 amp, 28V DC resistive; 100,000 at 1 amp, 28V DC resistive. Contact Resistance, 0.1 ohm maximum before life test, 0.2 ohm after life test at max. current. Operative Power, pull-in at 25° C: 431, 40 mW; 432, 60 mW; 412, 130 mW; 712, 185 mW; others, 100 mW. Contact Bounce, less than 1.5 ms, except 420/422, 2.0 ms; 712, 4.0 ms max. Overload, 2 amps at 28 VDC. Vibration, 30 G's to 3000 cps. Shock, 80 G's for 11 ms. −65° C to +125° C, except 712, −55°C to +70°C. Operate Time. 2 ms. Can Height: Types 411, 412, 0.265"; 420, 421, 422, 712 are 0.275"; 431, 432, 0.375".

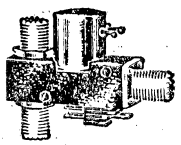


Stock No.	Mfr's Type	Fig.	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-99	100-249
41 D 7442	411-6*	E	6	125	20.60	19.60	18.50	15.40
41 D 7443	411-9*	E	9	280	20.60	19.60	18.50	15.40
41 D 7444	411-12*	E	12	500	20.60	19.60	18.50	15.40
41 D 7445	411-18*	E	18	1130	20.60	19.60	18.50	15.40
41 D 7446	411-26*	E	26.5	2000	20.60	19.60	18.50	15.40
41 D 7447	411D-6*	A	6	125	22.35	21.35	20.25	17.15
41 D 7448	411D-9*	A	9	280	22.35	21.35	20.25	17.15
41 D 7449	411D12*	A	12	500	22.35	21.35	20.25	17.15
41 D 7450	411D-18*	A	18	1130	22.35	21.35	20.25	17.15
41 D 7451	411D-26*	A	26.5	2000	22.35	21.35	20.25	17.15
41 D 7452	411T-6*	B	6	125	24.60	23.60	22.50	19.40
41 D 7453	411T-9*	B	9	280	24.60	23.60	22.50	19.40
41 D 7454	411T-12*	B	12	500	24.60	23.60	22.50	19.40
41 D 7455	411T-18*	B	18	1130	24.60	23.60	22.50	19.40
41 D 7456	411T-26*	B	26.5	2000	24.60	23.60	22.50	19.40
41 D 7457	412-6†	F	6	98	27.20	25.80	24.50	20.40
41 D 7458	412-9†	F	9	220	27.20	25.80	24.50	20.40
41 D 7459	412-12†	F	12	390	27.20	25.80	24.50	20.40
41 D 7460	412-18†	F	18	880	27.20	25.80	24.50	20.40
41 D 7461	412-26†	F	26.5	1560	27.20	25.80	24.50	20.40
41 D 7462	412D-6†	F	6	98	28.95	27.55	26.25	22.15
41 D 7464	412D-9†	F	9	220	28.95	27.55	26.25	22.15
41 D 7465	412D-12†	F	12	390	28.95	27.55	26.25	22.15
41 D 7466	412D-18†	F	18	880	28.95	27.55	26.25	22.15
41 D 7467	412D-26†	F	26.5	1560	28.95	27.55	26.25	22.15

Stock No.	Mfr's Type	Fig.	Coil VDC	Coil Ohms	EACH 1-24	25-49	50-99	100-249
41 D 7468	412T-6†	D	6	98	31.20	29.80	28.50	24.40
41 D 7469	412T-9†	D	9	220	31.20	29.80	28.50	24.40
41 D 7470	412T-12†	D	12	390	31.20	29.80	28.50	24.40
41 D 7471	412T-18†	D	18	880	31.20	29.80	28.50	24.40
41 D 7472	412T-26†	D	26.5	1560	31.20	29.80	28.50	24.40
41 D 7473	420-26†	G	26.5	2000	35.40	35.40	35.40	27.80
41 D 7474	421-26*	H	26.5	2000	28.70	28.70	28.70	22.40
41 D 7475	422-26	J	26.5	2000	28.70	28.70	28.70	22.40
41 D 7476	431-4.0K*	E	26.5	4000	26.65	26.65	26.65	20.40
41 D 7477	432-26†	F	26.5	3300	29.75	29.75	29.75	24.20
41 D 7478	712-6	F	6	100	9.90	9.90	9.40	8.50
41 D 7479	712-9	F	9	220	9.90	9.90	9.40	8.50
41 D 7480	712-12	F	12	390	9.90	9.90	9.40	8.50
41 D 7481	712-18	F	18	880	9.90	9.90	9.40	8.50
41 D 7482	712-26	F	26.5	1560	9.90	9.90	9.40	8.50
41 D 7483	712D-6	C	6	100	11.15	11.15	10.65	9.75
41 D 7484	712D-9	C	9	220	11.15	11.15	10.65	9.75
41 D 7486	712D-12	C	12	390	11.15	11.15	10.65	9.75
41 D 7487	712D-18	C	18	880	11.15	11.15	10.65	9.75
41 D 7488	712D-26	C	26.5	1560	11.15	11.15	10.65	9.75
41 D 7489	712T-6	D	6	100	13.90	13.90	13.40	12.50
41 D 7490	712T-9	D	9	220	13.90	13.90	13.40	12.50
41 D 7491	712T-12	D	12	390	13.90	13.90	13.40	12.50
41 D 7492	712T-18	D	18	880	13.90	13.90	13.40	12.50
41 D 7493	712T-26	D	26.5	1560	13.90	13.90	13.40	12.50

Coaxial Relays and Switches

DOW-KEY COAXIAL RELAYS AND SWITCHES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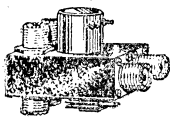
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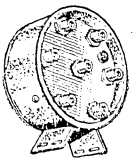
DK2-60B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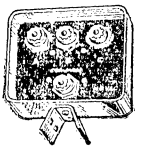
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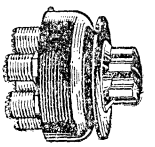
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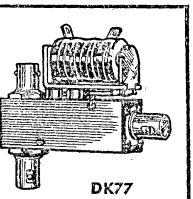
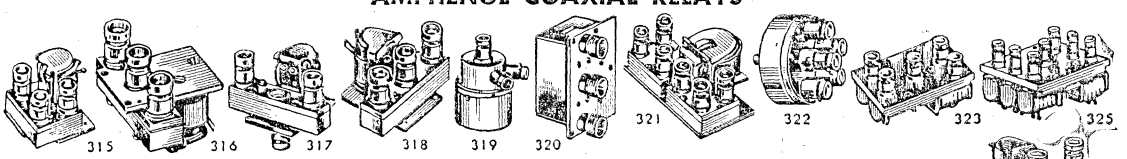

DK77

60 Series. Heavy-duty relays for up to 1 kW. VSWR less than 1.15:1, DC to 500 MHz. Types with asterisk (*) have patented automatic receiver-protecting connector for over 100 dB RF isolation, 0-500 MHz. Types ending in "2" include external DPDT contacts (5 amps @ 110 VAC). 2¾x3¾x1⅛". 10 oz. 260 Series. DPDT switch for up to 1 kW, 0-500 MHz. VSWR below 1.15:1; isolation exceeds 30 dB @ 500 MHz; loss under 0.03 dB @ 30 MHz. Life, over 1 million operations. 2¾x3¾x1¾". Wt., 12 oz. 260B Series. Above, but internally connected in de-energized position. Types with dagger (†) include external DPDT contacts for aux. circuits (5 A @ 110 VAC). 12 oz. Type 71. SP6T weatherproof switch. 1 kW, 0-500 MHz; VSWR, 1.1:1 at 100 MHz; isolation, 40 dB at 100 MHz; over 1 million operations. 5¾" dia., 2¼" deep. Mtg. strap. 3 lbs. 72 Series. Above, but SP3T. Wt., 1½ lbs. 77 Series. Miniature SPDT relays; up to 250 watts, DC to 1000 MHz. VSWR, 1.1:1 at 400 MHz. Crosstalk, 35 dB at 400 MHz. Insertion loss, under .03 at 500 MHz. §SPDT auxiliary contacts; 5 amps @ 110 VAC. 2⅜x2⅛x1⅛". 5 oz. 78 Series. Manual coax switches (not wafer switches) rated 1 kW to 500 MHz. VSWR, 1.05:1 at 150 MHz. Isolation, 50 dB at 500 MHz, 80 dB at 30 MHz. −55° to +85° C. Silver-plated connectors, fine silver contacts. ‡Transfer-crossover switch. Dial plates, knobs. 3" dia. x 1⅛". 12 oz.

Stock No.	Mfr's Type	Action	Imp., Ohms	Coil V	Volt. Range	Connect.	EACH 1-4	5-9	10-24	25-49
41 D 6114	60-2204	SPDT	50	12 DC	9.5-14	UHF	14.85	13.50	12.15	10.80
41 D 6113	60-2304	SPDT	50	28 DC	19-31	UHF	14.85	13.50	12.15	10.80
41 D 6115	60-2604	SPDT	50	115 AC	100-125	UHF	14.85	13.50	12.15	10.80
41 D 5953	60-2228*	SPDT	50	12 DC	9.5-14	UHF	16.35	14.85	13.35	11.90
41 D 5955	60-2628*	SPDT	50	115 AC	110-125	UHF	16.35	14.85	13.35	11.90
41 D 6118	60-222842*	SPDT	50	12 DC	9.5-14	UHF	18.00	16.35	14.70	13.10
41 D 6112	60-232842*	SPDT	50	28 DC	19-31	UHF	18.00	16.35	14.70	13.10
41 D 6119	60-262842*	SPDT	50	115 AC	100-125	UHF	18.00	16.35	14.70	13.10
41 D 6117	60-260442	SPDT	50	115 AC	100-125	UHF	16.50	15.00	13.50	12.00
41 D 6124	260-2204	DPDT	50	12 DC	9.5-14	UHF	24.75	22.50	20.50	18.00
41 D 6149	260-2604	DPDT	50	115 AC	100-125	UHF	24.75	22.50	20.50	18.00
41 D 5956	260B2604	DPDT	50	115 AC	100-125	UHF	23.90	21.75	19.55	17.40
41 D 5944	260B260442†	DPDT	50	115 AC	100-125	UHF	25.55	23.25	20.90	18.60
41 D 5957	71-260402	SP6T	50	115 AC	100-125	UHF	61.85	56.25	50.60	45.00
41 D 5980	72-230402	SP3T	50	28 DC	19-31	UHF	31.35	28.50	25.65	22.80
41 D 5960	72-260412	SP3T	50	115 AC	100-125	UHF	31.35	28.50	25.65	22.80
41 D 5910	77-220202	SPDT	50	12 DC	9.5-14	BNC	11.50	10.50	9.45	8.40
41 D 5911	77-230202	SPDT	50	28 DC	19-31	BNC	11.50	10.50	9.45	8.40
41 D 5914	77-220232§	SPDT	50	12 DC	9.5-14	BNC	12.75	11.60	10.45	9.30
41 D 5919	77-230232§	SPDT	50	28 DC	19-31	BNC	12.75	11.60	10.45	9.30
41 D 5900	78-0204	SPDT	50	.....	.....	UHF	14.00	12.75	11.45	10.20
41 D 5901	78-0304	SP3T	50	.....	.....	UHF	14.45	13.10	11.80	10.05
41 D 5902	78-0604	SP6T	50	.....	.....	UHF	15.65	14.25	12.80	11.40
41 D 5904	78-0904	‡T-C	50	.....	.....	UHF	16.65	15.20	13.70	12.20
41 D 5880	78-0202	SPDT	50	.....	.....	BNC	15.75	14.30	12.90	11.45
41 D 5881	78-0302	SP3T	50	.....	.....	BNC	16.75	15.20	13.70	12.20
41 D 5882	78-0602	SP6T	50	.....	.....	BNC	19.70	17.90	16.15	14.35
41 D 5883	78-0902	‡T-C	50	.....	.....	BNC	20.70	18.90	17.00	15.10

AMPHENOL COAXIAL RELAYS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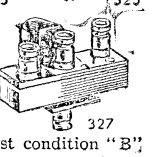
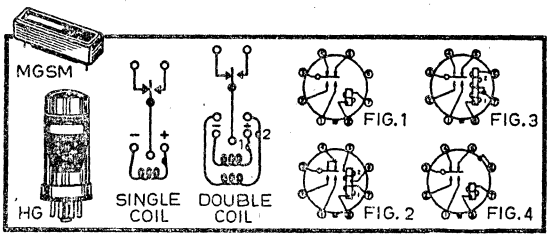

327

Precision coax units. Maximum time to operate and release is 20 milliseconds. Gold-plated, fine silver contacts assure reliable low-level operation. Minimum life expectancy is 1,000,000 cycles, when switch is operated at speeds of less than 10 Hz. Switches are impedance matched to 50-ohm cable, though loss is negligible with 75-ohm cable. Operation is break-before-make. Units meet applicable portions of military connector specifications as follows: BNC connectors, MIL-C-3608: Type N connectors, MIL-C-71. All materials used are corrosion resisting types or are suitably plated to withstand the 48-hour test condition "B" requirement of MIL-STD-202.

Stock No.	Mfr's Type	Termination	Action	Connectors	Freq. (MHz)	Power (W)	Coil Volts	Coil Ohms	Wt., Oz.	EACH 1-4	5-9	10-24	25-49	50-99
41 D 7801	315-010002-3	Open	SPDT	BNC	1000	100	26 DC	280	4	25.30	21.00	18.10	15.94	14.05
41 D 7803	316-010082-3	Short	SPDT	BNC	2750	100	26 DC	280	4½	28.27	23.47	20.22	17.82	15.70
41 D 7804	316-010082-6	Short	SPDT	BNC	2750	100	120 DC	7000	4½	28.27	23.47	20.22	17.82	15.70
41 D 7805	316-010102-8	Short	SPDT	BNC	2750	100	115 AC	550	6½	30.47	25.30	21.79	19.21	16.92
41 D 7810	317-010202-3	Short	SPDT	BNC	2750	100	26 DC	280	4½	28.27	23.47	20.22	17.82	15.70
41 D 7811	317-010215-8	Short	SPDT	BNC	2750	100	115 AC	550	6½	30.47	25.30	21.79	19.21	16.92
41 D 7812	317-010242-3	Short	SPDT	N	4000	100	26 DC	280	5	28.27	23.47	20.22	17.82	15.70
41 D 7814	317-010255-8	Short	SPDT	N	4000	100	115 AC	550	7	30.47	25.30	21.79	19.21	16.92
41 D 7820	318-010381-0	Short	SPDT	BNC	2750	100	lever manual	.....	4½	28.27	23.47	20.22	17.82	15.70
41 D 7821	318-010382-3	Short	SPDT	BNC	2750	100	26 DC	280	4½	28.27	23.47	20.22	17.82	15.70
41 D 7823	318-010407-3	Open	SPDT	BNC	2750	100	26 DC	280	4½	28.27	23.47	20.22	17.82	15.70
41 D 7825	318-011165-3	Res.	SPDT	BNC	2750	100	26 DC	280	4½	32.67	27.13	23.36	20.59	18.14
41 D 7828	318-011576-8	Res.	SPDT	BNC	2750	100	115 AC	550	6½	34.87	28.95	24.94	21.98	19.36
41 D 7832	319-011141-0	Open	SPDT	BNC	1000	100	rotary manual	.....	4½	46.20	38.35	33.03	29.11	25.64
41 D 7833	320-010931-3	Open	SPDT	N	1200	1000	26 DC	200	20	61.38	50.95	43.89	38.68	34.07
41 D 7835	321-011062-0	Open	DPDT	BNC	1000	100	lever manual	.....	8	38.94	32.33	27.85	24.54	21.62
41 D 7834	321-011064-3	Open	DPDT	BNC	1000	100	26 DC	200	10	38.94	32.33	27.85	24.54	21.62
41 D 7836	322-011431-0	Open	1P4T	BNC	2750	100	rotary manual	.....	11	62.70	52.04	44.84	39.50	34.80
41 D 7838	323-011651-3	Open	1P4T	BNC	900	100	26 DC	280	14	55.88	46.39	39.96	35.21	31.02
41 D 7839	322-011442-0	Open	1P6T	BNC	2750	100	rotary manual	.....	12	71.50	59.35	51.13	45.05	39.69
41 D 7840	325-011635-3	Short	1P6T	BNC	900	100	26 DC	280	21	70.40	58.43	50.34	44.35	39.07
41 D 7842	325-011641-3	Open	1P6T	BNC	900	100	26 DC	280	21	70.40	58.43	50.34	44.35	39.07
41 D 7845	327-010582-3	.....	Transfer	BNC	1000	100	26 DC	280	10½	39.27	32.60	28.08	24.75	21.80

C. P. Clare Relays and Hansen Motors

C. P. CLARE MERCURY-WETTED, DRY REED AND TELEPHONE RELAYS



SERIES HGSM RELAYS

Relay modules for PC board mounting. 1000 Series is SPDT make-before-break; 5000 Series is SPDT break-before-make. Contacts rated at 2 amps, 500 volts max., 100 V.A. at rated load. Maximum dissipation, 2 watts at 25°C. Temperature rise: 30°C per watt at 25°C ambient. Life expectancy: 22x10⁹. .040″ dia. terminals require .063″ dia. mounting hole. Single side-stable; except †bi-stable double wound (see illustrations above). For prices on quantities larger than those shown, contact Allied. 5/8x5/8x2 1/16″. Av. wt., 3 oz.

Stock No.	Type HGSM-	Coil Ohms	Must Opr. mA	Must Rel. mA	Must Opr. VDC	Max. VDC	EACH 1-9	10-24	25-49
41 D 7521	1005	65	37.4	6.2	2.7	11.4	10.80	8.10	7.56
41 D 7522	1007	90	37.7	6.3	3.8	13.4	10.80	8.10	7.56
41 D 7523	1009	275	17.0	2.8	5.2	23.4	10.80	8.10	7.56
41 D 7524	1010	450	12.9	2.1	6.4	30.0	10.80	8.10	7.56
41 D 7525	1011	675	11.6	1.9	8.6	36.7	10.80	8.10	7.56
41 D 7526	1002	940	10.1	1.7	10.5	43.3	10.80	8.10	7.56
41 D 7527	1001	1425	8.3	1.4	13	53.4	10.80	8.10	7.56
41 D 7528	1003	2400	7.35	1.2	20.6	69.2	10.80	8.10	7.56
41 D 7530	1063†	460/460	±7.8 7.8	.....	±3.95	30.3	11.50	8.63	8.05
41 D 7531	1016†	1100/1100	7.25 5.7	.....	8.77 6.9	46.9 46.9	11.50	8.63	8.05
41 D 7532	5021	65	37.4	6.2	2.7	11.4	10.80	8.10	7.56
41 D 7533	5035	275	17.0	2.8	5.2	23.4	10.80	8.10	7.56
41 D 7534	5009	450	12.9	2.1	6.4	30.0	10.80	8.10	7.56
41 D 7535	5010	675	11.6	1.9	8.6	36.7	10.80	8.10	7.56
41 D 7536	5011	940	10.1	1.7	10.5	43.3	10.80	8.10	7.56
41 D 7537	5001	1425	8.3	1.4	13	53.4	10.80	8.10	7.56
41 D 7538	5002	1950	7.5	1.2	17.6	62.4	10.80	8.10	7.56
41 D 7546	5064	2400	7.35	1.2	20.6	69.2	10.80	8.10	7.56
41 D 7553	5003†	1100/1100	±7.25 5.7	.....	±8.77 6.99	46.9 46.9	11.50	8.63	8.05

SERIES HG RELAYS

HG, SPDT make-before break contacts rated 5 amps at 500 volts, 250 V.A. max. HG2, two switch capsules for DPDT action; HG3, 3PDT; HG4, 4PDT. Life expectancy, 22x10⁹. 2.63x1.312″ dia. Base figures (see illus. above): *1, †2, ‡3, §4. Av. shpg. wt., 5 oz.

41 D 7500	HG-1019§	40	67	30	2.9	11	16.15	12.11	11.30
41 D 7501	HG-1012§	130	37	16	5.4	20	16.15	12.11	11.30
41 D 7502	HG-1026*	500	20	8.7	11	39	16.15	12.11	11.30
41 D 7503	HG-1004*	700	19	8.3	15	45	16.15	12.11	11.30
41 D 7505	HG-1043*	1000	15	6.6	17	55	16.15	12.11	11.30

SERIES HG RELAYS (Cont'd)

Stock No.	Mfr's Type	Coil Ohms	Must Opr. mA	Must Rel. mA	Must Opr. VDC	Max. VDC	EACH 1-9	10-24	25-49
41 D 7506	HG-1001*	2500	10	4.4	28	87	16.45	12.34	11.51
41 D 7509	HG-1002*	4000	7.5	3.3	33	110	9.35	7.01	6.54
41 D 7510	HG-1017§	4000	7.5	3.3	33	110	17.00	12.75	11.90
41 D 7511	HG2A1002†	140	67	28	10	24	26.20	19.65	18.34
41 D 7512	HG2A1015†	1250	22	9.3	30	71	26.20	19.65	18.34
41 D 7513	HG2A1001†	5000	11	47	62	142	26.20	19.65	18.34
41 D 7514	HG2A1004‡	5000	11	47	62	142	26.20	19.65	18.34
41 D 7515	HG2A1013‡	10,000	8.6	3.6	94	200	26.20	19.65	18.34
41 D 7516	HG3A1004†	315	44	19	15	36	33.95	25.46	23.76
41 D 7517	HG3A1006‡	500	35	15	19	45	33.95	25.46	23.76
41 D 7518	HG3A1003†	5000	11	47	62	142	33.95	25.46	23.76
41 D 7519	HG4A1011§	390	42	18	18	40	43.70	32.78	30.59
41 D 7520	HG4A1006§	10,000	8.6	3.7	94	200	43.70	32.78	30.59

LB AND LBP SERIES

Miniature telephone-type relays with excellent switching capacity and versatility. Ideal for military, commerical or industrial uses. Six form C contacts rated 2 amps. Mechanical life, 100,000,000 operations. LB series for direct PC mounting; LBP Series for direct plug-in socket mounting (sockets below). 1.24x1.00x1.220″. Av. wt., 1 oz.

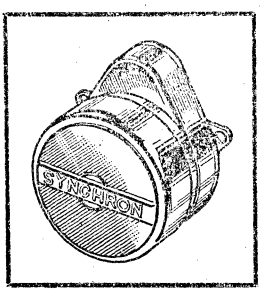
Stock No.	Type LB-	Stock No.	Type LBP-	Coil V	Coil Ohms	EACH 1-9	10-24	25-99
41 D 7282	0060B00	41 D 7291	0060B00	12	130	5.75	5.18	4.89
41 D 7283	0060H00	41 D 7292	0060H00	14	200	5.75	5.18	4.89
41 D 7284	0060C00	41 D 7293	0060C00	18	330	5.75	5.18	4.89
41 D 7288	0060D00	41 D 7294	0060D00	24	590	5.75	5.18	4.89
41 D 7289	0060K00	41 D 7295	0060K00	30	915	5.75	5.18	4.89
41 D 7290	0060J00	41 D 7296	0060J00	34	1150	6.00	5.40	5.10
41 D 7364	RP15450-G5	Solder Lug Socket				1.15	1.04	.98
41 D 7366	RP15450-G6	PC Board Socket				1.15	1.04	.98

PICOREED REED RELAYS

Sealed contacts rated 0.5 amp max. at 100 V and 10 VA max.; 1.0 amp max. at rated load. Sizes: *.187x.250x.781″; †.225x.380x.781″; ‡.225x.480x.781″; §.225x.580x.781″. PRA, 5/8″ axial leads; PRB, PC mount. Prefix indicates contact form; PRA, 1 Form A. Av. wt., 1 oz.

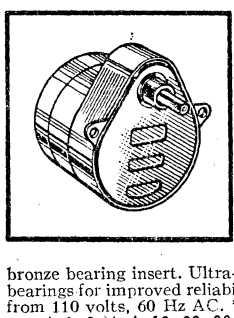
Stock No.	Mfr's Type	Stock No.	Mfr's Type	Coil VDC	Coil Ohms	EACH 1-9	10-24	25-99
41 D 7297	PRA-2010*	41 D 7314	PRB-2010*	6	387	3.50	3.20	2.89
41 D 7298	PR2A-2007†	41 D 7315	PR2B-2007†	6	136	4.25	3.91	3.58
41 D 7299	PR3A-2006‡	41 D 7316	PR3B-2006‡	6	117	5.00	4.63	4.27
41 D 7305	PRA4-2005§	41 D 7317	PR4B-2005§	6	88	5.95	5.53	5.12
41 D 7306	PRA-2013*	41 D 7320	PRB-2013*	12	1200	3.50	3.20	2.89
41 D 7307	PR2A-2011†	41 D 7321	PR2B-2011†	12	740	4.25	3.91	3.58
41 D 7308	PR3A-2009‡	41 D 7322	PR3B-2009‡	12	483	5.00	4.63	4.27
41 D 7309	PR4A-2008§	41 D 7359	PR4B-2008§	12	351	5.95	5.53	5.12
41 D 7310	PRA-2016*	41 D 7360	PRB-2016*	24	5380	4.05	3.69	3.33
41 D 7311	PR2A-2014†	41 D 7361	PR2B-2014†	24	3042	4.80	4.41	4.02
41 D 7312	PR3A-2013‡	41 D 7362	PR3B-2013‡	24	2254	5.50	5.08	4.67
41 D 7313	PR4A-2012§	41 D 7363	PR4B-2012§	24	1856	5.95	5.53	5.18

HANSEN "SYNCHRON" SYNCHRONOUS MOTORS



Hysteresis-synchronous timing motors. Sealed gear case, brass gears and one-piece steel pinions. Two-piece field structure, shaded poles. Mount in any position. At 1 rpm or more, motor can be stalled without damage. Double bearing on rotor shaft, reduction train and output shaft. K12RC, 4 watt "K" coil, 20-oz.-in. torque at 1 rpm. I12 RC, 3 watt 1″ coil, 30 oz.-in. torque at speeds shown. All have Type 12 flatted shaft, 1/8″ dia. x 3/8″ long. Clockwise. Two .142″ dia. mtg. holes spaced 1.875″. −40° to +140° F. 110 V, 60 Hz AC. *Specify speed: Type K12RC, 1, 2, 3, 4, 6, 10, 30, 50, 60 rpm; Type I12 RC, 1, 2, 4, 10, or 12 revolutions per hour. 12 oz.

Stock No.	Mfr's Type	Speed* (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
41 D 5800 C	K12RC	1-60 rpm	5.10	4.10	3.10	2.60	2.02
41 D 5801 C	I12RC	1 or 2 rph	5.02	4.02	3.17	2.67	2.09
41 D 5802 C	I12RC	4-12 rph	5.02	4.02	3.12	2.62	2.04



900 Series. Self-starting hysteresis-synchronous with positive direction of rotation. Features instrument-type gear train, thicker gears to match increased torque. Extra heavy phenolic first gear for low noise level. Patented, hardened steel Synchron rotor ring; improved Class A coil construction. Silicone life-time lubrication. Mounts in any position, may be stalled continuously without electrical or mechanical damage. Torque rating at 1 rpm, 98 oz.-in. at 8 watts. Flatted shaft, 3/8″ diameter x 5/16″ long. 3/8″ diameter x 5/16″ long bearing. Porous bronze bearing insert. Ultra-precision rotor shaft rotates on double bearings for improved reliability. Clockwise rotation. For operation from 110 volts, 60 Hz AC. *When ordering, specify choice of output speed: 1, 2, 4, 6, 10, 20, 30, or 60 rpm. †Type 9GA393RP. Shpg. wt., 12 oz.

Stock No.	Series	Speed* (Specify)	EACH 1-9	10-24	25-49	50-99	100-249
41 D 5803C	900†	1-60 rpm	9.50	8.75	8.25	7.25	6.23

Synchronous Motors

HEAVY-DUTY MOTORS WITH 40 TO 600 INCH-OUNCES OF TORQUE

Rugged synchronous motors for continuous-duty use in educational training devices, lab and process controls, medical equipment, time switches, etc. Will not overheat in continuous duty or in stalled position. Operating Temp.: —40° C to +105° C; power required, 5 watts, 95-130V, 60 Hz AC. Stainless steel flatted shaft, 3/16" dia. x 1" long. Bronze bearings; brass gearing. Nickel plated cases. Mounting, three #6 holes spaced 120°. Torque equals 1 rpm rating, divided by speed.

40 INCH-OUNCE UNIDIRECTIONAL

SM Series. 40 inch-ounce at 1 rpm. Rugged shaded pole unidirectional motor with clockwise rotation. Instant start at full torque. Case: 1¾x2½" dia. Wt., 1 lb. *Specify ½, 1, 2, 3, 4, 5, 6, 10, 15, 30, or 60 rpm when ordering.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7152 C	½-60	13.51	12.16	11.55	10.98	10.43

100 INCH-OUNCE REVERSIBLE

CA Series. 100 in.-oz. at 1 rpm. (SPDT switching). 2½x2⅛" dia. Includes capacitor. Wt., 1¼ lbs. *Specify ⅓, ½, 1, 1½, 2, 2½, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24, 25, 30, 32, 33⅓, 40, 48, 50, 60, 64, 80, 100, 120, 150, 160, 200, 240, 400, 600, 800, or 1,000 rpm when ordering.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7154 C	⅓-1000	13.76	12.39	11.77	11.19	10.64

150 INCH-OUNCE UNIDIRECTIONAL

EA Series. 150 in.-oz. at 1 rpm. Open frame, shaded pole. Accurate timing motor, clockwise rotation. Case: 1⅝x2⅝x3⅝6". 3/16x1" Output shaft exceptt, 3/32x¾". Wt., 1¼ lbs. *Specify 1, 2, 4, 6, 8, 10, 12, 20, 30, 60, 120, or 3600 rpm.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7155 C	1-120	10.29	9.25	8.79	8.35	7.93
41 D 7156	3600†	7.62	6.82	6.52	6.19	5.35

150 INCH-OUNCE REVERSIBLE

DA Series. 150 in.-oz. at 1 rpm. Instantly reversible (SPDT switch), highly accurate both clockwise and counter-clockwise. Effective magnetic shielding. Case: 1¾x2½" dia. 1¼ lbs. *Specify 1, 2, 4, 6, 8, 10, 12, 20, 30, 60, or 120 rpm.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7150 C	1-120	16.06	14.45	13.73	13.05	12.40

40 INCH-OUNCE UNIDIRECTIONAL WITH CLUTCH AND BRAKE

PC-SM Positive Clutch and Brake Series. Basic SM motor as described at left with positive clutch and instantaneous brake. Shock and vibration resistant. Starts in 20 milliseconds or less—stops 60 rpm shaft in 12°; 1 rpm in 1/5°. Shpg. wt., 1¼ lbs. *Specify ½, 1, 2, 3, 4, 5, 6, 10, 15, 30, or 60 rpm when ordering.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7153 C	½-60	19.65	17.68	16.80	15.95	15.16

100 INCH-OUNCE REVERSIBLE WITH POSITIVE ACTION CLUTCH

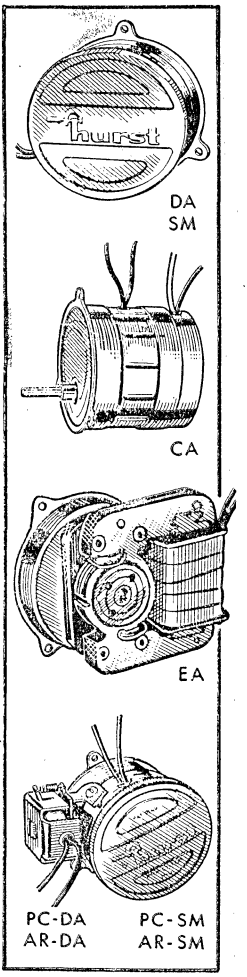
AR-DA Series. 100 inch-ounce, reversible. Features high accuracy both clockwise and counter-clockwise. Operates as an automatic reset motor when a return spring is attached to the output shaft. When clutch is de-energized, the shaft is free for manual or automatic reset. Clutch mechanism is fully lubricated and completely enclosed. Designed for heavy-duty use and will easily handle full 100 in.-oz. rating. Size and appearance same as PC series. Accurate within 1/5 second at 1 rpm, more accurate at higher speeds. Maximum error in seconds 1.5625 divided by the rpm. Case: 2½x2⅛" dia. Clutch actuator, ⅞" height x 1⅜" width. Shpg. wt., 1½ lbs. *Specify 1, 4, 6, 10, 30, or 60 rpm when ordering.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7157 C	1-60	26.18	23.56	22.39	21.26	20.20

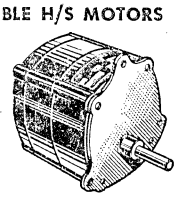
120 INCH-OUNCE REVERSIBLE

PC-DA Positive Brake and Clutch Series. Basic reversible DA motor as described above, with positive clutch and instantaneous brake. Highly accurate, vibration and shock resistant. Starts in 20 milliseconds—stops 60 rpm shaft in 1/5°. Shpg. wt., 1½ lbs. *Specify 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 or 120 rpm when ordering.

Stock No.	*rpm	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 7151 C	1-120	22.20	19.98	18.98	18.03	17.13



MODEL GA 600-INCH-OUNCE REVERSIBLE H/S MOTORS



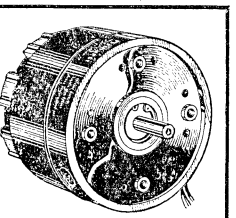
Capacitor phased hysteresis-synchronous reversible motors. Utilize full output torque without gearing damage. Lifetime lubrication. High-impact glass-reinforced Lexan housing. Stainless steel output shaft, ¼x1" (flatted) 1.0 μF capacitor (±5%) included. Case: 2¾x 2¾x3". Adapter plate (below) permits output shaft and stud locations to match many motors, 115 V, 60 Hz AC. Shpg. wt., 2¾ lbs. Specify speed.

Stock No.	Speed rpm	Torque (Oz.-in.)	EACH					
			1-9	10-24	25-49	50-74	75-99	100-249
41 D 7162	3600	.6	22.44	21.32	20.20	19.07	17.95	15.71
41 D 7161 C	300	2.0	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	225	2.7	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	180	3.3	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	150	4.0	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	120	5.0	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	100	6.0	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7161 C	60	10.0	29.10	27.64	26.19	24.74	23.29	20.37
41 D 7160 C	30	20.0	31.52	29.94	28.37	26.80	25.22	22.08
41 D 7160 C	18	33.0	31.52	29.94	28.37	26.80	25.22	22.08
41 D 7159 C	10	60.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	6	100.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	6	120.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	4	150.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	3	200.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	2	300.0	33.55	31.88	30.21	28.53	26.86	23.51
41 D 7159 C	1	600.0	33.55	31.88	30.21	28.53	26.86	23.51

41 D 7163. Adapter Plate. Wt., 4 oz. ..... Each .83

MODEL HB MOTOR

- Inverted Rotor Design for Greatly Reduced Flutter
- Temperature Rise of Only 40° C Even Under Full Load
- Precision Hysteresis-Synchronous Design for Accurate Speed
- Lifetime Lubricated Bearings

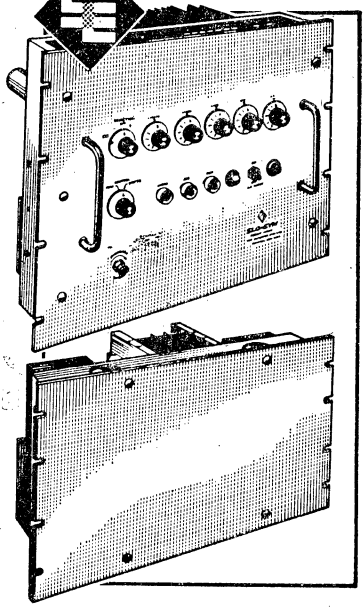


"Honey Bee" 1/50 HP hysteresis-synchronous motor features inverted rotor design for greatly reduced flutter. Ideally suited for applications in video recording, instrumentation, data handling, tape recording, telemetering, turntables, and other precision devices. Temperature rise of only 40° Centigrade under full load. Starting torque: 12 inch-ounce at 1800 rpm. Pull in torque: 11 inch-ounce. Pull out torque: 11.2 inch-ounce. Dynamically balanced rotor. Instantly reversible and completely accurate in either direction. 3¾" dia. x 3⅝" long, 12" leads. Mounting: (4) #10-32-2B tapped mounting holes, equally spaced on 2.625 dia. B.C. 5/16" max thd. engag. Ball bearings, lifetime lubrication. Stainless steel shaft, 5/16" dia. x 1" length. Includes 2.5 μF, 300 VAC capacitor. 115 V, 60 Hz AC. Available at 900 or 1800 rpm (specify). Wt., 4 lbs.

41 D 7165 C. 1-4...Each 65.00 | 5-9.....Each 62.00
10-24.....Each 57.50 | 25-49.....Each 48.84
50-99.....Each 45.39 | 100-249.....Each 43.24

Specify Both Stock No. and Output Speed on Motors

Superior-Electric Industrial Automation Aids



MODEL HTR400 *SLO-SYN* TRANSLATOR

- Drives Motor Up to 2000 Steps/Second
- With or Without Stepping Motor
- Triggering Pulse Can Be Supplied By Tape Reader, Oscillator, Etc.

High-speed, pulse-to-step converter drives appropriate Superior Slo-Syn motor one step for each pulse received. Designed especially for use in programming, positioning, indexing, digital counters, remote meter indication, and many other digital applications. Features internal oscillator that supplies adjustable frequency, from 50 to 2000 steps per revolution, with fast and automatic motor acceleration and deceleration. Requires 10-15 volt negative change of voltage for triggering, with minimum pulse-width or 50 microseconds. Acceleration and deceleration times: 65 milliseconds. Operating temperature: 0° to 40°C. Rack mount, 19x10¼x10⅝". Requires Type HS25, HS50, or HS50L bifilar DC motor (listed in table below). Shpg. wt., 61 lbs.

41 D 5385 X, 1-5.....Each 785.00

Model HTR400S. Translator with Superior HS400B stepping motor. Wt., 71 lbs.

41 D 5386, 1-5.....Each 995.00

MODEL HPR400R-4 *SLO-SYN* PRESET INDEXER

- Controls Indexing to 9999 Steps
- Provision for Computer Input
- Functions Can Be Controlled by Voltage Level
- Available With or Without Stepping Motor

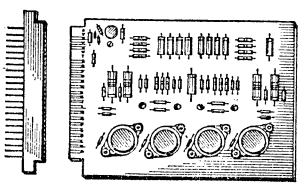
High-speed, rack-mounted unit for driving Slo-Syn stepping motors in indexing and other positioning operations. Decade counter controls on front panel select step increments. Will automatically drive motor the pre-selected number of steps, then actuate a relay control for external equipment. Speed range, 50 to 2000 steps/second. Has 24-pin connector for remote control from computer, external decade switches or relays, remote sensing devices, or other isolated control elements. Momentary contact closure of 150 microseconds minimum required for start, stop and reset; functions can also be controlled by voltage levels. Operating temperature range, 0° to 40°C. Overall size: 19x13x13³¹⁄₃₂". For 105-125 volt, 60 Hz AC operation. Requires Type HS25, HS50, or HS50L bifilar DC stepping motor, listed in table below. Wt., 66 lbs.

41 D 5387 X, 1-5.....Each 1320.00

HPR400SR-4. Preset Indexer with HS400B-1003 stepping motor. Shpg. wt., 76 lbs.

41 D 5388 X, 1-5.....Each 1530.00

TYPE STM1800 TRANSLATOR MODULE



Plug-in printed circuit board has logic circuit for stepping Slo-Syn Bifilar motors in increments of 1.8°. Provides bidirection operation of motor. Requires a 30-volt center-tapped D9 power supply with maximum ripple of 5%. Draws from 1 to 8 amps, depending on motor used. Voltage may have to be varied to maintain rated motor voltage. Can be triggered by 10 to 15-volt negative voltage change with minimum pulse width of 50 microseconds. Input impedance, 500 ohms. Stepping increment, 1.8° except 5° when used with TS50 motor. Requires dropping resistor. With connector. Wt., 14 oz.

41 D 5434, 1-5.....Each 68.00

6-24.....Each 61.20

25-99.....Each 57.80

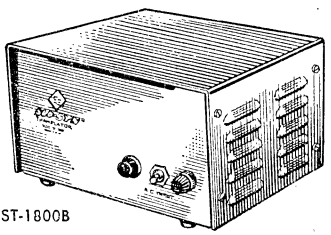
TYPE STM1800V TRANSLATOR MODULE

Translator module is similar to STM1800, with logic circuit for stepping Slo-Syn Bifilar motors, but includes built-in oscillator that can be adjusted to drive motor at speeds from 4 steps per second up to maximum at which motor will drive load. Requires 30-volt center-tapped D9 power supply with maximum ripple of 5%. Draws from 1 to 8 amps, depending on motor used. Voltage may have to be varied to maintain motor voltage. Provides 1.8° stepping increments, except 5° when used with TS50. Includes 500K potentiometer for speed adjust. With connector. Wt., 1 lb.

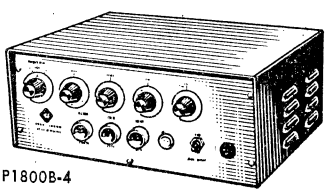
41 D 5435, 1-5.....Each 78.00

6-24.....Each 70.20

25-99.....Each 66.30



ST-1800B



SP1800B-4

SLO-SYN TRANSLATOR

ST-1800B. Pulse-to-step converter for use with appropriate bifilar-type synchronous stepping motors (see below). Used in programmed positioning, indexing, digital counters, programmed mixing, remote meter indication, many other applications. Converts low-level signal impulses or square waves into correct switching sequence to drive motor at 200 discrete steps per revolution. 1-amp input at 120 VAC. Wt., 12 lbs.

41 D 5404 X, 1-5.....Each 395.00

6-24..Each 355.50 **25-99**.....Each 335.75

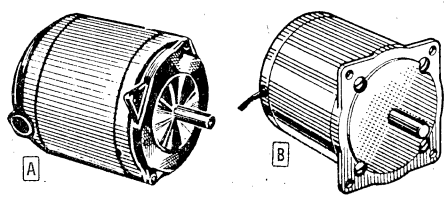
SLO-SYN PRESET INDEXERS

SP1800B-4. Excellent for control of indexing operations in applications using synchronous stepping motors for positioning. Any indexing movement can be set on control panel. Automatically provides correct switching sequence required to drive motor needed number of 1.8° steps. Can be made to cycle automatically. Controls indexing up to 9999 steps. 1.25-amp input at 120 VAC. Shpg. wt., 15 lbs.

41 D 5417 X, 1-5.....Each 875.00

6-24..Each 787.50 **25-99**.....Each 743.75

SLO-SYN BIFILAR DC MOTORS



High torque with instant stop-start-reverse

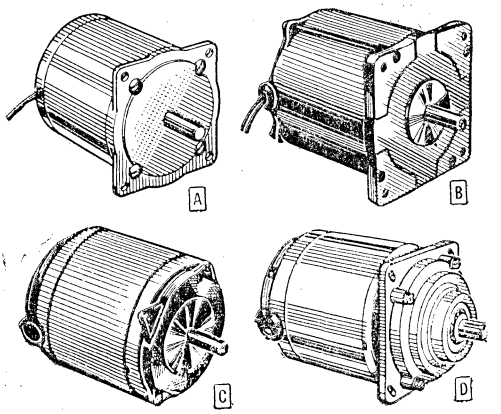
Synchronous motors for DC stepping applications where the use of push-pull circuitry and a center tapped power supply is not possible, or where increased torque at high stepping speeds is required. Only a single-ended power source and SPDT switching is necessary. Translator modules, at left, provide stepping in 1.8° increments. Translator and preset indexer, shown above, provide stepping and indexing for variety of programed systems in industrial applications.

Stock No.	Mfr's Type	Fig.	DC Volts	Amps Per Winding	Size (in.)	Wt., Lbs.	EACH 1-5	EACH 6-24	EACH 25-99
41 D 5410	SS50-1009	A	5.5	1.3	2½x3⅜	3½	80.00	72.00	68.00
41 D 5411	SS150-1010	A	10.0	1.25	4⅞x4¼	8	90.00	81.00	76.50
41 D 5412	SS250-1002	A	9.0	1.55	4⅞x4¼	8	111.00	99.90	94.35
41 D 5413 U	SS250-1027	B	4.6	3.1	4⅞x4¼	8	111.00	99.90	94.95
41 D 5426 X	SS400-1021	B	5.3	3.4	6¾x4¾	15	153.00	137.70	130.05
41 D 5406	HS50	A	3.0	4.0	3¹¹⁄₁₆x3⅜	5	103.00	92.70	87.55
41 D 5436	HS25	A	5.4	1.5	2³⁄₃₂x3¼	2	116.00	104.40	98.60
41 D 5437	HS50L	A	4.5	3.5	5⁵⁄₁₆x3⅜	7	141.00	126.90	119.85

Industrial Motors from Superior and Sigma

SUPERIOR ELECTRIC *SLO-SYN* INSTANT REVERSING SYNCHRONOUS AC MOTORS

For continuous control heavy-duty applications requiring rapid starting, stopping, and reversing characteristics. Basic speed, 72 rpm at 120 volts, 60 Hz, AC except †200 rpm. Number in manufacturer's type number below indicates torque in oz.-in.; for example, SS25 has torque of 25 oz.-in. Motors with E suffix have shaft extensions to permit attaching drive at either end. *Square design, explosion-proof, 60 Hz AC only.



Stock No.	Mfr's Type	Fig.	Max. Amps	Size L x Dia.	Wt., Lbs.	EACH 1-5	6-24	25-99
41 D 5421	SS25	A	0.1	2¼x2 7/32″	1½	55.00	49.50	46.75
41 D 5458	SS50	A	0.3	2½X3 3/8″	3½	48.00	43.20	40.80
41 D 6083	SS50E	A	0.3	2½x3 3/8″	3½	60.00	54.00	51.00
41 D 5977	SS150	B	0.4	4 7/8x4¼″	8	58.00	52.20	49.30
41 D 6084	SS150E	B	0.4	4 7/8x4¼″	8	70.00	63.00	59.50
41 D 5405	SS250	B	0.6	4 7/8x4¼″	8	79.00	71.10	67.15
41 D 6085	SS250E	B	0.6	4 7/8x4¼″	8	91.00	81.90	77.35
41 D 5401 U	SS400	B	0.6	6¾x4¼″	15	121.00	108.90	102.85
41 D 6086	SS400E	B	0.6	6¾x4¼″	15	133.00	119.70	113.05
41 D 7463 X	X1500	A	3.0	6½x6½″	38	263.00	236.70	223.55
41 D 5407	TS50†	A	0.3	3 11/16x3 3/8″	5	73.00	65.70	62.05

SLO-SYN PLANETARY GEAR AND RC MOTORS

As above except types with suffix P have speed-reducing planetary gear assemblies; types with suffix RC have built-in resistor capacitor networks; P-RC types have both. Typical applications for "Slo-Syn" motors include remote control of rheostats, potentiometers and selector switches; camera focusing; process timing; machine tool carriage feeds; assembly line parts positioning and countless other automatic and semiautomatic operations. Approximate speed for motor with P1 assembly, 16.6 rpm (ratio 4⅓); P2, 3.3 (ratio 21⅔); P3, 0.665 (ratio 108⅓). Exact speed may be calculated from basic motor speed (72 rpm) and ratio. To determine shipping weights, use weight indicated for motor in table above and add 1 lb. for RC type, 2 lbs. for P type, and 3 lbs. for P-RC type.

Stock No.	Mfr's Type	Torque (Oz.-In.)	Size L x Dia.	EACH 1-5	6-24	25-99
41 D 5451	SS50-P1	120	2 7/8x3 3/8″	73.00	65.70	62.05
41 D 5452	SS50-P2	600	2 7/8x3 3/8″	73.00	65.70	62.05
41 D 5453	SS50-P3	2000	3 3/16x3 3/8″	83.00	74.70	70.55
41 D 5454	SS50-RC	50	5 5/32x3 3/8″	70.00	63.00	59.50
41 D 5455	SS50-P1RC	120	5 19/32x3 3/8″	95.00	85.50	80.75
41 D 5456	SS50-P2RC	600	5 19/32x3 3/8″	95.00	85.50	80.75
41 D 5457	SS50-P3RC	2000	5 29/32x3 3/8″	105.00	94.50	89.25
41 D 5459 X	SS150-P1	400	6¼x4¼″	83.00	74.70	70.55
41 D 5460 X	SS150-P2	2000	6¼x4¼″	83.00	74.70	70.55
41 D 5461 X	SS150-RC	150	7½x4¼″	80.00	72.00	68.00
41 D 5462 X	SS150-P2RC	400	8 7/8x4¼″	105.00	94.50	89.25
41 D 5463	SS250-P1	650	6¼x4¼″	104.00	93.60	88.40
41 D 5466 X	SS400-P1	1000	6¼x4¼″	150.00	135.00	127.50

RESISTORS FOR ABOVE

Fixed, wirewound resistors for use with capacitors (right) in phase shifting networks for motors listed in tables above (except RC types which have network built in). *U.L. Recog. Tol., ±5%. 2 oz.

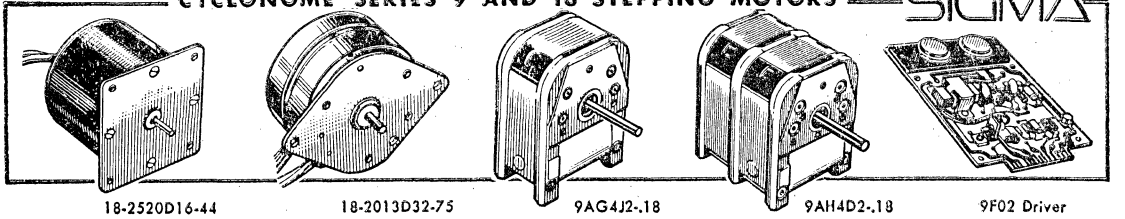
Stock No.	Mfr's Type	Use With Motor	Ohms	Watts	EACH 1-5	6-24	25-99
41 D 5422	R-SS25	SS25	500	5	1.75	1.58	1.49
41 D 5415	R-SS50	SS50	400	25	1.75	1.58	1.49
41 D 5984	SS150	SS150	250	25	1.75	1.58	1.49
41 D 5439	R-SS250/SS400	SS250/SS400	150	50	3.25	2.93	2.76
41 D 4011	R-X1500*	X1500	55	375	8.50	7.65	7.23
41 D 5438	R-TS50	TS50	300	25	1.75	1.58	1.49

CAPACITORS FOR ABOVE

Can-type electrolytics for use in phase shifting networks for motors listed above (except RC types which have network built in). Rated at 330 volts, AC. C-X1500 is Recognized Under the Component Program of U.L. Laboratories, Inc. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Use With Motor	μF	EACH 1-5	6-24	25-99
41 D 5424	C-SS25	SS25	.75	4.25	3.83	3.61
41 D 5494	C-SS50	SS50	2.25	6.00	5.40	5.10
41 D 5987	C-SS150/-TS50	SS150/-TS50	3.75	4.75	4.28	4.04
41 D 5443	C-SS250/SS400	SS250/SS400	6.5	6.00	5.40	5.10
41 D 4012	C-X1500	X1500	55.0	24.00	21.60	20.40

CYCLONOME SERIES 9 AND 18 STEPPING MOTORS — SIGMA



Series 9. Provides fast and accurate conversion of digital pulse input to analog shaft output motion. Operates from any drive input with successive DC pulses of alternating polarity. Each pluse advances the rotor shaft one step (15° or 18°), latches it magnetically in place. Rigid position accuracy, ±15 minutes angular, non-cumulative. Bi-polar construction with PM stator, soft iron rotor, dual windings. 9F02 Drive Package and damper must be used for speeds over 50 steps/second. Rated continuous duty at 24 VDC nom.

Series 18. Two-phase inductor stepping motors with steps of 9°, 11.25° or 22.5°. Can be operated at low step rate by manual switches; logic circuits needed for higher rates. Operate bidirectionally with A202-2 Drive. Requires 28 VDC. Bidirectional (2 drivers, 9F02, needed). †Value of external resistor required, Drive Packages. Mounted on 4x6″ printed circuit board. 1 lb.

41 D 7435. 9F02. For Series 9. 8-20 V; 6 μsec (min).....72.00

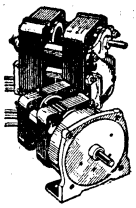
41 D 7436. A202. For Series 18. 4-10 V; 1 μsec (min).....75.00

AT-214-1 Damper. For Series 9 stepping motors.

41 D 7437. Shpg. wt., 6 oz.....42.00

Stock No.	Mfr's Type	Step Angle	Max. Steps/ Second	Torque, Gm./cm Max. Step	Min. Hold	Min. Detent	Ohms/ Winding	Amps/ Winding	External Resistor† Ohms	W	Size, Inches H.xW.xD.	Shpg. wt. Oz.	EACH 1-24	25-49	50-74
41 D 7428	9AG4J2-.18	18°	425	360	750	375	.18	6.2	3.7	150	2 7/16x1 13/16x1 5/32″	12	82.00	73.80	69.70
41 D 7429	9AH4D2-.18	18°	300	345	720	360	.18	6.2	3.7	150	2 7/16x1 13/16x2 5/16	23	115.00	105.50	97.75
41 D 7430	9AK4J2-.18	15°	475	420	950	475	.18	6.2	3.7	150	2 7/16x1 13/16x1 5/32	12	82.00	73.80	69.70
41 D 7431	9AL4D2-.18	15°	400	395	880	440	.18	6.2	3.7	150	2 7/16x1 13/16x2 5/16	23	115.00	103.50	97.75
41 D 7432	18-1408D40-195	9°	800	35	100	8	195	.055	145	5	1.418dia.x.787	3	18.00	16.20	15.30
41 D 7433	18-2013D32-75	11.25°	300	210	500	18	75	.155	51.6	10	1.969dia.x1.26	8	26.00	23.40	22.10
41 D 7434	18-2520D16-35	22.5°	700	190	75	75	35	.320	25	20	2.52x2.52x1.969	16	40.00	36.00	34.00

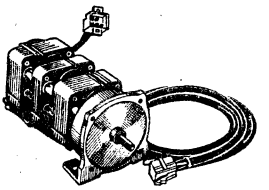
R.M.S. and G. K. Heller Motors and Controllers



R.M.S. LOW-COST SHADED-POLE AC MOTORS

CONSTANT AND VARIABLE-SPEED TYPES

Ideal for vending, photocopy, display, cycle controllers, remote-control device, motorized valves, business machines—many other applications. Mount in any position with no lubricant loss. No fan required. Permanently lubricated; sintered-bronze bearings; no commutators or brushes; impedance protected. 155° insulation; gear-case lubrication good from —65 to 300°F. Variable-speed motors provide constant torque over 10 to 1 speed variation. Variable types require Speed Control Box below to vary speed. All motors listed for operation from 115 volts, 50-60 Hz AC. Av. motor shpg. wt., 3 lbs.



CONSTANT-SPEED GEAR MOTORS

SEE TABLE BELOW FOR PRICES

rpm	Torque In.-Oz.	Mfr's Type		
		Clockwise	Counter Clockwise	Reversible
1	800	BG5R1K	BG5L1K	BG5P1K
2	800	BG5R2K	.....	BG5P2K
3	750	.....	.....	BG5P3K
4	560	BG5R4K	.....	.....
5	450	BG5R5K	.....	BG5P5K
6	375	.....	BG5L6K	BG5P6K
8	280	BG5R8K	.....	.....
10	225	BG5R10K	BG5L10K	BG5P10K
15	450	BG8R15K	.....	BG8P15K
20	300	BG8R20K	.....	BG8P20K
30	200	BG8R30K	.....	BG8P30K
60	100	BG8R60K	.....	BG8P60K
100	60	BG8R100K	BG8L100K	BG8P100K
200	30	BG8R200K	.....	BG8P200K
300	20	BG8R300K	.....	BG8P300K

PRICES OF GEAR MOTORS

SPECIFY TYPE AND RPM FROM ABOVE (CCW, Counter Clockwise)

Stock No.	Rotation	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 4522 C	Clockwise	15.80	14.25	13.45	12.65	11.85
41 D 4523 C	CCW	15.80	14.25	13.45	12.65	11.85
41 D 4524 C	Reversible	22.40	20.20	19.05	17.95	16.80

VARIABLE-SPEED GEAR MOTORS

CLOCKWISE UNIDIRECTIONAL (PRICES BELOW)

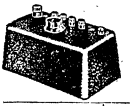
Stock No.	Mfr's Type	Torque In.-Oz.	Speed in rpm
41 D 4504	BG8R400C5BK	10	400-40
41 D 4505	BG8R100C5BK	40	100-10
41 D 4506	BG8R10C5BK	400	10-1
41 D 4498	BG5R1C4BK	800	1-0.1

REVERSIBLE (PRICES BELOW)

41 D 4507	BG8P400C5BK	10	400-40
41 D 4508	BG8P100C5BK	40	100-10
41 D 4509	BG8P10C5BK	400	10-1
41 D 4499	BG5P1C4BK	800	1-0.1

PRICES (EACH) OF GEAR MOTORS

Rotation	1-9	10-24	25-49	50-99	100-249
Unidirectional	23.50	22.35	21.15	20.00	18.80
Reversible	28.00	26.60	25.20	23.80	22.40

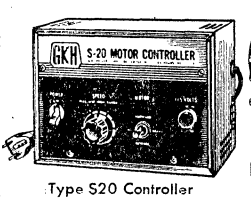


SOLID-STATE SPEED CONTROL BOX FOR USE WITH ABOVE MOTORS

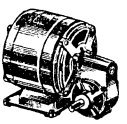
SCTBK controls unidirectional motors; SCTPBK, reversible. 7¼x4¼x4". 2 lbs.

Stock No.	Mfr's Type	EACH				
		1-9	10-24	25-49	50-99	100-249
41 D 4525	SCTBK	39.70	38.50	37.32	35.73	33.75
41 D 4526	SCTPBK	41.70	40.45	39.20	37.53	35.45

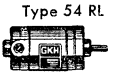
G. K. HELLER MOTORS AND SOLID-STATE CONTROLLERS



Type S20 Controller



Type 54 RL



MSB1815

S20 SCR Controller. Dual-Speed range for infinitely variable speed control of DC shunt-wound or PM motors. Zener diode feedback circuit keeps constant speed. Reversible, with automatic dynamic braking. Magnetic circuit breaker. Full starting torque in high range, full torque at all speeds in low. Full-wave filtered armature supply. For 1/40 to ⅛ hp motors. 7x5x4". 117 VAC.
41 D 7176. Shpg. wt., 5 lbs. **66.00**

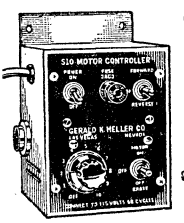
⅛ HP Geared Motors. Single-reduction variable-speed motors. 9 13/32x 6 1/64x5 19/32" dia. With base. 22 lbs. Specify Gear Ratio.

Mfr's Type	Gear Ratio	Low-Speed Range	High-Speed Range	Torque In.-Lbs.
54 RL 10	10:1	0-180 rpm	280 rpm	32
54 RL 20	20:1	0-90 rpm	140 rpm	54
54 RL 30	30:1	0-60 rpm	90 rpm	66
54 RL 40	40:1	0-45 rpm	70 rpm	73

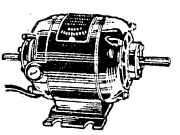
41 D 7173 C. Specify Gear Ratio. ..... **Each 97.50**

1/15 HP Non-Geared Motor. Variable-speed, double-shaft. 0-1800 rpm low range, 0-3000 rpm high. With base. 7¾x4x4¼" dia. 8½ lbs.
41 D 7174. Type MSB1815. ..... **Each 54.00**

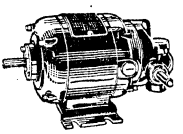
⅛ HP Non-Geared Motor. Self-ventilated, variable-speed. Double shaft. Same rpm ranges as above. Base. 8¾x4¼x4" dia. 11½ lbs.
41 D 7175. Type MSB188. ..... **Each 60.00**



Model S10 Solid-State Controller



Plain Motor



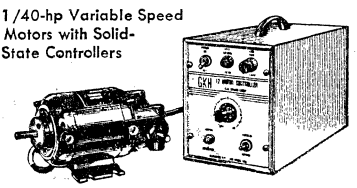
Right-Angle Gear Motor

S10 Controller and 2T60 Plain Motor. Shunt-wound 1/40 hp motor with full-wave filtered DC from SCR circuit. 100-3000 rpm speed with stepless continuous control. Torque, 11.2 in./oz. at any speed. Switches: power off/on lowspeed/on high speed; forward/off/reverse(automatic dynamic braking of motor in off position). 5/16" shaft extends 1" from both ends of open, fan-ventilated motor. Controller, 5½ x4 3/8x3 1/8"; motor, 4½x3 37/16x3 21/32". 115 V, 50-60 Hz single-phase AC.
41 D 7170. Shpg. wt., 10 lbs. ..... **Both for 90.00**

S10 Controller and 2T60 Gear Motor. 1/40 hp, right angle. 5/16" ball-bearing armature shaft extends 1 5/16" from one end for mounting pulley. Gear motor is enclosed and dust proof for long-life, except for cable bushing. All-bronze heavy-duty construction of gear trains. Gear shafts have precision sleeve bearing, with grease seals. Gear head is easily adjustable to choice of any 12 positions. Size, 3 11/32x3 37/16x6 1/16". Controller for 115 V, 50-60 Hz single-phase AC.
41 D 7171 C. Specify Choice of Gear Ratio: 6, 10, 18 or 30 to 1. Shpg. wt., 10 lbs. ..... **Both for 102.00**
41 D 7172 C. Specify Choice of Gear Ratio: 36, 60, 100, 300, 540, 900 or 1110 to 1. Shpg. wt., 10 lbs. ..... **Both for 105.00**

MODEL T2 PRECISION MOTORS AND CONTROLLERS

1/40-hp Variable Speed Motors with Solid-State Controllers

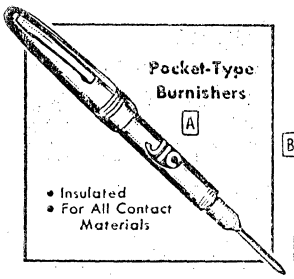


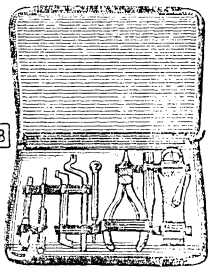
Precision-made totally enclosed motor, with solid-state controller. Provides continuously variable speed over 2000:1 range with constant torque. Type T2-1MC has range from less than 1 to 1800 rpm; other models have reduction gear heads. ±0.5% accuracy, even with overloads to 350%. Torque limiting and thermal overload protection. Reverse instantly without damaging surges or overshoots. Socket for external meter or recorder. Controller has silicon transistors and linear ICs; concentric coarse and fine speed controls. Motor has oversize brushes, dynamically balanced armature, die-cast housing. Controller, 5x6x12". 110-130 V, 50-60 Hz AC. **Prices include motor and controller.**

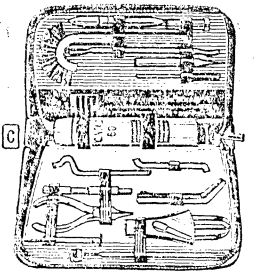
Stock No.	Mfr's Type	Max. rpm	Torque In.-Lbs.	EACH	Stock No.	Mfr's Type	Max. rpm	Torque In.-Lbs.	EACH
41 D 7177	T2-300MC	6	7	213.00	41 D 7180	T2-10MC	180	4.2	210.00
41 D 7178	T2-60MC	30	8	213.00	41 D 7181	T2-6MC	300	3.2	210.00
41 D 7179	T2-30MC	60	3.5	210.00	41 D 7182	T2-1MC	1800	0.63	204.00

Specify Stock No., Mfr's Type and Speed When Ordering Motors

Jonard Relay Adjusting Tools and Gauges







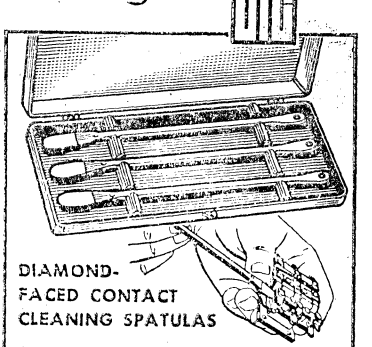
A P-4 and P-6 Pocket Burnishers. Leave no residue on contact. Replaceable blades. Insulated. Pocket clip. ⅜x5½".

P-4 Burnisher. With 12 RB4 (¼x1¼") blades.
41 D 7355. Wt., 5 oz. 3.90

P-6 Burn. With 12 RB6 (5/16x1¾") blades.
41 D 7356. Wt., 5 oz. 3.90
41 D 7357. RB4 Blades. 2 oz. ... Pkg. 25/3.75
41 D 7358. RB6 Blades. 2 oz. ... Pkg. 25/3.75

B KR-6 Compact 8-Piece Tool Kit. For setting, adjusting, testing relays. Carbon steel, polished finish. Includes: spring adjuster; armature arm bender; armature stop bender; duckbill plier; contact burnisher; 0-50 gram spring tension gauge; swivel head screwdvr; fine point tweezer. Case.
41 D 7351. Wt., 2 lbs. 22.00

C Model K-55 15-Piece Master Tool Kit. Precision-made and professionally-designed group of tools for adjusting and maintaining relays, contactors, switches, controls, and other components for the telecommunication and similarly related electronic industries. Complete 15-piece kit includes: two spring adjustors (SA-7, SA-17); duckbill plier; inspection mirror; armature arm bender; Penfile contact burnisher; tension measuring gauge; screwdriver; 4-in-one tool; back-stop bender; angle thickness gauge; tweezer; selector switch contact cleaning brush; twelve replacement burnisher blades; can of "Kontact 60" spray. Supplied complete with leather storage case for all tools. Shpg. wt., 3½ lbs.
41 D 7350. ..... 37.60

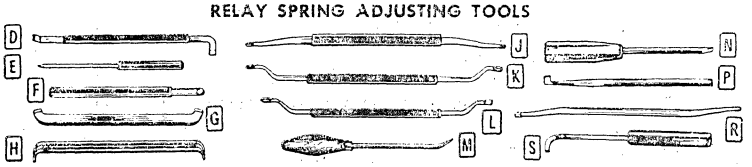


DIAMOND-FACED CONTACT CLEANING SPATULAS

Clean with only gentle pressure, do not disturb contact gap. Type 200, .019" diamond grain. Type 300, .017" diamond grain. Have two diamond faces. Type 400, .011" diamond grain. Type K-234. Set of one each in plastic case, 6" long. *Per set. Wt., 2 oz.

Stock No.	Type	For Relays	EACH
41 D 7328	D-200	Industrial	4.95
41 D 7329	D-300	Intermediate	4.95
41 D 7330	D-400	Sensitive	4.95
41 D 7285	K-234	Set of 3	*14.85

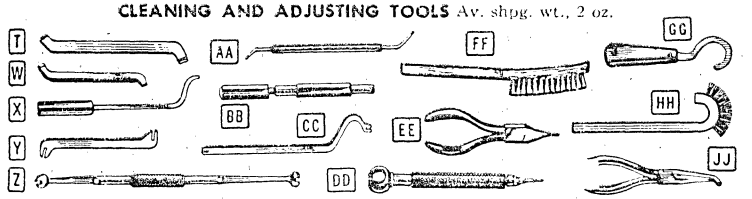
RELAY SPRING ADJUSTING TOOLS



Quality made of plated and polished high carbon steel, heat treated and tempered. Have insulated handles for use with "live" equipment. Av. shpg. wt., 3 oz.

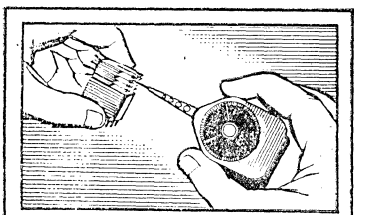
Stock No.	Mfr's Type	Fig.	Description	Slot Width	Lgth.	EACH
41 D 7352	SA-6A	D	Cross, lengthwise slots	.030"	5½"	2.95
41 D 7354	SA-7	E	For miniature relays	.015"	4½"	1.75
41 D 7353	SA-8	F	For heavy springs	.045"	4½"	2.98
41 D 6920	S-201	G	Aid spring adjuster	.034"	4¼"	3.01
41 D 6915	SA-24	H	Crosswise slots .040"x.028"	.....	5½"	2.88
41 D 7344	SA-17	J	For all relay types	.023"	8"	3.84
41 D 7345	SA-16	K	Lengthwise slot	.018"	6½"	3.28
41 D 7347	SA-2	L	Gen. type, chisel edge	.032"	7"	2.98
41 D 6917	SA-143	M	Bent; single saw slot	.025"	8"	2.86
41 D 6918	SA-163	N	Straight driver; cross slot	.038"	5½"	2.77
41 D 6919	SA-175	P	Close-set saw slot	.031"	5¼"	2.92
41 D 7346	SA-20	R	For closely-set springs	.022"	7"	3.90
41 D 6916	SA-25	S	Angled; single saw slot	.032"	6½"	2.98

CLEANING AND ADJUSTING TOOLS Av. shpg. wt., 2 oz.



Stock No.	Type	Fig.	Description	EACH
41 D 6921	AB-20	T	Arm bender armature, 3 slots .114"	1.98
41 D 6922	AB-21	W	Arm bender wrench, .120" slot	1.88
41 D 6923	J-34	X	Pole piece adjuster, 3" lg.	1.68
41 D 6931	S-187	Y	Double dog adjuster, .114" slots	2.14
41 D 6924	DW-16	Z	Offset wrench, 3/16" open	3.48
41 D 6925	DW-32	Z	Offset wrench, 7/32" open.	3.48
41 D 6926	DW-4	Z	Offset wrench, ¼" open.	3.48
41 D 6927	S-457	AA	Wire and Spring aid, 5½" lg.	3.40
41 D 6928	FW-24	BB	Wrench/Screwdriver; 7/32", ¼"	3.10
41 D 6929	SB-22	CC	Armature stop adj., slot .033"	1.98
41 D 6930	J-23	DD	Screwdriver guide pin, 4½" lg.	3.60
41 D 6932	PL-8	EE	Duck bill pliers, 5½" lg.	5.34
41 D 7332	WB-65	FF	Nickel-silver wire brush, 9" lg.	2.40
41 D 6934	BC-23	GG	Bank cleaner; 6" lg., 1½" dia.	3.58
41 D 7331	HB-75	HH	Curved hair brush; 8" lg., 1¾" radius	2.70
41 D 6933	PLS-9	JJ	Bent nose duck bill pliers, 5½" lg.	5.96

GAUGES



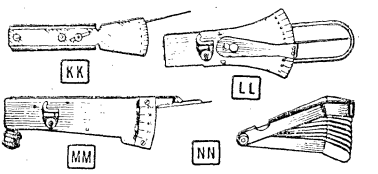
DYNAMOMETERS

Dial gauges determine force required to actuate delicate mechanisms. With max. reading pointer.

41 D 6935. Type GD-5. Calibrated 5-50 grams. Dial face 1½". 5 oz. 13.55

41 D 6936 Type GD-15. Calibrated 15-150 grams. Dial face 1½". 5 oz. ... 13.55

41 D 6937. Type GD-100. Calibrated 100-1000 grams. Dial 2½". 5 oz. .. 31.25



KK G-700 Spring Tension Gauge. Calibrated both sides from 0-700 grams. 5 oz.
41 D 6938. ..... 7.96

LL G-10 Spring Tension Gauge. Calibrated both sides from 0-10 grams. 5 oz.
41 D 6940. ..... 6.48

LL G-30 Spring Tension Gauge. Calibrated both sides from 0-30 grams. 5 oz.
41 D 7286. ..... 6.48

LL G-50 Spring Tension Gauge. Calibrated both sides from 0-50 grams. 5 oz.
41 D 7342. ..... 6.48

LL G-150 Spring Tension Gauge. Calibrated both sides from 0-150 grams. 5 oz.
41 D 7287. ..... 6.48

MM GP-50 Preset Spring Tension Gauge. Calibrated both sides 0-50 gm. 3 oz.
41 D 7340. ..... 7.48

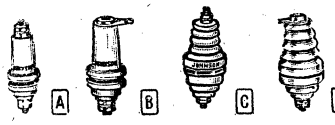
NN T-255 Angled Thickness Gauge. Has 9 blades, .009" to .026". 4" blades. 5 oz.
41 D 6939. ..... 2.24

SEE PAGE 519 FOR OTHER JONARD TOOLS

Insulators, Bushings, Spreaders and Coil Forms

E. F. JOHNSON HEAVILY GLAZED INSULATORS AND BUSHINGS

THRU-PANEL INSULATORS



Thru-panel, high voltage insulators are compression mounted by means of a stud throughout length. Extrusion of insulator base extends mounting hole increasing breakdown rating. Flat mounting surfaces with cushion washer. Long leakage paths. White glazed porcelain except †steatite. *Type Nos. with suffix -2 have banana jack plus lug-type terminal. Jacks take Johnson 108-740 or other .175" dia. banana plugs. Av., 12 oz.

Stock No.	Mfr's Type	Fig.	Top Ht.	Panel Hole	Hard-ware	EACH 1-49	50-99	100-499
47D 6200	135-40†	A	1¼"	7/16"	10-32	.55	.48	.41
47D 6202	135-42†	A	⅞"	13/32"	10-32	.50	.43	.37
47D 6203	135-42-2	B	⅞"	13/32"	*	.66	.57	.49
47D 6205	135-44†	A	⅝"	5/16"	6-32	.39	.33	.29
47D 6206	135-45	C	1⅜"	½"	10-32	.74	.64	.55
47D 6210	135-46	A	2¾"	11/16"	¼-20	1.69	1.46	1.26
47D 6211	135-47	A	4½"	31/32"	¼-20	2.80	2.40	2.10
47D 6215	135-48	C	2"	11/16"	10-32	1.19	1.03	.89
47D 6216	135 48-2	D	2"	11/16"	*	1.35	1.17	1.01

INSULATED THRU-PANEL BUSHING ASSEMBLIES

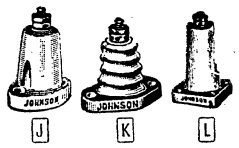
Used in transmitter and antenna installations. Serve as antenna terminals on transmitters, and as high-voltage terminals on heavy-duty power supplies. Max. Dia.: Types 135-50 and 135-55, ¾"; 135-51, 1¼"; 135-52, 1¾". All types consist of a pair of identical steatite insulators, cushion washers, hardware. 8 oz.

47D 6217	135-50	F	½"	13/32"	6-32	.46	.40	.35
47D 6219	135-51	F	13/16"	27/32"	10-32	.76	.66	.57
47D 6220	135-52	F	1⅛"	1 7/32"	¼"-20	.99	.85	.74
47D 6223	135-55	E	¼"	15/32"	6-32	.37	.32	.27

ULTRA-STEATITE CONE INSULATORS

(Not illus.) Non-ribbed high-grade steatite insulators. For mounting coils, capacitors, etc. Threads tapped directly into the steatite. Width shown is max. (base). With 2 nickel-plated brass machine screws and washers, cork cushion washer. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Height	Width	EACH 1-49	50-99	100-499
47D 6224	135-500	⅝"	⅝"	.26	.23	.20
47D 6231	135-501	1"	¾"	.35	.30	.26
47D 6232	135-502	1½"	1"	.65	.56	.49
47D 6233	135-503	2"	1⅛"	.96	.83	.72
47D 6234	135-504	3"	1½"	1.68	1.46	1.26



STAND-OFF INSULATORS

All are high-glaze porcelain types except †high-glaze steatite. Ideal for RF applications—feature long leakage path, low capacity, high moisture resistance and breakage-resistant bases. Nickel-plated brass hardware includes screw, flat washer, 2 nuts. Types 135-60, -62 and -65 are ribbed; others have smooth surfaces. All have 2-hole mtg. bases except *Types 135-60 and -62 which are similar to Fig. K but have square bases with 4 mtg. holes. Av. shpg. wt., 1 lb.

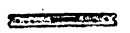
Stock No.	Mfr's Type	Fig.	Body Ht.	Hard-ware	EACH 1-49	50-99	100-499
47D 6235	135-20†	J	1 9/16"	10-32	.43	.37	.32
47D 6237	135-22†	J	1"	8-32	.26	.23	.19
47D 6239	135-24†	J	⅝"	6-32	.21	.18	.16
47D 6240	135-60	*	4½"	¼-20	1.40	1.20	1.04
47D 6241	135-62	*	2¾"	¼-20	.81	.74	.61
47D 6242	135-65	K	1⅜"	10-32	.44	.38	.32
47D 6248	135-66	L	2¾"	¼-20	.99	.85	.74
47D 6251	135-67	L	4½"	¼-20	1.40	1.20	1.04

PORCELAIN ANTENNA STRAIN INSULATORS

Have heavily porcelain-glazed surfaces to prevent moisture absorption, and nickel-plated brass hardware suitable for exposed applications. Type 136-107 is wet process, glazed 1" diameter round design with 800 lbs. breaking strength. 136-104 is dry process, glazed ⅝" square design with 400 lbs. breaking strength. Shpg. wt., 10 oz.

Stock No.	Mfr's Type	Size	EACH 1-49	50-99	100-499
47D 6254	136-104	4" long by ⅝" square	.36	.31	.27
47D 6255	136-107	7" long by 1" diameter	1.62	1.40	1.21

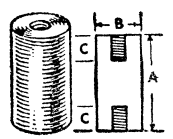
PORCELAIN ANTENNA-FEEDER SPREADERS



Feeder insulators of high-grade, low-absorption porcelain for lowest leakage loss. All are designed for open-wire antenna feeders and transmission lines with impedances of approximately 200 to 600 ohms. Unglazed-porcelain bars with a ⅜x½" cross-section treated with "Silaneal," a silicone product resistant to moisture. Surfaces suitable for exposed applications. In choice of 3 lengths. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Length	EACH 1-49	50-99	100-499
47D 6257	136-122	2"	.20	.17	.15
47D 6258	136-124	4"	.34	.29	.25
47D 6259	136-126	6"	.50	.43	.37

H. H. SMITH CERAMIC STAND-OFF INSULATORS



Commercial-grade threaded insulators to suit a wide variety of RF applications. Grade L-5 ceramic is employed with outside highly glazed to prevent absorption of moisture and avoid leakage losses. All except Type 2640 are threaded at both ends to accept 6-32 or ¼-20 machine screws. Type 2640 is threaded throughout. Av., 3 oz.

Stock No.	Mfr's Type	Dimensions A	B	C	Thread	PER PKG. OF 10 1-4	5-9	10-24
47D 4347	2640	¼"	¼"	Thru	6-32	1.60	1.34	1.21
47D 4348	2641	½"	¼"	5/32"	6-32	1.64	1.37	1.23
47D 4349	2642	⅜"	⅜"	5/32"	6-32	1.70	1.42	1.28
47D 4350	2643	½"	⅜"	3/16"	6-32	2.03	1.69	1.52
47D 4351	2644	½"	½"	9/64"	6-32	2.22	1.85	1.67
47D 4352	2645	¾"	½"	¼"	6-32	2.34	1.95	1.76
47D 4353	2646	1"	½"	⅜"	6-32	2.58	2.15	1.94
47D 4355	2647	1½"	½"	9/16"	6-32	2.94	2.45	2.20
47D 4356	2648	2½"	½"	½"	6-32	3.10	2.67	2.40
47D 4357	2649	2½"	¾"	¾"	¼-20	4.32	3.60	3.24
47D 4358	2650	4"	¾"	¾"	¼-20	6.48	5.40	4.86

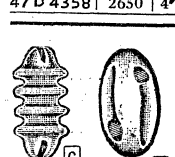
H. H. SMITH JAN-SPEC CERAMIC STANDOFFS

Grade L-5 threaded insulators for wide RF applications. Made to JAN 1-8 and JAN 1-10 specifications. Outside ceramic is glazed. Same appearance as insulators at left. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	MIL NL633W-	Dimensions A	B	C	Thread	PER PKG. 10 1-4	5-9	10-24
47D 4612	2600	01-004	1/2"	3/8"	5/32"	6-32	2.00	1.67	1.50
47D 4613	2602	01-006	¾"	⅜"	¼"	6-32	2.28	1.90	1.71
47D 4614	2603	01-008	1"	⅜"	⅜"	6-32	2.36	1.97	1.77
47D 4615	2605	01-012	1½"	⅜"	⅜"	6-32	2.72	2.27	2.04
47D 4616	2606	01-016	2"	⅜"	⅜"	6-32	2.76	2.30	2.07
47D 4617	2608	02-006	¾"	½"	¼"	8-32	2.06	1.72	1.55
47D 4618	2609	02-008	1"	½"	⅜"	8-32	1.91	1.74	1.57
47D 4619	2611	02-012	1½"	½"	⅜"	8-32	3.00	2.50	2.25
47D 4620	2612	02-016	2"	½"	⅜"	8-32	3.60	3.00	2.70
47D 4621	2613	02-020	2½"	½"	⅜"	8-32	3.60	3.00	2.70
47D 4622	2614	02-024	3"	½"	⅜"	8-32	3.78	3.15	2.84
47D 4623	2615	03-008	1"	¾"	⅜"	10-32	3.12	2.60	2.34
47D 4624	2617	03-012	1½"	¾"	⅜"	10-32	4.13	3.44	3.10
47D 4625	2618	03-016	2"	¾"	⅜"	10-32	4.68	3.90	3.51
47D 4626	2619	03-020	2½"	¾"	⅜"	10-32	4.80	4.00	3.60
47D 4627	2621	03-032	4"	¾"	⅜"	10-32	6.12	5.10	4.59

CONSOLIDATED WIRE

PORCELAIN ANTENNA INSULATORS



[G] **Ribbed Insulator.** 2½" long. Use as end insulators with antennas. **4 per package.**
47D 6051. 1-9 Packages.....Per Pkg. .40
10-49 Packages.....Per Pkg. .37
50-99 Packages.....Per Pkg. .34
100-499 Packages.....Per Pkg. .22

[H] **Egg Insulator.** White ceramic strain insulator for breaking guy wires into non-resonant lengths. 1¾x⅞" dia. **4 per package.**
47D 6052. 1-9 Pkgs..Per Pkg. .48 10-49 Pkgs.....Per Pkg. .45
50-99 Pkgs.....Per Pkg. .41 100-499 Pkgs.....Per Pkg. .39

MAYFAIR POLYSTYRENE COIL FORMS

Low loss, high dielectric polystyrene construction—excellent for plug-in type regenerative receiver coils; plate, grid or tank coils in VFO's; grid-dip meter coils; many other applications. Forms with 5 and 6 prongs fit standard tube sockets; 5-prong miniature form fits Amphenol' Type 78-S5S sockets. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Prongs	Size L x Dia.	EACH 1-99	100-499	500-999	1000-Up
47D 6693	24-5H	5 min.	1 9/16x¾"	.28	.25	.23	.21
47D 6696	24-5P	5 std.	2¼x1¼"	.27	.24	.22	.20
47D 6697	24-6P	6 std.	2¼x1¼"	.40	.36	.33	.30

Depend on Allied for Same-Day Shipment in Industrial Quantities

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★ Connectors—Commercial and Military Types
★ Electronics Hardware
★ Dial and Graphics Kits
★ Printed Circuit Boards, Packaging
★ Breadboard Components, Accessories

QUICK-REFERENCE INDEX TO MANUFACTURERS AND PRODUCTS

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ADC		49	311, 323
ALCO Circuit Boards		EACH	348
Knobs		999	353
Terminals MEP, MEH		999	311
AMPHENOL			
APC7		EACH	296
Series 17		2499	291
Series 26		249	290
Series 27, 31*		2499	295, 296
Series 57		249	290
Series 61		2499	292
Series 67		199	287, 288
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Series 86		2499	292
Series 91		2499	292, 297
Series 115		99	286
Series 126		249	289, 291
Series 133, 143		2499	293
Series 160		2499	292
Series 165		99	289
Series 220, 221, 222, 223	C-8384B	2499	291
Series 225		249	293
Series 246	C-26500	999	289
Series 261		2499	293
Series 348	81511B	99	288
Series 3100A thru 3108B	C-5015D	999	282-287
Series 3057, 3420, 9760		999	286
Series 5116, Quick Crimp BNC RF Series*		2499	296
Sockets		999	330, 331

*Connectors with prefix UG, CW, PL, SO, M are under MIL Specs

Mfr's Type	MIL Spec	OEM Prices Up to	Page
AUGAT 314, 316, 324, 336, 8000, 8004, 8058, 8060, 8075, 8076, 8089, 8092, 8095, 8100, 8128, 8130, 8135, 8136, 8150		999	328-330
BIRTCHER PBC		4999	351
CAMBION Miniature Connectors		9999	341
CANNON XLR P3 Series		499	297
CINCH-JONES			
Series 2, 13		999	311
Series 37		499	305
Series 81		999	311
Series 140, 141, 142		999	307, 308
Series 150		999	307
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Series 2400		499	305
Series D	M-14F,STD-202A	499	306
Mini-Jones		499	305
Sockets		249	332, 333

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DEVRY PC Components		EA.	349
ELCO			
Series 500 Plugs		999	301
Series 5006, 5007, 5009		999	300
Series 5023, 5101		999	301, 302
Series 5200		999	301
Series 6007, 6022		999	302
Series 6309		999	302
Series 7000, 7001, 7008, 7009, 7012, 7014, 7015, 7022		999	300, 301
Series 7021, 7022		999	300
Series 7023, 7024		999	300
Series 8016, 8017		249	303
Series 8129		249	302
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E. F. JOHNSON		999	320, 324
KEPRO		EA.	344-345
KINGS RF*		999	298, 299
KULKA			
670, 671, 672, Jumpers		999	309
6, 7, 8 TB	MIL-T-16784B	999	309
37, 38, 39 TB	MIL-T-55164	999	309
KURZ-KASCH		2499	354
MALLORY		499	315
MILLEN		EA.	356
MUELLER (Clips)		999	319
NATIONAL		EA.	355
POMONA Black Boxes		249	299
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RAYTHEON			
Knobs	M-L-K-3926A MIL-MS91528C	499	352, 355
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SWITCHCRAFT	J-641,J-641(1), J-614(A),J-642, P, 642, JJ-048, PJ-291, PJ-636	999	312-314,323
Audio Cables		999	324
TRIAD PC Boards		99	347
USECO		24,999	338, 339
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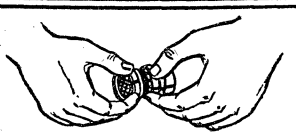
VECTOR		999	332, 336, 348-350
VERO		499	346, 351
WALDOM/MOLEX		ANY	335

AMPHENOL MS CONNECTORS ASSEMBLED TO YOUR ORDER



ELCO PRINTED CIRCUIT CONNECTORS ASSEMBLED TO YOUR ORDER

Fast delivery is assured when our assembly dept. makes up and positions to your specifications any MS Amphenol connectors listed. Type Nos. stamped on part when specified.

Now 7 contact styles are available from stock in any of the following Elco Printed Circuit Connectors Series: 5006, 5007, 5009, 7001, 7008 and 7024.

Amphenol MS Connector Insert Arrangements

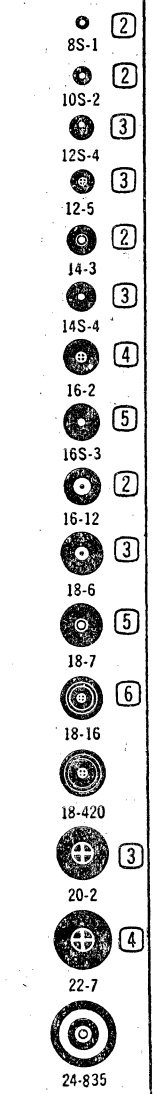
SERVICE RATINGS

SERVICE	1	2	3	4	5	6
Max. Operating Sea Level Volts DC	250	700	1250	1750	2450	4200
Max. Operating Sea Level Volts AC (rms)	200	500	900	1250	1750	3000

CURRENT RATINGS

CONTACT SIZE	20	16	12	8	4	0
AMPERES	10	22	41	73	135	245

1 Contact



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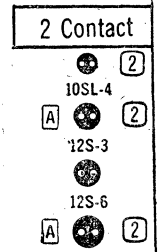

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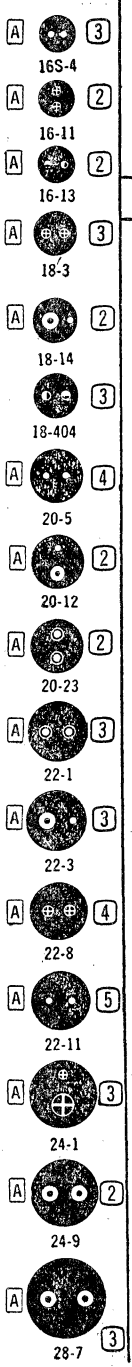

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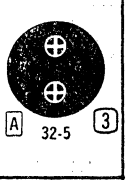

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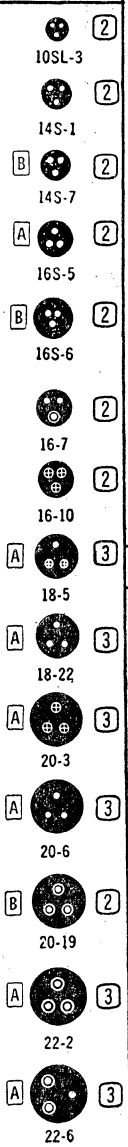

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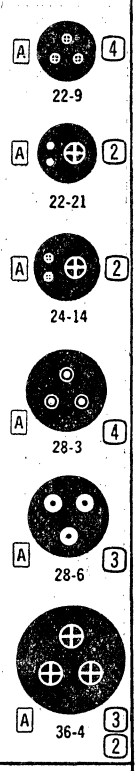

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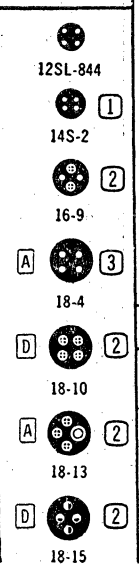

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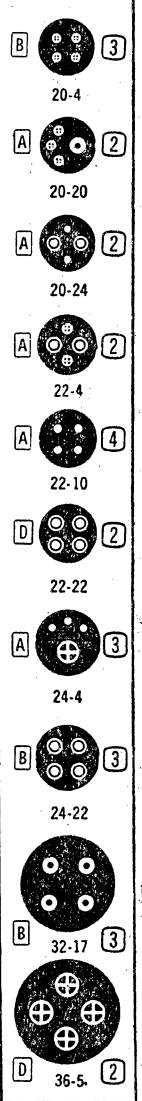

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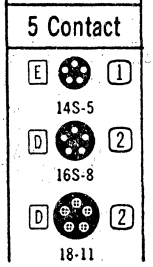

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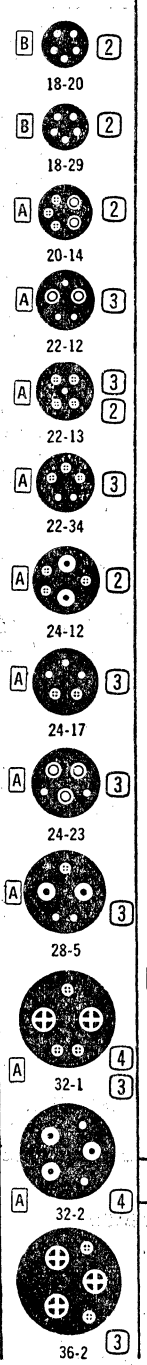

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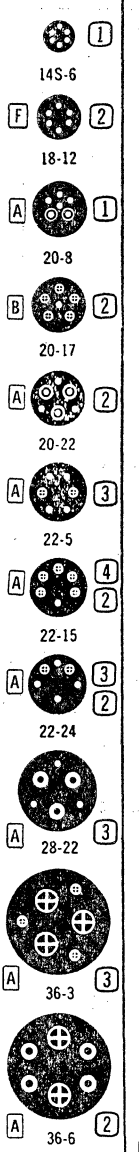

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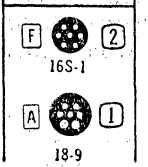

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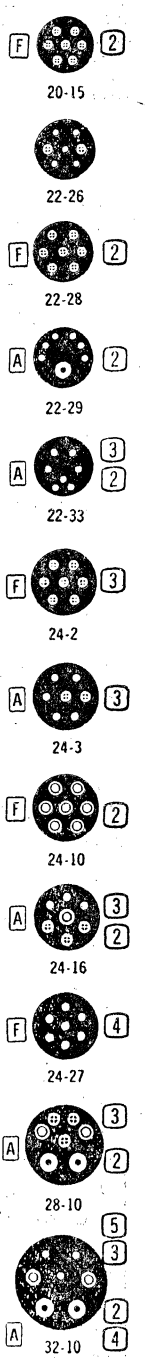
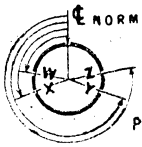


See Following Pages for Amphenol MS Connector Listings

Amphenol MS Connector Insert Arrangements



FRONT VIEW OF POSITIONS

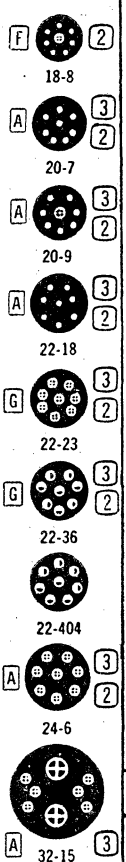
See Pages 282-287, 289 for Connector Listings. Contact sizes correspond in number coding to wire sizes.

CODE OF WIRE SIZES

ALTERNATE INSERT POSITIONS AVAILABLE

[A] W, X, Y or Z
[B] W, X or Y
[C] W, Y or Z
[D] X or Y
[E] X
[F] W or Z
[G] W or Y

8 Contact



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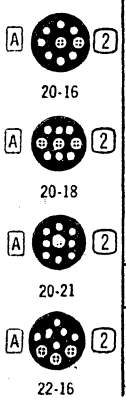

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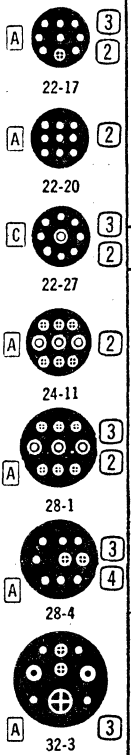

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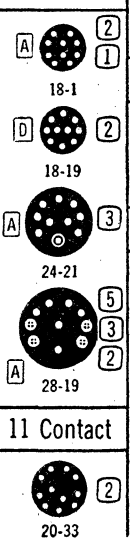

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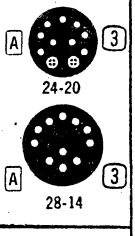

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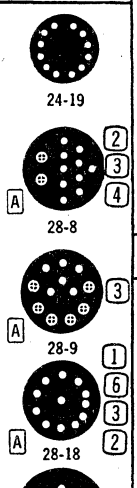

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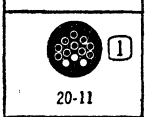

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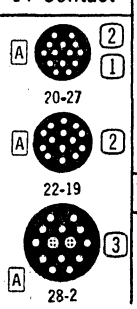

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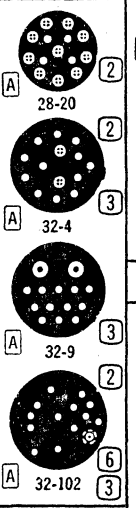

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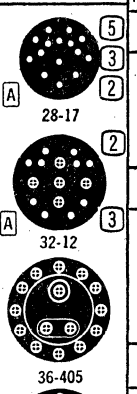

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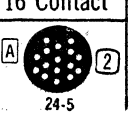

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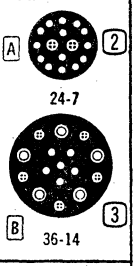

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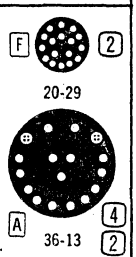

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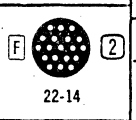

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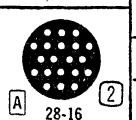

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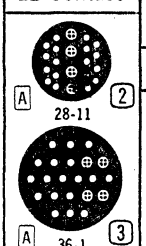

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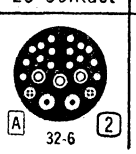

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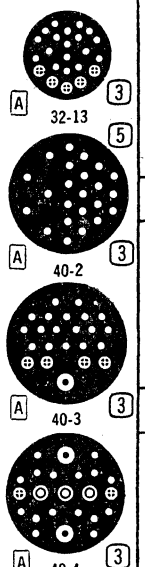

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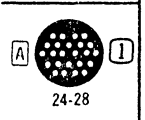

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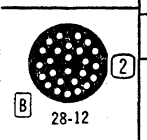

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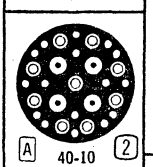

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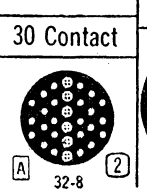

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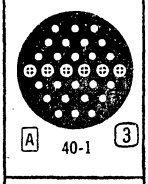

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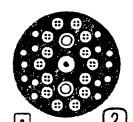

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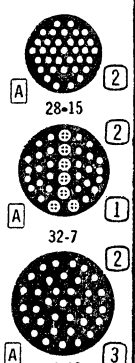

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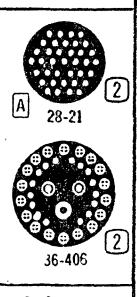

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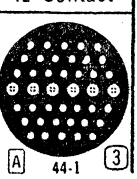
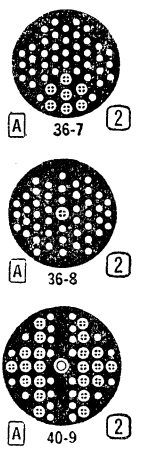
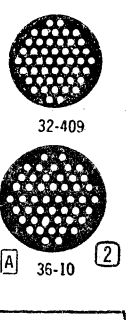


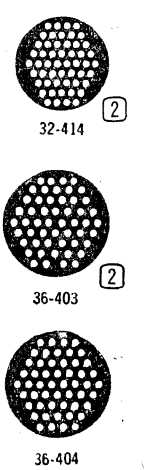
47 Contact



48 Contact



52 Contact



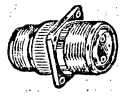
See Following Pages for Amphenol MS Connector Listings

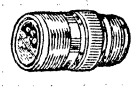
Amphenol MS Receptacles . .

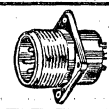
Explanation of Series Nos. E.g.: 3102A-18-11P. "A" stands for solid shell ("B" split shell). "18" indicates shell size in 16ths of 1". "P"—pin; "S"—socket type. Mates for 3100A, 3101A and 3102A are directly opposite, on facing page. Require cable clamp (see page 288) except 3102A. Contacts are silver plated, and solder cups tinned. Aluminum shells with cadmium plate and O.D. conversion. Meet MIL-C-5015D.

HOW TO ORDER
Specify Stock Number, then add connector Type Number. For example, 47 D 7000A (stock no.)—3100A-8S-1P (type no.).

Positions W, X, Y, Z Available from Stock as indicated, below. 5¢ Extra Per Connector


3100A Wall Receptacle


3101A Cable Receptacle


3102A Box Receptacle

Shell Style Insert	No. Contacts	Positions				MS 3100A EACH				MS 3101A EACH				MS 3102A EACH			
		W	X	Y	Z	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
8S-1P	1					1.66	1.37	1.22	1.10	1.54	1.27	1.13	1.02	.93	.77	.69	.62
8S-1S	1					1.66	1.37	1.22	1.10	1.54	1.27	1.13	1.02	.93	.77	.69	.62
10S-2P	1					1.71	1.42	1.26	1.14	1.40	1.16	1.03	.93	.64	.53	.47	.43
10S-2S	1					1.73	1.43	1.27	1.15	1.42	1.17	1.04	.94	.66	.54	.48	.44
10SL-3P	3					1.09	.90	.80	.72	1.61	1.33	1.18	1.07	.83	.69	.61	.55
10SL-4P	2					1.07	.89	.79	.71	1.52	1.26	1.12	1.01	.83	.69	.61	.55
12-5P	1					1.42	1.17	1.04	.94	1.57	1.30	1.16	1.05	.88	.73	.65	.59
12-5S	1					1.52	1.26	1.12	1.01	1.70	1.40	1.24	1.13	1.00	.83	.74	.67
12S-2P	2					1.30	1.07	.95	.86	1.49	1.23	1.09	.99	.74	.61	.55	.49
12S-2S	2					1.35	1.12	.99	.90	1.51	1.24	1.10	1.00	.76	.63	.56	.51
12S-3P	2	X	X	X	X	1.16	.96	.85	.77	1.37	1.13	1.00	.91	.62	.51	.46	.41
12S-3S	2	X	X	X	X	1.19	.99	.88	.79	1.40	1.16	1.03	.93	.66	.54	.48	.44
12S-4P	1					1.21	1.00	.89	.81	1.42	1.17	1.04	.94	.67	.56	.50	.45
12S-4S	1					1.21	1.00	.89	.81	1.42	1.17	1.04	.94	.67	.56	.50	.45
12SL-844P	4					.....	.....	.....	.....	.....	.....	.....	.....	1.51	1.24	1.10	1.00
14S-1P	3					1.25	1.03	.91	.83	1.52	1.26	1.12	1.01	.81	.67	.60	.54
14S-1S	3					1.28	1.06	.94	.85	1.54	1.27	1.13	1.02	.83	.69	.61	.55
14S-2P	4					1.23	1.02	.90	.82	1.51	1.24	1.10	1.00	.80	.66	.58	.53
14S-2S	4					1.33	1.10	.98	.89	1.59	1.32	1.17	1.06	.88	.73	.65	.59
14S-5P	5		X			1.37	1.13	1.00	.91	1.64	1.36	1.21	1.09	.93	.77	.69	.62
14S-5S	5		X			1.42	1.17	1.04	.94	1.70	1.40	1.24	1.13	.99	.82	.72	.66
14S-6P	6					1.42	1.17	1.04	.94	1.70	1.40	1.24	1.13	.99	.82	.72	.66
14S-6S	6					1.45	1.20	1.07	.97	1.73	1.43	1.27	1.15	1.02	.84	.75	.68
14S-7P	3	X	X	X		1.25	1.03	.91	.83	1.52	1.26	1.12	1.01	.81	.67	.60	.54
14S-7S	3	X	X	X		1.28	1.06	.94	.85	1.54	1.27	1.13	1.02	.83	.69	.61	.55
14S-9P	2	X	X	X	X	1.18	.97	.86	.78	1.45	1.20	1.07	.97	.74	.61	.55	.49
14S-9S	2	X	X	X	X	1.19	.99	.88	.79	1.47	1.22	1.08	.98	.76	.63	.56	.51
16-9P	4					1.75	1.44	1.28	1.16	1.80	1.49	1.32	1.20	1.07	.89	.79	.71
16-9S	4					1.95	1.62	1.44	1.30	2.02	1.67	1.49	1.35	1.30	1.07	.95	.86
16-10P	3					1.70	1.40	1.24	1.13	1.75	1.44	1.28	1.16	1.02	.84	.75	.68
16-10S	3					1.89	1.56	1.38	1.25	1.94	1.60	1.42	1.29	1.21	1.00	.89	.81
16-11P	2	X	X	X	X	1.57	1.30	1.16	1.05	1.64	1.36	1.21	1.09	.92	.76	.67	.61
16-11S	2	X	X	X	X	1.78	1.47	1.31	1.18	1.83	1.52	1.35	1.22	1.11	.92	.81	.74
16-13P	2	X	X	X	X	3.86	3.19	2.83	2.56	3.91	3.23	2.87	2.60	3.18	2.63	2.34	2.12
16-13S	2	X	X	X	X	4.45	3.68	3.26	2.96	4.50	3.72	3.30	2.99	3.77	3.12	2.77	2.51
16S-1P	7	X			X	1.57	1.30	1.16	1.05	1.71	1.42	1.26	1.14	1.00	.83	.74	.67
16S-1S	7	X			X	1.75	1.44	1.28	1.16	1.87	1.54	1.37	1.24	1.16	.96	.85	.77
16S-4P	2	X	X	X	X	1.40	1.16	1.03	.93	1.52	1.26	1.12	1.01	.81	.67	.60	.54
16S-4S	2	X	X	X	X	1.45	1.20	1.07	.97	1.57	1.30	1.16	1.05	.87	.72	.64	.58
16S-5P	3	X	X	X	X	1.49	1.23	1.09	.99	1.61	1.33	1.18	1.07	.92	.76	.67	.61
16S-5S	3	X	X	X	X	1.52	1.26	1.12	1.01	1.66	1.37	1.22	1.10	.95	.79	.70	.63
16S-8P	5		X	X		1.54	1.27	1.13	1.02	1.68	1.39	1.23	1.12	.97	.80	.71	.64
16S-8S	5		X	X		1.59	1.32	1.17	1.06	1.73	1.43	1.27	1.15	1.02	.84	.75	.68
18-1P	10	X	X	X	X	1.95	1.62	1.44	1.30	2.20	1.82	1.61	1.46	1.35	1.12	.99	.90
18-1S	10	X	X	X	X	2.13	1.76	1.56	1.41	2.37	1.96	1.74	1.58	1.51	1.24	1.10	1.00
18-3P	2	X	X	X	X	1.56	1.29	1.14	1.04	1.80	1.49	1.32	1.20	.95	.79	.70	.63
18-3S	2	X	X	X	X	1.92	1.59	1.41	1.28	2.16	1.79	1.59	1.44	1.31	1.09	.97	.87
18-4P	4	X	X	X	X	1.57	1.30	1.16	1.05	1.82	1.50	1.33	1.21	.97	.80	.71	.64
18-4S	4	X	X	X	X	1.71	1.42	1.26	1.14	1.94	1.60	1.42	1.29	1.09	.90	.80	.72
18-5P	3	X	X	X	X	1.51	1.24	1.10	1.00	1.75	1.44	1.28	1.16	.88	.73	.65	.59
18-5S	3	X	X	X	X	1.71	1.42	1.26	1.14	1.94	1.60	1.42	1.29	1.09	.90	.80	.72
18-8P	8	X			X	1.95	1.62	1.44	1.30	2.20	1.82	1.61	1.46	1.35	1.12	.99	.90
18-8S	8	X			X	2.09	1.73	1.54	1.39	2.32	1.92	1.70	1.54	1.47	1.22	1.08	.98
18-9P	7	X	X	X	X	1.85	1.53	1.36	1.23	2.09	1.73	1.54	1.39	1.23	1.02	.90	.82
18-9S	7	X	X	X	X	2.01	1.66	1.47	1.33	2.23	1.84	1.64	1.48	1.38	1.14	1.02	.92
18-10P	4		X	X		1.89	1.56	1.38	1.25	2.13	1.76	1.56	1.41	1.28	1.06	.94	.85
18-10S	4		X	X		2.09	1.73	1.54	1.39	2.32	1.92	1.70	1.54	1.47	1.22	1.08	.98
18-11P	5		X	X		1.89	1.56	1.38	1.25	2.13	1.76	1.56	1.41	1.28	1.06	.94	.85
18-11S	5		X	X		1.95	1.62	1.44	1.30	2.20	1.82	1.61	1.46	1.35	1.12	.99	.90
18-12P	6	X			X	1.76	1.46	1.30	1.17	2.01	1.66	1.47	1.33	1.14	.94	.84	.76
18-12S	6	X			X	1.89	1.56	1.38	1.25	2.13	1.76	1.56	1.41	1.28	1.06	.94	.85
18-15P	4		X	X		6.26	5.18	4.60	4.16	6.50	5.38	4.78	4.32	5.66	4.68	4.15	3.76
18-15S	4		X	X		6.44	5.32	4.72	4.28	6.66	5.51	4.89	4.43	5.81	4.80	4.27	3.86
18-16P	1					1.71	1.42	1.26	1.14	1.94	1.60	1.42	1.29	1.09	.90	.80	.72
18-16S	1					2.01	1.66	1.47	1.33	2.23	1.84	1.64	1.48	1.38	1.14	1.02	.92
20-4P	4	X	X	X		1.97	1.63	1.45	1.31	2.11	1.74	1.55	1.40	1.25	1.03	.91	.83
20-4S	4	X	X	X		2.25	1.86	1.65	1.50	2.39	1.97	1.75	1.59	1.52	1.26	1.12	1.01
20-7P	8	X	X	X	X	1.97	1.63	1.45	1.31	2.11	1.74	1.55	1.40	1.25	1.03	.91	.83
20-7S	8	X	X	X	X	2.15	1.77	1.57	1.43	2.27	1.87	1.66	1.51	1.42	1.17	1.04	.94
20-8P	6	X	X	X	X	2.25	1.86	1.65	1.50	2.39	1.97	1.75	1.59	1.52	1.26	1.12	1.01
20-8S	6	X	X	X	X	2.61	2.16	1.92	1.74	2.75	2.27	2.02	1.83	1.89	1.56	1.38	1.25

SPECIFY IF CONNECTORS ARE TO BE STAMPED WITH MFR'S TYPE NO.

and Mating Plugs

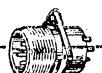
SIMPLIFIED ORDERING

Select desired insert (pg. 282-283), then shell style; receptacles on opposite page. Mating plugs, below. Paired-off listing places mating plugs and receptacles on the same line.

Insert 18-4

→ 4 No. 16 contacts, 22 amps, 900 VAC

Panel Recept. MS 3102A-18-4P



→ Pin Contacts Cold Circuit

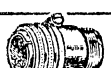
Straight Plug MS-3106A-18-4S

→ Socket Contacts Hot Circuit

Cable Clamp MS 3057-10A

→ Clamps on Page 288

3106A



3106B

3108A

3108B

Shell Style Insert	Series 3106A EACH				Series 3106B EACH				Series 3108A EACH				Series 3108B EACH			
	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
8S-1S	1.07	.89	.79	.71	.....	.....	.....	.....	1.83	1.52	1.35	1.22	.....	.....	.....	.....
8S-1P	1.07	.89	.79	.71	.....	.....	.....	.....	1.83	1.52	1.35	1.22	.....	.....	.....	.....
10S-2S	1.51	1.24	1.10	1.00	.....	.....	.....	.....	2.37	1.96	1.74	1.58	1.23	1 02	.90	.82
10S-2P	1.49	1.23	1.09	.99	.....	.....	.....	.....	2.34	1.93	1.71	1.55	1.21	1.00	.89	.81
10SL-3S	1.30	1.07	.95	.86	.....	.....	.....	.....	2.32	1.92	1.70	1.54	1.21	1.00	.89	.81
10SL-4S	1.28	1.06	.94	.85	.....	.....	.....	.....	2.30	1.90	1.69	1.53	1.18	.97	.86	.78
12-5S	1.54	1.27	1.13	1.02	.....	.....	.....	.....	2.70	2.23	1.98	1.79	1.64	1.36	1.21	1.09
12-5P	1.44	1.19	1.05	.95	.....	.....	.....	.....	2.60	2.15	1.91	1.73	1.52	1.26	1.12	1.01
12S-2S	1.23	1.02	.90	.82	.....	.....	.....	.....	2.79	2.30	2.04	1.85	1.56	1.29	1.14	1.04
12S-2P	1.21	1.00	.89	.81	.....	.....	.....	.....	2.77	2.29	2.03	1.84	1.54	1.27	1.13	1.02
12S-3S	1.12	.93	.83	.75	.....	.....	.....	.....	2.65	2.19	1.94	1.76	1.45	1.20	1.07	.97
12S-3P	1.09	.90	.80	.72	.....	.....	.....	.....	2.61	2.16	1.92	1.74	1.42	1.17	1.04	.94
12S-4S	1.14	.94	.84	.76	.....	.....	.....	.....	2.66	2.20	1.96	1.77	1.47	1.22	1.08	.98
12S-4P	1.14	.94	.84	.76	.....	.....	.....	.....	2.66	2.20	1.96	1.77	1.47	1.22	1.08	.98
12SL-844S	2.80	2.32	2.06	1.86	.....	.....	.....	.....	4.22	3.49	3.10	2.81	.....	.....	.....	.....
14S-1S	1.28	1.06	.94	.85	1.52	1.26	1.12	1.01	2.60	2.15	1.91	1.73	1.42	1.17	1.04	.94
14S-1P	1.25	1.03	.91	.83	1.51	1.24	1.10	1.00	2.58	2.13	1.89	1.71	1.40	1.16	1.03	.93
14S-2S	1.33	1.10	.98	.89	1.57	1.30	1.16	1.05	2.65	2.19	1.94	1.76	1.47	1.22	1.08	.98
14S-2P	1.23	1.02	.90	.82	1.49	1.23	1.09	.99	2.56	2.12	1.88	1.70	1.38	1.14	1.02	.92
14S-5S	1.42	1.17	1.04	.94	1.68	1.39	1.23	1.12	2.75	2.27	2.02	1.83	1.56	1.29	1.14	1.04
14S-5P	1.37	1.13	1.00	.91	1.61	1.33	1.18	1.07	2.68	2.22	1.97	1.78	1.51	1.24	1.10	1.00
14S-6S	1.45	1.20	1.07	.97	1.71	1.42	1.26	1.14	2.79	2.30	2.04	1.85	1.59	1.32	1.17	1.06
14S-6P	1.42	1.17	1.04	.94	1.68	1.39	1.23	1.12	2.75	2.27	2.02	1.83	1.56	1.29	1.14	1.04
14S-7S	1.28	1.06	.94	.85	1.52	1.26	1.12	1.01	2.60	2.15	1.91	1.73	1.42	1.17	1.04	.94
14S-7P	1.25	1.03	.91	.83	1.51	1.24	1.10	1.00	2.58	2.13	1.89	1.71	1.40	1.16	1.03	.93
14S-9S	1.19	.99	.88	.79	1.45	1.20	1.07	.97	2.53	2.09	1.85	1.68	1.35	1.12	.99	.90
14S-9P	1.18	.97	.86	.78	1.44	1.19	1.05	.95	2.51	2.07	1.84	1.67	1.33	1.10	.98	.89
16-9S	1.87	1.54	1.37	1.24	.....	.....	.....	.....	3.41	2.82	2.50	2.27	2.27	1.87	1.66	1.51
16-9P	1.66	1.37	1.22	1.10	.....	.....	.....	.....	3.20	2.65	2.35	2.13	2.06	1.70	1.51	1.37
16-10S	1.80	1.49	1.32	1.20	.....	.....	.....	.....	3.34	2.76	2.45	2.22	2.20	1.82	1.61	1.46
16-10P	1.59	1.32	1.17	1.06	.....	.....	.....	.....	3.15	2.60	2.31	2.09	2.01	1.66	1.47	1.33
16-11S	1.70	1.40	1.24	1.13	.....	.....	.....	.....	3.24	2.67	2.37	2.15	2.09	1.73	1.54	1.39
16-11P	1.49	1.23	1.09	.99	.....	.....	.....	.....	3.03	2.50	2.22	2.01	1.89	1.56	1.38	1.25
16-13S	4.36	3.60	3.20	2.90	.....	.....	.....	.....	5.90	4.88	4.33	3.92	4.76	3.93	3.49	3.16
16-13P	3.75	3.10	2.76	2.50	.....	.....	.....	.....	5.31	4.39	3.90	3.53	4.15	3.43	3.05	2.76
16S-1S	1.57	1.30	1.16	1.05	1.97	1.63	1.45	1.31	3.48	2.87	2.55	2.31	1.85	1.53	1.36	1.23
16S-1P	1.42	1.17	1.04	.94	1.82	1.50	1.33	1.21	3.30	2.73	2.43	2.20	1.70	1.40	1.24	1.13
16S-4S	1.30	1.07	.95	.86	1.70	1.40	1.24	1.13	3.18	2.63	2.34	2.12	1.56	1.29	1.14	1.04
16S-4P	1.23	1.02	.90	.82	1.64	1.36	1.21	1.09	3.13	2.59	2.30	2.08	1.51	1.24	1.10	1.00
16S-5S	1.37	1.13	1.00	.91	1.76	1.46	1.30	1.17	3.25	2.69	2.39	2.16	1.64	1.36	1.21	1.09
16S-5P	1.33	1.10	.98	.89	1.73	1.43	1.27	1.15	3.22	2.66	2.36	2.14	1.59	1.32	1.17	1.06
16S-8S	1.44	1.19	1.05	.95	1.83	1.52	1.35	1.22	3.32	2.75	2.44	2.21	1.71	1.42	1.26	1.14
16S-8P	1.38	1.14	1.02	.92	1.78	1.47	1.31	1.18	3.27	2.70	2.40	2.17	1.66	1.37	1.22	1.10
18-1S	2.04	1.69	1.50	1.36	2.40	1.99	1.77	1.60	3.96	3.27	2.91	2.63	2.49	2.06	1.83	1.66
18-1P	1.87	1.54	1.37	1.24	2.23	1.84	1.64	1.48	3.79	3.13	2.78	2.52	2.32	1.92	1.70	1.54
18-3S	1.83	1.52	1.35	1.22	2.20	1.82	1.61	1.46	3.75	3.10	2.76	2.50	2.28	1.89	1.68	1.52
18-3P	1.47	1.22	1.08	.98	1.83	1.52	1.35	1.22	3.39	2.80	2.49	2.25	1.92	1.59	1.41	1.28
18-4S	1.61	1.33	1.18	1.07	1.97	1.63	1.45	1.31	3.55	2.93	2.60	2.36	2.08	1.72	1.52	1.38
18-4P	1.49	1.23	1.09	.99	1.85	1.53	1.36	1.23	3.41	2.82	2.50	2.27	1.94	1.60	1.42	1.29
18-5S	1.61	1.33	1.18	1.07	1.97	1.63	1.45	1.31	3.55	2.93	2.60	2.36	2.08	1.72	1.52	1.38
18-5P	1.42	1.17	1.04	.94	1.78	1.47	1.31	1.18	3.34	2.76	2.45	2.22	1.87	1.54	1.37	1.24
18-8S	2.01	1.66	1.47	1.33	2.37	1.96	1.74	1.58	3.93	3.25	2.88	2.61	2.46	2.03	1.80	1.63
18-8P	1.87	1.54	1.37	1.24	2.23	1.84	1.64	1.48	3.79	3.13	2.78	2.52	2.32	1.92	1.70	1.54
18-9S	1.90	1.57	1.40	1.27	2.27	1.87	1.66	1.51	3.84	3.17	2.82	2.55	2.37	1.96	1.74	1.58
18-9P	1.76	1.46	1.30	1.17	2.13	1.76	1.56	1.41	3.68	3.05	2.71	2.45	2.21	1.83	1.63	1.47
18-10S	2.01	1.66	1.47	1.33	2.37	1.96	1.74	1.58	3.93	3.25	2.88	2.61	2.46	2.03	1.80	1.63
18-10P	1.80	1.49	1.32	1.20	2.16	1.79	1.59	1.44	3.72	3.07	2.73	2.46	2.25	1.86	1.65	1.50
18-11S	1.87	1.54	1.37	1.24	2.23	1.84	1.64	1.48	3.79	3.13	2.78	2.52	2.32	1.92	1.70	1.54
18-11P	1.80	1.49	1.32	1.20	2.16	1.79	1.59	1.44	3.72	3.07	2.73	2.47	2.25	1.86	1.65	1.50
18-12S	1.80	1.49	1.32	1.20	2.16	1.79	1.59	1.44	3.72	3.07	2.73	2.47	2.25	1.86	1.65	1.50
18-12P	1.68	1.39	1.23	1.12	2.04	1.69	1.50	1.36	3.60	2.97	2.64	2.39	2.13	1.76	1.56	1.41
18-15S	6.33	5.23	4.65	4.21	6.70	5.53	4.91	4.45	8.27	6.84	6.07	5.50	6.80	5.62	4.99	4.52
18-15P	6.18	5.11	4.53	4.11	6.54	5.41	4.80	4.35	8.10	6.69	5.94	5.38	6.63	5.48	4.86	4.40
18-16S	1.90	1.57	1.40	1.27	2.27	1.87	1.66	1.51	3.84	3.17	2.82	2.55	2.37	1.96	1.74	1.58
18-16P	1.61	1.33	1.18	1.07	1.97	1.63	1.45	1.31	3.55	2.93	2.60	2.36	2.08	1.72	1.52	1.38
20-4S	2.46	2.03	1.80	1.63	2.73	2.26	2.01	1.82	4.43	3.66	3.25	2.94	2.85	2.36	2.10	1.90
20-4P	2.18	1.80	1.60	1.45	2.46	2.03	1.80	1.63	4.15	3.43	3.05	2.76	2.58	2.13	1.89	1.71
20-7S	2.34	1.93	1.71	1.55	2.61	2.16	1.92	1.74	4.33	3.58	3.18	2.88	2.75	2.27	2.02	1.83
20-7P	2.18	1.80	1.60	1.45	2.46	2.03	1.80	1.63	4.15	3.43	3.05	2.76	2.58	2.13	1.89	1.71
20-8S	2.82	2.33	2.07	1.87	3.10	2.56	2.27	2.06	4.79	3.96	3.52	3.19	3.22	2.66	2.36	2.14
20-8P	2.46	2.03	1.80	1.63	2.73	2.26	2.01	1.82	4.43	3.66	3.25	2.94	2.85	2.36	2.10	1.90

SPECIFY IF CONNECTORS ARE TO BE STAMPED WITH MFR'S TYPE NO.

Amphenol MS Receptacles . .

HOW TO ORDER. Specify Stock No., then connector Type No. Example: 47 D 7000 A (stock no.)—3100A-20-9P (type no.)

Shell Style Insert	No. of Contacts	Positions				Series 3100A EACH				Series 3101A EACH				Series 3102A EACH			
		W	X	Y	Z	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
20-9P	8	X	X	X	X	2.13	1.76	1.56	1.41	2.25	1.86	1.65	1.50	1.40	1.16	1.03	.93
20-9S	8	X	X	X	X	2.16	1.79	1.59	1.44	2.28	1.89	1.68	1.52	1.44	1.19	1.05	.95
20-14P	5	X	X	X	X	2.37	1.96	1.74	1.58	2.49	2.06	1.83	1.66	1.64	1.36	1.21	1.09
20-14S	5	X	X	X	X	3.04	2.52	2.24	2.02	3.18	2.63	2.34	2.12	2.32	1.92	1.70	1.54
20-15P	7	X				2.18	1.80	1.60	1.45	2.30	1.90	1.69	1.53	1.45	1.20	1.07	.97
20-15S	7	X			X	2.96	2.45	2.17	1.97	3.10	2.56	2.27	2.06	2.23	1.84	1.64	1.48
20-16P	9	X	X	X	X	2.20	1.82	1.61	1.46	2.32	1.92	1.70	1.54	1.47	1.22	1.08	.98
20-16S	9	X	X	X	X	2.34	1.93	1.71	1.55	2.47	2.04	1.82	1.64	1.61	1.33	1.18	1.07
20-17P	6	X	X	X		2.16	1.79	1.59	1.44	2.28	1.89	1.68	1.52	1.44	1.19	1.05	.95
20-17S	6	X	X	X		2.63	2.17	1.93	1.75	2.77	2.29	2.03	1.84	1.90	1.57	1.40	1.27
20-18P	9	X	X	X	X	2.28	1.89	1.68	1.52	2.42	2.00	1.78	1.61	1.56	1.29	1.14	1.04
20-18S	9	X	X	X	X	2.53	2.09	1.85	1.68	2.65	2.19	1.94	1.76	1.80	1.49	1.32	1.20
20-21P	9	X	X	X	X	2.13	1.76	1.56	1.41	2.25	1.86	1.65	1.50	1.40	1.16	1.03	.93
20-21S	9	X	X	X	X	2.23	1.84	1.64	1.48	2.37	1.96	1.74	1.58	1.51	1.24	1.10	1.00
20-22P	6	X	X	X	X	2.51	2.07	1.84	1.67	2.63	2.17	1.93	1.75	1.78	1.47	1.31	1.18
20-22S	6	X	X	X	X	2.96	2.45	2.17	1.97	3.10	2.56	2.27	2.06	2.23	1.84	1.64	1.48
20-23P	2	X	X	X	X	2.11	1.74	1.55	1.40	2.23	1.84	1.64	1.48	1.38	1.14	1.02	.92
20-23S	2	X	X	X	X	2.30	1.90	1.69	1.53	2.44	2.02	1.79	1.62	1.57	1.30	1.16	1.05
20-24P	4	X	X	X	X	2.16	1.79	1.59	1.44	2.28	1.89	1.68	1.52	1.44	1.19	1.05	.95
20-24S	4	X	X	X	X	2.68	2.22	1.97	1.78	2.82	2.33	2.07	1.87	1.95	1.62	1.44	1.30
20-27P	14	X	X	X	X	2.25	1.86	1.65	1.50	2.39	1.97	1.75	1.59	1.52	1.26	1.12	1.01
20-27S	14	X	X	X	X	2.47	2.04	1.82	1.64	2.60	2.15	1.91	1.73	1.75	1.44	1.28	1.16
20-29P	17	X			X	2.44	2.02	1.79	1.62	2.56	2.12	1.88	1.70	1.71	1.42	1.26	1.14
20-29S	17	X			X	2.70	2.23	1.98	1.79	2.84	2.35	2.08	1.89	1.97	1.63	1.45	1.31
20-33P	11					2.42	2.00	1.78	1.61	2.54	2.10	1.87	1.69	1.70	1.40	1.24	1.13
20-33S	11					2.49	2.06	1.83	1.66	2.61	2.16	1.92	1.74	1.76	1.46	1.30	1.17
22-2P	3	X	X	X	X	2.39	1.97	1.75	1.59	2.49	2.06	1.83	1.66	1.52	1.26	1.12	1.01
22-2S	3	X	X	X	X	2.91	2.40	2.13	1.93	3.01	2.49	2.21	2.00	2.06	1.70	1.51	1.37
22-4P	4	X	X	X	X	2.47	2.04	1.82	1.64	2.58	2.13	1.89	1.71	1.61	1.33	1.18	1.07
22-4S	4	X	X	X	X	2.80	2.32	2.06	1.86	2.91	2.40	2.13	1.93	1.94	1.60	1.42	1.29
22-5P	6	X	X	X	X	2.30	1.90	1.69	1.53	2.42	2.00	1.78	1.61	1.45	1.20	1.07	.97
22-5S	6	X	X	X	X	2.32	1.92	1.70	1.54	2.44	2.02	1.79	1.62	1.47	1.22	1.08	.98
22-9P	3	X	X	X	X	2.04	1.69	1.50	1.36	2.15	1.77	1.57	1.43	1.18	.97	.86	.78
22-9S	3	X	X	X	X	2.60	2.15	1.91	1.73	2.70	2.23	1.98	1.79	1.75	1.44	1.28	1.16
22-10P	4	X	X	X	X	2.04	1.69	1.50	1.36	2.15	1.77	1.57	1.43	1.18	.97	.86	.78
22-10S	4	X	X	X	X	2.13	1.76	1.56	1.41	2.23	1.84	1.64	1.48	1.28	1.06	.94	.85
22-11P	2	X	X	X	X	1.89	1.56	1.38	1.25	2.01	1.66	1.47	1.33	1.04	.86	.76	.69
22-11S	2	X	X	X	X	2.04	1.69	1.50	1.36	2.15	1.77	1.57	1.43	1.18	.97	.86	.78
22-12P	5	X	X	X	X	2.47	2.04	1.82	1.64	2.58	2.13	1.89	1.71	1.61	1.33	1.18	1.07
22-12S	5	X	X	X	X	2.85	2.36	2.10	1.90	2.96	2.45	2.17	1.97	2.01	1.66	1.47	1.33
22-14P	19	X			X	2.73	2.26	2.01	1.82	2.84	2.35	2.08	1.89	1.87	1.54	1.37	1.24
22-14S	19	X			X	3.13	2.59	2.30	2.08	3.24	2.67	2.37	2.15	2.27	1.87	1.66	1.51
22-15P	6	X	X	X	X	2.44	2.02	1.79	1.62	2.54	2.10	1.87	1.69	1.57	1.30	1.16	1.05
22-15S	6	X	X	X	X	2.98	2.46	2.18	1.98	3.10	2.56	2.27	2.06	2.13	1.76	1.56	1.41
22-17P	9	X	X	X	X	2.44	2.02	1.79	1.62	2.54	2.10	1.87	1.69	1.57	1.30	1.16	1.05
22-17S	9	X	X	X	X	2.51	2.07	1.84	1.67	2.61	2.16	1.92	1.74	1.66	1.37	1.22	1.10
22-18P	8	X	X	X	X	2.27	1.87	1.66	1.51	2.39	1.97	1.75	1.59	1.42	1.17	1.04	.94
22-18S	8	X	X	X	X	2.30	1.90	1.69	1.53	2.42	2.00	1.78	1.61	1.45	1.20	1.07	.97
22-19P	14	X	X	X	X	2.68	2.22	1.97	1.78	2.80	2.32	2.06	1.86	1.83	1.52	1.35	1.22
22-19S	14	X	X	X	X	2.73	2.26	2.01	1.82	2.84	2.35	2.08	1.89	1.87	1.54	1.37	1.24
22-22P	4		X	X		2.75	2.27	2.02	1.83	2.85	2.36	2.10	1.90	1.89	1.56	1.38	1.25
22-22S	4		X	X		3.46	2.86	2.54	2.30	3.56	2.95	2.62	2.37	2.60	2.15	1.91	1.73
22-23P	8	X		X		2.63	2.17	1.93	1.75	2.75	2.27	2.02	1.83	1.78	1.47	1.31	1.18
22-23S	8	X		X		3.37	2.79	2.48	2.24	3.49	2.89	2.57	2.32	2.53	2.09	1.85	1.68
22-36P	8	X		X		11.90	9.84	8.74	7.91	12.01	9.92	8.81	7.98	11.04	9.12	8.10	7.34
22-36S	8	X		X		13.03	10.77	9.56	8.66	13.13	10.85	9.64	8.73	12.18	10.07	8.94	8.10
24-2P	7	X			X	2.77	2.29	2.03	1.84	2.79	2.30	2.04	1.85	1.76	1.46	1.30	1.17
24-2S	7	X			X	3.34	2.76	2.45	2.22	3.36	2.77	2.46	2.23	2.34	1.93	1.71	1.55
24-5P	16	X	X	X	X	3.06	2.53	2.25	2.04	3.10	2.56	2.27	2.06	2.08	1.72	1.52	1.38
24-5S	16	X	X	X	X	3.46	2.86	2.54	2.30	3.48	2.87	2.55	2.31	2.46	2.03	1.80	1.63
24-6P	8	X	X	X	X	2.87	2.37	2.11	1.91	2.89	2.39	2.12	1.92	1.87	1.54	1.37	1.24
24-6S	8	X	X	X	X	3.74	3.09	2.74	2.48	3.75	3.10	2.76	2.50	2.75	2.27	2.02	1.83
24-7P	16	X	X	X	X	3.20	2.65	2.35	2.13	3.22	2.66	2.36	2.14	2.20	1.82	1.61	1.46
24-7S	16	X	X	X	X	3.46	2.86	2.54	2.30	3.48	2.87	2.55	2.31	2.46	2.03	1.80	1.63
24-10P	7	X			X	4.00	3.30	2.93	2.66	4.01	3.32	2.95	2.67	2.99	2.47	2.20	1.99
24-10S	7	X			X	4.58	3.79	3.37	3.05	4.60	3.80	3.38	3.06	3.75	3.10	2.76	2.50
24-11P	9	X	X	X	X	3.41	2.82	2.50	2.27	3.43	2.83	2.51	2.28	2.42	2.00	1.78	1.61
24-11S	9	X	X	X	X	4.34	3.59	3.19	2.89	4.36	3.60	3.20	2.90	3.34	2.76	2.45	2.22
24-12P	5	X	X	X	X	3.56	2.95	2.62	2.37	3.58	2.96	2.63	2.38	2.56	2.12	1.88	1.70
24-12S	5	X	X	X	X	4.27	3.53	3.14	2.84	4.29	3.55	3.15	2.85	3.27	2.70	2.40	2.17
24-20P	11	X	X	X	X	2.85	2.36	2.10	1.90	2.87	2.37	2.11	1.91	1.85	1.53	1.36	1.23
24-20S	11	X	X	X	X	2.89	2.39	2.12	1.92	2.91	2.40	2.13	1.93	1.89	1.56	1.38	1.25
24-27P	7	X			X	2.46	2.03	1.80	1.63	2.47	2.04	1.82	1.64	1.45	1.20	1.07	.97
24-27S	7	X			X	2.53	2.09	1.85	1.68	2.54	2.10	1.87	1.69	1.52	1.26	1.12	1.01
24-28P	24	X	X	X	X	3.36	2.77	2.46	2.23	3.37	2.79	2.48	2.24	2.37	1.96	1.74	1.58
24-28S	24	X	X	X	X	3.79	3.13	2.78	2.52	3.82	3.16	2.81	2.54	2.80	2.32	2.06	1.86
28-2P	14	X	X	X	X	3.15	2.60	2.31	2.09	3.49	2.89	2.57	2.32	2.20	1.82	1.61	1.46
28-2S	14	X	X	X	X	3.36	2.77	2.46	2.23	3.70	3.06	2.72	2.46	2.42	2.00	1.78	1.61
28-9P	12	X	X	X	X	3.32	2.75	2.44	2.21	3.67	3.03	2.69	2.44	2.39	1.97	1.75	1.59
28-9S	12	X	X	X	X	3.63	3.00	2.67	2.42	3.98	3.29	2.92	2.65	2.68	2.22	1.97	1.78

See Page 286 For Cable Clamps and Accessories

. . and Mating Plugs

HOW TO ORDER. Specify Stock No. (47 D 7000 A), then connector Type No. Example: 47 D 7000 A (stock no.)—3106A-20-9S (type no.)

Shell Style Insert	Series 3106A EACH				Series 3106B EACH				Series 3108A EACH				Series 3108B EACH			
	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
20-9S	2.37	1.96	1.74	1.58	2.63	2.17	1.93	1.75	4.34	3.59	3.19	2.89	2.77	2.29	2.03	1.84
20-9P	2.32	1.92	1.70	1.54	2.60	2.15	1.91	1.73	4.31	3.56	3.16	2.86	2.73	2.26	2.01	1.82
20-14S	3.25	2.69	2.39	2.16	3.53	2.92	2.59	2.35	5.22	4.32	3.84	3.47	3.65	3.02	2.68	2.43
20-14P	2.56	2.12	1.88	1.70	2.84	2.35	2.08	1.89	4.55	3.76	3.34	3.02	2.96	2.45	2.17	1.97
20-15S	3.17	2.62	2.32	2.10	3.43	2.83	2.51	2.28	5.14	4.25	3.77	3.42	3.56	2.95	2.62	2.37
20-15P	2.39	1.97	1.75	1.59	2.65	2.19	1.94	1.76	4.36	3.60	3.20	2.90	2.79	2.30	2.04	1.85
20-16S	2.54	2.10	1.87	1.69	2.82	2.33	2.07	1.87	4.52	3.73	3.31	3.00	2.94	2.43	2.16	1.96
20-16P	2.40	1.99	1.77	1.60	2.66	2.20	1.96	1.77	4.38	3.62	3.21	2.91	2.80	2.32	2.06	1.86
20-17S	2.84	2.35	2.08	1.89	3.11	2.57	2.29	2.07	4.81	3.98	3.53	3.20	3.24	2.67	2.37	2.15
20-17P	2.37	1.96	1.74	1.58	2.63	2.17	1.93	1.75	4.34	3.59	3.19	2.89	2.77	2.29	2.03	1.84
20-18S	2.73	2.26	2.01	1.82	2.99	2.47	2.20	1.99	4.71	3.89	3.45	3.13	3.10	2.56	2.27	2.06
20-18P	2.49	2.06	1.83	1.66	2.77	2.29	2.03	1.84	4.46	3.69	3.28	2.97	2.89	2.39	2.12	1.92
20-21S	2.44	2.02	1.79	1.62	2.70	2.23	1.98	1.79	4.41	3.65	3.24	2.93	2.84	2.35	2.08	1.89
20-21P	2.32	1.92	1.70	1.54	2.60	2.15	1.91	1.73	4.31	3.56	3.16	2.86	2.73	2.26	2.01	1.82
20-22S	3.17	2.62	2.32	2.10	3.43	2.83	2.51	2.28	5.14	4.25	3.77	3.42	3.56	2.95	2.62	2.37
20-22P	2.68	2.22	1.97	1.78	2.98	2.46	2.18	1.98	4.69	3.88	3.44	3.12	3.11	2.57	2.29	2.07
20-23S	2.51	2.07	1.84	1.67	2.79	2.30	2.04	1.85	4.48	3.70	3.29	2.98	2.91	2.40	2.13	1.93
20-23P	2.30	1.90	1.69	1.53	2.58	2.13	1.89	1.71	4.29	3.55	3.15	2.85	2.70	2.23	1.98	1.79
20-24S	2.89	2.39	2.12	1.92	3.17	2.62	2.32	2.10	4.86	4.02	3.57	3.23	3.29	2.72	2.41	2.19
20-24P	2.37	1.96	1.74	1.58	2.63	2.17	1.93	1.75	4.34	3.59	3.19	2.89	2.77	2.29	2.03	1.84
20-27S	2.66	2.20	1.96	1.77	2.94	2.43	2.16	1.96	4.65	3.85	3.42	3.09	3.06	2.53	2.25	2.04
20-27P	2.46	2.03	1.80	1.63	2.73	2.26	2.01	1.82	4.43	3.66	3.25	2.94	2.85	2.36	2.10	1.90
20-29S	2.91	2.40	2.13	1.93	3.18	2.63	2.34	2.12	4.88	4.03	3.58	3.24	3.30	2.73	2.43	2.20
20-29P	2.63	2.17	1.93	1.75	2.91	2.40	2.13	1.93	4.62	3.82	3.39	3.07	3.03	2.50	2.22	2.01
20-33S	2.68	2.22	1.97	1.78	2.96	2.45	2.17	1.97	4.67	3.86	3.43	3.11	3.10	2.56	2.27	2.06
20-33P	2.61	2.16	1.92	1.74	2.89	2.39	2.12	1.92	4.60	3.80	3.38	3.06	3.01	2.49	2.21	2.00
22-2S	2.91	2.40	2.13	1.93	3.25	2.69	2.39	2.16	5.09	4.20	3.73	3.38	3.41	2.82	2.50	2.27
22-2P	2.39	1.97	1.75	1.59	2.73	2.26	2.01	1.82	4.57	3.78	3.35	3.04	2.89	2.39	2.12	1.92
22-4S	2.80	2.32	2.06	1.86	3.15	2.60	2.31	2.09	4.98	4.12	3.66	3.31	3.30	2.73	2.43	2.20
22-4P	2.47	2.04	1.82	1.64	2.82	2.33	2.07	1.87	4.65	3.85	3.42	3.09	2.98	2.46	2.18	1.98
22-5S	2.32	1.92	1.70	1.54	2.66	2.20	1.96	1.77	4.50	3.72	3.30	2.99	2.84	2.35	2.08	1.89
22-5P	2.30	1.90	1.69	1.53	2.65	2.19	1.94	1.76	4.48	3.70	3.29	2.98	2.82	2.33	2.07	1.87
22-9S	2.60	2.15	1.91	1.73	2.94	2.43	2.16	1.96	4.77	3.95	3.51	3.17	3.11	2.57	2.29	2.07
22-9P	2.04	1.69	1.50	1.36	2.39	1.97	1.75	1.59	4.22	3.49	3.10	2.81	2.54	2.10	1.87	1.69
22-10S	2.13	1.76	1.56	1.41	2.47	2.04	1.82	1.64	4.31	3.56	3.16	2.86	2.63	2.17	1.93	1.75
22-10P	2.04	1.69	1.50	1.36	2.39	1.97	1.75	1.59	4.22	3.49	3.10	2.81	2.54	2.10	1.87	1.69
22-11S	2.04	1.69	1.50	1.36	2.39	1.97	1.75	1.59	4.22	3.49	3.10	2.81	2.54	2.10	1.87	1.69
22-11P	1.89	1.56	1.38	1.25	2.23	1.84	1.64	1.48	4.07	3.36	2.98	2.70	2.40	1.99	1.77	1.60
22-12S	2.85	2.36	2.10	1.90	3.20	2.65	2.35	2.13	5.03	4.16	3.70	3.35	3.36	2.77	2.46	2.23
22-12P	2.47	2.04	1.82	1.64	2.82	2.33	2.07	1.87	4.65	3.85	3.42	3.09	2.98	2.46	2.18	1.98
22-14S	3.13	2.59	2.30	2.08	3.48	2.87	2.55	2.31	5.31	4.39	3.90	3.53	3.63	3.00	2.67	2.42
22-14P	2.73	2.26	2.01	1.82	3.06	2.53	2.25	2.04	4.91	4.06	3.61	3.27	3.24	2.67	2.37	2.15
22-15S	2.98	2.46	2.18	1.98	3.32	2.75	2.44	2.21	5.16	4.26	3.78	3.43	3.49	2.89	2.57	2.32
22-15P	2.44	2.02	1.79	1.62	2.79	2.30	2.04	1.85	4.62	3.82	3.39	3.07	2.94	2.43	2.16	1.96
22-17S	2.51	2.07	1.84	1.67	2.85	2.36	2.10	1.90	4.69	3.88	3.44	3.12	3.01	2.49	2.21	2.00
22-17P	2.44	2.02	1.79	1.62	2.79	2.30	2.04	1.85	4.62	3.82	3.39	3.07	2.94	2.43	2.16	1.96
22-18S	2.30	1.90	1.69	1.53	2.65	2.19	1.94	1.76	4.48	3.70	3.29	2.98	2.82	2.33	2.07	1.87
22-18P	2.27	1.87	1.66	1.51	2.61	2.16	1.92	1.74	4.45	3.68	3.26	2.96	2.79	2.30	2.04	1.85
22-19S	2.73	2.26	2.01	1.82	3.06	2.53	2.25	2.04	4.91	4.06	3.61	3.27	3.24	2.67	2.37	2.15
22-19P	2.68	2.22	1.97	1.78	3.03	2.50	2.22	2.01	4.86	4.02	3.57	3.23	3.20	2.65	2.35	2.13
22-22S	3.46	2.86	2.54	2.30	3.79	3.13	2.78	2.52	5.64	4.66	4.14	3.75	3.96	3.27	2.91	2.63
22-22P	2.75	2.27	2.02	1.83	3.10	2.56	2.27	2.06	4.93	4.08	3.62	3.28	3.25	2.69	2.39	2.16
22-23S	3.37	2.79	2.48	2.24	3.72	3.07	2.73	2.47	5.55	4.59	4.08	3.69	3.89	3.22	2.86	2.59
22-23P	2.63	2.17	1.93	1.75	2.98	2.46	2.18	1.98	4.81	3.98	3.53	3.20	3.15	2.60	2.31	2.09
22-36S	13.03	10.77	9.56	8.66	13.37	11.05	9.82	8.89	15.21	12.57	11.16	10.11	13.53	11.18	9.93	8.99
22-36P	11.90	9.84	8.74	7.91	12.25	10.12	8.99	8.14	14.08	11.64	10.34	9.36	12.40	10.25	9.11	8.25
24-2S	3.39	2.80	2.49	2.25	4.01	3.32	2.95	2.67	5.74	4.75	4.22	3.82	3.70	3.06	2.72	2.46
24-2P	2.82	2.33	2.07	1.87	3.43	2.83	2.51	2.28	5.16	4.26	3.78	3.43	3.13	2.59	2.30	2.08
24-5S	3.51	2.90	2.58	2.33	4.12	3.40	3.02	2.74	5.85	4.83	4.29	3.89	3.82	3.16	2.81	2.54
24-5P	3.13	2.59	2.30	2.08	3.74	3.09	2.74	2.48	5.47	4.52	4.01	3.63	3.43	2.83	2.51	2.28
24-6S	3.79	3.13	2.78	2.52	4.41	3.65	3.24	2.93	6.14	5.08	4.51	4.08	4.10	3.39	3.01	2.73
24-6P	2.92	2.42	2.15	1.94	3.55	2.93	2.60	2.36	5.28	4.36	3.87	3.51	3.24	2.67	2.37	2.15
24-7S	3.51	2.90	2.58	2.33	4.12	3.40	3.02	2.74	5.85	4.83	4.29	3.89	3.82	3.16	2.81	2.54
24-7P	3.25	2.69	2.39	2.16	3.88	3.20	2.84	2.58	5.59	4.62	4.10	3.71	3.56	2.95	2.62	2.37
24-10S	4.64	3.83	3.40	3.08	5.24	4.33	3.85	3.48	6.97	5.76	5.12	4.63	4.95	4.09	3.63	3.29
24-10P	4.05	3.35	2.97	2.69	4.67	3.86	3.43	3.11	6.40	5.29	4.70	4.26	4.36	3.60	3.20	2.90
24-11S	4.39	3.63	3.23	2.92	5.02	4.15	3.68	3.34	6.75	5.58	4.95	4.49	4.71	3.89	3.45	3.13
24-11P	3.48	2.87	2.55	2.31	4.08	3.37	3.00	2.71	5.81	4.80	4.27	3.86	3.77	3.12	2.77	2.51
24-12S	4.33	3.58	3.18	2.88	4.95	4.09	3.63	3.29	6.66	5.51	4.89	4.43	4.64	3.83	3.40	3.08
24-12P	3.62	2.99	2.65	2.40	4.24	3.50	3.11	2.82	5.95	4.92	4.37	3.96	3.93	3.25	2.88	2.61
24-20S	2.94	2.43	2.16	1.96	3.56	2.95	2.62	2.37	5.29	4.38	3.89	3.52	3.25	2.69	2.39	2.16
24-20P	2.91	2.40	2.13	1.93	3.53	2.92	2.59	2.35	5.24	4.33	3.85	3.48	3.22	2.66	2.36	2.14
24-27S	2.58	2.13	1.89	1.71	3.20	2.65	2.35	2.13	4.93	4.08	3.62	3.28	2.89	2.39	2.12	1.92
24-27P	2.51	2.07	1.84	1.67	3.13	2.59	2.30	2.08	4.84	4.00	3.56	3.22	2.82	2.33	2.07	1.87
24-28S	3.86	3.19	2.83	2.56	4.46	3.69	3.28	2.97	6.19	5.12	4.55	4.12	4.15	3.43	3.05	2.76
24-28P	3.41	2.82	2.50	2.27	4.00	3.30	2.93	2.66	5.76	4.76	4.23	3.83	3.72	3.07	2.73	2.47
28-2S	3.49	2.89	2.57	2.32	3.82	3.16	2.81	2.54	5.81	4.80	4.27	3.86	3.86	3.19	2.83	2.56
28-2P	3.29	2.72	2.41	2.19	3.60	2.97	2.64	2.39	5.59	4.62	4.10	3.71	3.63	3.00	2.67	2.42
28-9S	3.75	3.10	2.76	2.50	4.08	3.37	3.00	2.71	6.09	5.03	4.47	4.05	4.12	3.40	3.02	2.74
28-9P	3.46	2.86	2.54	2.30	3.77	3.12	2.77	2.51	5.78	4.78	4.24	3.84	3.82	3.16	2.81	2.54

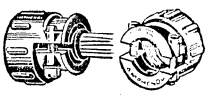
SPECIFY IF CONNECTORS ARE TO BE STAMPED WITH TYPE NO.

Amphenol Power Connectors and Accessories

HOW TO ORDER: Specify Stock No., then connector Type No. Example: 47 D 7000 A (stock no.) 3100A-11-16P (type no.)

MS RECEPTACLES (Cont'd) . . .

Shell Insert	No. of Contacts	Position				Series 3100A EACH				Series 3101A EACH				Series 3102A EACH			
		W	X	Y	Z	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
28-11P	22	X	X	X	X	3.56	2.95	2.62	2.37	3.91	3.23	2.87	2.60	2.61	2.16	1.92	1.74
28-11S	22	X	X	X	X	4.33	3.58	3.18	2.88	4.67	3.86	3.43	3.11	3.37	2.79	2.48	2.24
28-12P	26	X	X	X		3.70	3.06	2.72	2.46	4.05	3.35	2.97	2.69	2.77	2.29	2.03	1.84
28-12S	26	X	X	X		4.33	3.58	3.18	2.88	4.67	3.86	3.43	3.11	3.37	2.79	2.48	2.24
28-15P	35	X	X	X	X	4.15	3.43	3.05	2.76	4.50	3.72	3.30	2.99	3.22	2.66	2.36	2.14
28-15S	35	X	X	X	X	4.79	3.96	3.52	3.19	5.14	4.25	3.77	3.42	3.86	3.19	2.83	2.56
28-16P	20	X	X	X	X	3.67	3.03	2.69	2.44	4.01	3.32	2.95	2.67	2.73	2.26	2.01	1.82
28-16S	20	X	X	X	X	3.70	3.06	2.72	2.46	4.05	3.35	2.97	2.69	2.77	2.29	2.03	1.84
28-17P	15	X	X	X	X	3.11	2.57	2.29	2.07	3.46	2.86	2.54	2.30	2.16	1.79	1.59	1.44
28-17S	15	X	X	X	X	3.32	2.75	2.44	2.21	3.67	3.03	2.69	2.44	2.39	1.97	1.75	1.59
28-18P	12	X	X	X	X	3.01	2.49	2.21	2.00	3.36	2.77	2.46	2.23	2.06	1.70	1.51	1.37
28-18S	12	X	X	X	X	3.29	2.72	2.41	2.19	3.63	3.00	2.67	2.42	2.34	1.93	1.71	1.55
28-20P	14	X	X	X	X	3.60	2.97	2.64	2.39	3.94	3.26	2.90	2.62	2.65	2.19	1.94	1.76
28-20S	14	X	X	X	X	4.00	3.30	2.93	2.66	4.34	3.59	3.19	2.89	3.04	2.52	2.24	2.04
28-21P	37	X	X	X	X	4.29	3.55	3.15	2.85	4.64	3.83	3.40	3.08	3.34	2.76	2.45	2.22
28-21S	37	X	X	X	X	4.86	4.02	3.57	3.23	5.21	4.30	3.82	3.46	3.93	3.25	2.88	2.61
32-7P	35	X	X	X	X	4.55	3.76	3.34	3.02	4.84	4.00	3.56	3.22	3.51	2.90	2.59	2.33
32-7S	35	X	X	X	X	5.28	4.78	4.24	3.84	6.09	5.03	4.47	4.05	4.74	3.92	3.48	3.15
32-13P	23	X	X	X	X	4.10	3.39	3.01	2.73	4.41	3.65	3.24	2.93	3.06	2.53	2.25	2.04
32-13S	23	X	X	X	X	4.69	3.88	3.44	3.12	5.00	4.13	3.67	3.32	3.65	3.02	2.68	2.43
36-7P	47	X	X	X	X	6.45	5.33	4.74	4.29	6.59	5.45	4.84	4.38	4.91	4.06	3.61	3.27
36-7S	47	X	X	X	X	7.13	5.89	5.23	4.74	7.27	6.01	5.33	4.83	5.57	4.60	4.09	3.70
36-10P	48	X	X	X	X	6.16	5.09	4.52	4.09	6.30	5.21	4.62	4.19	4.62	3.82	3.39	3.07
36-10S	48	X	X	X	X	6.64	5.49	4.88	4.42	6.80	5.62	4.99	4.52	5.10	4.22	3.75	3.39
36-405P	15					10.19	8.42	7.48	6.77	10.33	8.54	7.58	6.87	8.65	7.15	6.35	5.75
36-405S	15					12.78	10.57	9.39	8.50	12.94	10.70	9.50	8.60	11.25	9.30	8.26	7.48



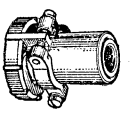
Stepdown Regular

CABLE CLAMP

Series 3057. Supports cable at plug or receptacle. Aluminum. *Stepdown type. 3½ oz.

MS Type	Fits Shell	EACH 1-49	50-99	100-999
3057-3	8S, 10S	.56	.46	.37
3057-4	10SL,12,12S	.57	.48	.38
3057-6	12SL,14,14S	.57	.48	.38
3057-8	16, 16S	.59	.49	.39
3057-10	18	.71	.59	.47
97-3057-10-6*	18	.77	.64	.51
3057-12	20, 22	.75	.63	.50
97-3057-12-6*	20, 22	.81	.68	.54
3057-16	24, 28	.92	.76	.61
3057-20	32	1.13	.94	.75
3057-24	36	1.56	1.20	1.04
3057-28	40	1.94	1.61	1.29

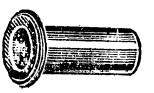
MS3057A CABLE CLAMP AND BOOT



Both cable halves move, automatically centering cable. AN3420 boot provides support and weather-proofing. Extra boots may be used for small cable O.D. Wt., 5 oz.

MS Type	Fits Shell	EACH 1-9	10-49	50-99	100-999
3057-4A	10SL, 12, 12S	.69	.62	.55	.45
3057-6A	12SL, 14, 14S	.69	.62	.55	.45
3057-8A	16, 16S	.72	.63	.56	.46
3057-10A	18	.79	.69	.62	.52
3057-12A	20, 22	.87	.77	.68	.56
3057-16A	24, 28	1.18	1.02	.92	.76
3057-20A	32	1.39	1.21	1.07	.89
3057-24A	36	1.79	1.46	1.29	1.15

AN3420 TELESCOPING BOOTS



Boots telescope within each other for use with cable that is too small in relation to the MS connector used. Weatherproof ends. 1½ oz.

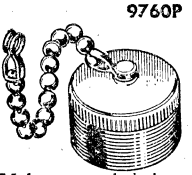
Type No.	Cable O.D.	EACH 1-9	10-49	50-99	100-999
9779-513-3	0.130	.09	.08	.07	.06
9779-513-4	0.220	.09	.08	.07	.06
9779-513-6	0.312	.10	.09	.08	.07
9779-513-8	0.437	.12	.09	.08	.07
9779-513-10	0.562	.15	.12	.11	.10
9779-513-12	0.625	.15	.12	.11	.10
9779-513-16	0.750	.19	.15	.14	.12
9779-513-20	0.937	.28	.23	.20	.18
9779-513-24	1.250	.34	.27	.24	.22

9760 DUST CAPS FOR RECEPTACLES

Internal threads for use with Amphenol MS3100A, MS3101A, and MS3102A, receptacles. Includes beaded chains for mounting. Av. wt., 2 oz.

MS Type	Fits Shell	EACH 1-49	50-99	100-999
9760-10	10S, 10SL	.50	.41	.33
9760-12	12, 12S, 12SL	.56	.46	.37
9760-14	14, 14S	.60	.50	.40
9760-16	16, 16S	.66	.55	.44
9760-18	18	.78	.65	.52
9760-20	20	.86	.71	.57
9760-22	22	.98	.81	.75
9760-24	24	1.14	.95	.76
9760-28	28	1.37	1.14	.91
9760-32	32	1.59	1.32	1.06
9760-36	36	1.76	1.46	1.17

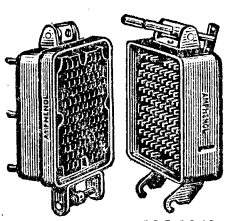
9760P DUST CAPS FOR PLUGS



Male caps and chains for plugs MS3106 and MS3108 listed on facing page. Has external threads, provides tight dust-free cover. Av. wt., 2 oz.

MS Type	Fits Shell	EACH 1-49	50-99	100-999
9760-10P	10S, 10SL	.75	.63	.50
9760-12P	12, 12S, 12SL	.83	.69	.55
9760-14P	14, 14S	.95	.79	.63
9760-16P	16, 16S	1.08	.90	.72
9760-18P	18	1.11	.93	.74
9760-20P	20	1.14	.95	.76
9760-22P	22	1.43	1.19	.95
9760-24P	24	1.71	1.43	1.14
9760-28P	28	1.80	1.50	1.20
9760-32P	32	2.64	2.20	1.76
9760-36P	36	2.73	2.28	1.82

SERIES 115 50-CONTACT AND 100-CONTACT VISE-LOCKED CABLE CONNECTORS



115-115P 115-114S

Accommodate 50 or 100 #16 wires. Vise action of screw lock provides leverage for attaching and detaching plug. Inserts have molded-in numbers to facilitate wiring and checking of circuits. Solder-cup contacts are free-floating for alignment in mating but cannot rotate. AN-type cable clamps with aluminum housings also listed. Approx. size of shells: 100-contact, 3½x3½x1 11/32"; 50-contact, 2 31/32x2¼x1 11/32". Rated at 750 V, 60 Hz AC max. at sea level. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Description and Number of Contacts	EACH 1-9	10-49
47 D 3017	115-30P-1000	Male Plug—100	27.65	25.14
47 D 3019	115-31S-1000	Female Receptacle—100	35.03	32.07
47 D 3021	115-32P	Male Receptacle—100	27.19	24.72
47 D 3020	115-32S	Female Plug—100	35.49	32.27
47 D 3022	115-114P	Male Plug—50	18.91	17.19
47 D 3024	115-115S	Female Receptacle—50	23.48	21.35
47 D 3031	115-115P	Male Receptacle—50	19.50	17.73
47 D 3030	115-114S	Female Plug—50	22.89	20.81
47 D 3032	115-949	Cable Clamp—100	7.64	6.95
D 3038	115-1391	Cable Clamp—50	4.88	4.44

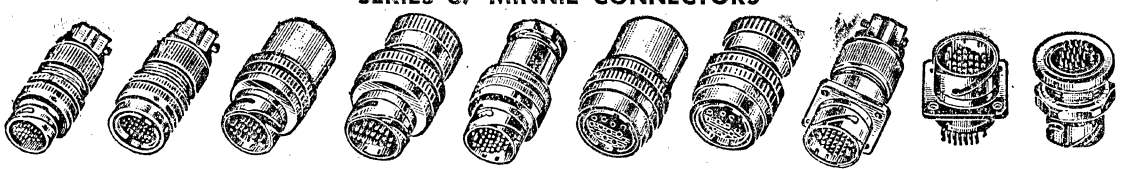
Amphenol MS Plugs, Series 67 Connectors

HOW TO ORDER: Specify Stock No., then connector Type No. Example: 47 D 7000 A (stock no.)—3106A-28-11S (type no.)

. . . AND MS MATING PLUGS (Cont'd)

Shell Insert	Position				Series 3106A EACH				Series 3106B EACH				Series 3108A EACH				Series 3108B EACH			
	W	X	Y	Z	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999	1-9	10-49	50-99	100-999
28-11S	X	X	X	X	4.45	3.68	3.26	2.96	4.77	3.95	3.51	3.17	6.78	5.61	4.98	4.51	4.81	3.98	3.53	3.20
28-11P	X	X	X	X	3.68	3.05	2.71	2.45	4.01	3.32	2.95	2.67	6.02	4.98	4.42	4.00	4.05	3.35	2.97	2.69
28-12S	X	X	X		4.45	3.69	3.26	2.96	4.77	3.95	3.51	3.17	6.78	5.61	4.98	4.51	4.81	3.98	3.53	3.20
28-12P	X	X	X		3.84	3.17	2.82	2.55	4.15	3.43	3.05	2.76	6.16	5.09	4.52	4.09	4.20	3.47	3.09	2.79
28-15S	X	X	X	X	4.93	4.08	3.62	3.28	5.24	4.33	3.85	3.48	7.25	5.99	5.32	4.82	5.29	4.38	3.89	3.52
28-15P	X	X	X	X	4.29	3.55	3.15	2.85	4.62	3.82	3.39	3.07	6.61	5.46	4.85	4.39	4.65	3.85	3.42	3.09
28-16S	X	X	X	X	3.84	3.17	2.82	2.55	4.15	3.43	3.05	2.76	6.16	5.09	4.52	4.09	4.20	3.47	3.09	2.79
28-16P	X	X	X	X	3.79	3.13	2.78	2.52	4.12	3.40	3.02	2.74	6.12	5.06	4.50	4.07	4.15	3.43	3.05	2.76
28-17S	X	X	X	X	3.46	2.86	2.54	2.30	3.77	3.12	2.77	2.51	5.87	4.78	4.24	3.84	3.82	3.16	2.81	2.54
28-17P	X	X	X	X	3.24	2.67	2.37	2.15	3.56	2.95	2.62	2.37	5.55	4.59	4.08	3.69	3.56	2.95	2.62	2.37
28-18S	X	X	X	X	3.41	2.82	2.50	2.27	3.74	3.09	2.74	2.48	5.74	4.75	4.22	3.82	3.77	3.12	2.77	2.51
28-18P	X	X	X	X	3.15	2.60	2.31	2.09	3.48	2.87	2.55	2.31	5.47	4.52	4.01	3.63	3.51	2.90	2.58	2.33
28-20S	X	X	X	X	4.12	3.40	3.02	2.74	4.45	3.68	3.26	2.96	6.45	5.33	4.74	4.29	4.48	3.70	3.29	2.98
28-20P	X	X	X	X	3.72	3.07	2.73	2.47	4.05	3.35	2.97	2.69	6.06	5.01	4.45	4.03	4.08	3.37	3.00	2.71
28-21S	X	X	X	X	5.00	4.13	3.67	3.32	5.33	4.40	3.91	3.54	7.32	6.05	5.37	4.86	5.36	4.43	3.94	3.57
28-21P	X	X	X	X	4.41	3.65	3.24	2.93	4.74	3.92	3.48	3.15	6.75	5.58	4.95	4.49	4.77	3.95	3.51	3.17
32-7S	X	X	X	X	6.54	5.41	4.80	4.35	6.57	5.43	4.83	4.37	9.27	7.66	6.81	6.16	6.85	5.66	5.03	4.55
32-7P	X	X	X	X	5.31	4.39	3.90	3.53	5.35	4.42	3.92	3.55	8.03	6.64	5.89	5.34	5.61	4.63	4.11	3.73
32-13S	X	X	X	X	5.45	4.50	4.00	3.62	5.48	4.53	4.03	3.65	8.18	6.76	6.01	5.44	5.76	4.76	4.23	3.83
32-13P	X	X	X	X	4.86	4.02	3.57	3.23	4.91	4.06	3.61	3.27	7.59	6.28	5.58	5.05	5.17	4.28	3.80	3.44
36-7S	X	X	X	X	7.73	6.39	5.68	5.14	7.87	6.51	5.78	5.23	10.67	8.82	7.84	7.10	8.22	6.79	6.03	5.42
36-7P	X	X	X	X	7.06	5.83	5.13	4.69	7.20	5.95	5.28	4.78	10.02	8.28	7.35	6.66	7.54	6.23	5.54	5.01
36-10S	X	X	X	X	7.27	6.01	5.33	4.83	7.39	6.11	5.42	4.91	10.21	8.44	7.49	6.79	7.73	6.39	5.68	5.14
36-10P	X	X	X	X	6.76	5.59	4.97	4.50	6.90	5.71	5.07	4.59	9.72	8.04	7.14	6.46	7.25	5.99	5.32	4.82
36-40SS					13.41	11.08	9.84	8.91	13.53	11.18	9.93	8.99	16.35	13.51	12.00	10.87	13.87	11.47	10.19	9.22
36-40SP					10.81	8.94	7.94	7.19	10.93	9.04	8.03	7.27	13.75	11.37	10.10	9.14	11.28	9.32	8.28	7.50

SERIES 67 MINNIE CONNECTORS



67-01C 67-06C 67-01P 67-01E 67-06J 67-06P 67-06E 67-00C 67-02E 67-03E

Miniature bayonet quick-disconnect connectors. Three bayonet pins prevent wobble. Stainless-steel inclined spring loaded slots. E, P, and H types meet E specs of MIL-C-5015. E and P not derated at 70,000 ft. X and W alternate positions (except hermetics) are available at an additional cost of $0.20 extra per connector in quantities of 1-24; $0.18 extra per connector in quantities of 25-99 and $0.15 extra per connector in quantities of 100-199. All No. 20 contacts are rated at 7.5 amps; No. 16 contacts are rated at 17.0 amps. All are 500 Vrms at sea level, except 14-5 Series, 600 V. Specify Stock No., 47 D 7000 A, then add connector Type No. Av. shpg. wt., 5 oz.

Function—Second Digit of Type	Shell—First Letter of Type
00—Panel Jack	C—With Clamp For Wire Bundle
01—Cable Receptacle	E—Environmental
02—Panel Receptacle	H—Hermetically Sealed
03—One Hole Receptacle, Rear Mtd.	J—Jacketed Cable, Waterproof Clamp
04—One Hole Receptacle, Front Mtd.	P—Potting, Includes Potting Form
06—Cable Plug	

Insert	CONTACTS 16	20	Coax
12-7	..	7	..
12-60	3	..	..
14-5	..	5	..
14-9	..	9	..
14-12	..	12	..

Insert	CONTACTS 16	20	Coax
14-61	..	8	1
14-63	5	..	..
18-24	..	24	..
18-62	..	19	1
18-64	14	..	..

Insert	CONTACTS 16	20	Coax
20-37	..	37	..
20-66	19	..	..
22-48	..	48	..
22-67	25	..	..
22-69	2	40	..

Type 67-	SIZE 12 EACH 1-24	25-99	100-199
00C12-7P	9.96	8.71	7.47
00C12-7S	11.60	10.15	8.70
00P12-7P	8.38	7.33	6.29
00P12-7S	10.02	8.77	7.52
01C12-7P	9.90	8.66	7.43
01C12-7S	11.52	10.08	8.64
01P12-7P	8.32	7.28	6.24
01P12-7S	9.94	8.70	7.46
02E12-7P	6.10	5.34	4.58
02E12-7S	7.72	6.75	5.79
06C12-7P	9.42	8.24	7.07
06C12-7S	11.06	9.68	8.30
06E12-7P	10.10	8.84	7.58
06E12-7S	11.74	10.27	8.81
06J12-7P	8.06	7.07	6.05
06J12-7S	8.96	7.84	6.72
06P12-7P	7.84	6.86	5.88
06P12-7S	9.48	8.29	7.11
00C12-60P	9.86	8.63	7.40
00C12-60S	10.76	9.41	8.07
00P12-60P	8.28	7.24	6.21
00P12-60S	9.18	8.03	6.89

Type 67-	SIZE 12 (Cont'd) EACH 1-24	25-99	100-199
01C12-60P	9.80	8.57	7.35
01C12-60S	10.70	9.36	8.03
01P12-60P	8.20	7.17	6.15
01P12-60S	9.10	7.96	6.83
02E12-60P	5.96	5.21	4.47
02E12-60S	6.94	6.07	5.21
06C12-60P	9.30	8.14	6.98
06C12-60S	10.24	8.96	7.68
06E12-60P	10.10	8.84	7.58
06E12-60S	11.02	9.64	8.27
06J12-60P	8.06	7.05	6.05
06J12-60S	8.96	7.84	6.72
06P12-60P	7.72	6.75	5.79
06P12-60S	8.62	7.54	6.47

Type 67-	SIZE 14 EACH 1-24	25-99	100-199
00C14-5S	11.00	9.62	8.25
00P14-5S	8.58	7.51	6.44
01C14-5S	10.14	8.87	7.61
01P14-5S	7.74	6.77	5.81
02E14-5P	5.36	4.69	4.02
02E14-5S	6.28	5.49	4.71

Type 67-	SIZE 14 (Cont'd) EACH 1-24	25-99	100-199
06C14-5S	9.92	8.68	7.44
06J14-5S	10.34	9.05	7.76
06P14-5S	7.52	6.58	5.64
00C14-9P	10.48	9.17	7.86
00C14-9S	11.80	10.32	8.85
00P14-9P	8.08	7.07	6.06
00P14-9S	9.38	8.21	7.04
01C14-9P	9.64	8.43	7.23
01C14-9S	10.94	9.57	8.21
01P14-9P	7.24	6.33	5.43
01P14-9S	8.54	7.47	6.41
02E14-9P	5.84	5.11	4.38
02E14-9S	7.12	6.73	5.34
06C14-9P	9.40	8.22	7.05
06C14-9S	10.72	9.38	8.04
06E14-9P	9.84	8.61	7.38
06E14-9S	11.16	9.76	8.37
06J14-9P	9.82	8.59	7.37
06J14-9S	11.14	9.75	8.36
06P14-9P	7.00	6.12	5.25
06P14-9S	8.32	7.28	6.24
00C14-12P	10.56	9.24	7.92

Type 67-	SIZE 14 (Cont'd) EACH 1-24	25-99	100-199
00C14-12S	12.14	10.62	9.11
00P14-12P	8.16	7.14	6.12
00P14-12S	9.74	8.52	7.31
01C14-12P	9.72	8.50	7.29
01C14-12S	11.30	9.89	8.48
01E14-12P	9.58	8.38	7.19
01E14-12S	11.16	9.76	8.37
01P14-12P	7.32	6.40	5.49
01P14-12S	8.92	7.80	6.69
02E14-12P	5.88	5.14	4.41
02E14-12S	7.86	6.88	5.90
03E14-12P	6.44	5.63	4.83
03E14-12S	8.42	7.37	6.32
06C14-12P	9.50	8.31	7.13
06C14-12S	11.08	9.69	8.31
06E14-12P	9.32	8.15	6.99
06E14-12S	10.92	9.55	8.19
06J14-12P	9.90	8.66	7.43
06J14-12S	11.48	10.04	8.61
06P14-12P	7.08	6.19	5.31
06P14-12S	8.66	7.58	6.50
00C14-61S	15.53	13.60	11.66

Amphenol MinniE Connectors Continued on Next Page

Amphenol Series 67 and Astro 348 Connectors

HOW TO ORDER: Specify Stock No., then connector Type No. Example: 47 D 7000 A (stock no.)—67-00P14-61S (type no.)

SIZE 14 (Cont'd)

Type 67-	EACH 1-24	25-99	100-199
00P14-61S	13.11	11.48	9.84
01C14-61S	14.67	12.84	11.01
01P14-61S	12.28	10.74	9.21
02E14-61P	6.90	6.04	5.18
06C14-61S	14.45	12.65	10.85
06J14-61S	14.87	13.02	11.16
06P14-61S	12.06	10.55	9.05
00C14-63S	12.06	10.55	9.05
00P14-63S	9.66	8.45	7.25
01C14-63S	11.22	9.82	8.42
06C14-63S	11.00	9.62	8.25
06J14-63S	11.40	9.97	8.55
06P14-63S	8.82	7.72	6.62

SIZE 18

Type 67-	EACH 1-24	25-99	100-199
00C18-24P	11.08	9.69	8.31
00C18-24S	14.87	13.02	11.16
00E18-24P	12.22	10.69	9.17
00E18-24S	15.99	14.00	12.00
00P18-24P	9.00	7.87	6.75
00P18-24S	12.77	11.18	9.59
01C18-24P	10.30	9.01	7.73
01C18-24S	14.07	12.32	10.56
01E18-24S	11.42	9.99	8.57
01E18-24S	15.19	13.30	11.40
01P18-24P	8.20	7.17	6.15
01P18-24S	12.00	10.50	9.00
02E18-24P	7.26	6.35	5.54
02E18-24S	10.92	9.55	8.19
03E18-24S	11.58	10.13	8.69
06C18-24P	10.30	9.01	7.73
06C18-24S	14.07	12.32	10.56
06E18-24P	11.42	9.99	8.57
06E18-24S	15.19	13.30	11.40
06J18-24P	8.96	7.84	6.72
06J18-24S	12.73	11.15	9.56
06P18-24P	8.20	7.17	6.15
06P18-24S	12.00	10.50	9.00

SIZE 18 (Cont'd)

Type 67-	EACH 1-24	25-99	100-199
00P18-62S	18.31	16.03	13.74
01C18-62S	19.61	17.16	14.72
01P18-62S	17.53	15.34	13.16
06C18-62S	19.61	17.16	14.72
06J18-62S	18.67	16.34	14.01
06P18-62S	17.53	15.34	13.16
00C18-64P	12.22	10.69	9.17
00C18-64S	13.27	11.62	9.96
00E18-64S	14.03	12.28	10.53
00P18-64S	11.20	9.80	8.40
01C18-64S	12.50	10.94	9.38
01E18-64S	13.23	11.58	9.93
01P18-64S	10.40	9.10	7.80
02E18-64P	7.78	6.81	5.84
02E18-64S	8.94	7.82	6.71
06C18-64S	12.50	10.94	9.38
06E18-64S	13.23	11.58	9.93
06J18-64S	11.52	10.08	8.64
06P18-64S	10.40	9.10	7.80

SIZE 20

Type 67-	EACH 1-24	25-99	100-199
00C20-37P	15.65	13.70	11.75
00C20-37S	21.01	18.39	15.77
00P20-37P	13.35	11.69	10.02
00P20-37S	18.69	16.36	14.03
01C20-37P	16.99	14.87	12.75
01C20-37S	20.07	17.57	15.06
01P20-37P	12.40	10.85	9.30
01P20-37S	17.83	15.61	13.38
02E20-37P	12.18	10.66	9.14
02E20-37S	16.03	14.03	12.03
03E20-37S	16.91	14.80	12.69
06C20-37P	14.77	12.93	11.09
06C20-37S	20.13	17.62	15.11
06J20-37P	15.73	13.77	11.81
06J20-37S	21.07	18.44	15.81
06P20-37P	12.48	10.92	9.36
06P20-37S	17.81	15.59	13.37

SIZE 20 (Cont'd)

Type 67-	EACH 1-24	25-99	100-199
00C20-66P	13.75	12.04	10.32
00C20-66S	17.23	15.08	12.93
00P20-66P	11.44	10.01	8.58
00P20-66S	14.93	13.07	11.21
01C20-66P	12.81	11.22	9.62
01C20-66S	16.31	14.28	12.24
01P20-66P	10.52	9.20	7.89
01P20-66S	14.01	12.27	10.52
06C20-66P	12.87	11.27	9.66
06C20-66S	16.35	14.31	12.27
06J20-66P	13.81	12.09	10.37
06J20-66S	17.31	15.15	12.99
06P20-66P	10.56	9.24	7.92
06P20-66S	14.05	12.30	10.55

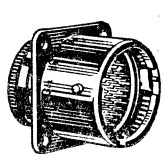
SIZE 22

Type 67-	EACH 1-24	25-99	100-199
00C22-48P	18.17	15.90	13.64
00C22-48S	24.87	21.77	18.66
00E22-48P	17.39	15.22	13.05
00E22-48S	24.11	21.10	18.09
00P22-48P	16.05	14.05	12.05
00P22-48S	22.77	19.93	17.09
01C22-48P	15.89	13.91	11.93
01C22-48S	22.61	19.79	16.97
01E22-48P	15.13	13.25	11.36
01E22-48S	21.83	19.11	16.38
01P22-48P	13.79	12.07	10.35
01P22-48S	20.49	17.93	15.38
02E22-48P	12.99	11.37	9.75
02E22-48S	19.41	16.99	14.57
06C22-48P	15.59	13.65	11.70
06C22-48S	22.25	19.47	16.70
06E22-48P	14.81	12.97	11.12
06E22-48S	21.53	18.84	16.16
06J22-48P	17.83	15.61	13.38
06J22-48S	24.53	21.47	18.41
06P22-48P	13.47	11.79	10.11
06P22-48S	20.19	17.67	15.15

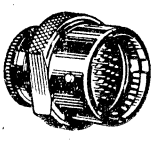
SIZE 22 (Cont'd)

Type 67-	EACH 1-24	25-99	100-199
00C22-67P	16.27	14.24	12.21
00C22-67S	20.91	18.30	15.69
00E22-67P	15.97	13.98	11.99
00E22-67S	20.61	18.04	15.47
00P22-67P	14.15	12.39	10.67
00P22-67S	18.81	16.46	14.12
01C22-67P	14.01	12.27	10.52
01C22-67S	18.65	16.32	14.00
01E22-67P	13.69	11.99	10.28
01E22-67S	18.33	16.04	13.76
01P22-67P	11.90	10.41	8.93
01P22-67S	16.53	14.47	12.41
02E22-67S	15.45	13.53	11.60
03E22-67S	17.17	15.03	12.89
06C22-67P	13.67	11.97	10.26
06C22-67S	18.31	16.03	13.74
06E22-67P	13.39	11.72	10.05
06E22-67S	18.03	15.78	13.53
06J22-67P	15.91	13.93	11.94
06J22-67S	20.57	18.00	15.44
06P22-67P	11.58	10.13	8.69
06P22-67S	16.21	14.19	12.17
00C22-69P	17.81	15.59	13.37
00C22-69S	23.55	20.61	17.67
00P22-69P	15.69	13.74	11.78
00P22-69S	21.45	18.77	16.10
01C22-69P	15.55	13.61	11.67
01C22-69S	21.29	18.63	15.98
01P22-69P	13.43	11.76	10.08
01P22-69S	19.17	16.78	14.39
03E22-69P	14.21	12.44	10.69
03E22-69S	20.19	17.67	15.15
06C22-69P	15.21	13.32	11.12
06C22-69S	20.97	18.35	15.74
06J22-69P	17.45	15.27	13.10
06J22-69S	23.23	20.33	17.43
06P22-69P	13.11	11.48	9.84
06P22-69S	18.87	16.52	14.16

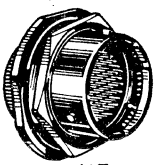
ASTRO 348 SUBMINIATURE CONNECTORS



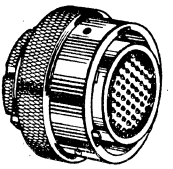
40E
SQUARE FLANGE



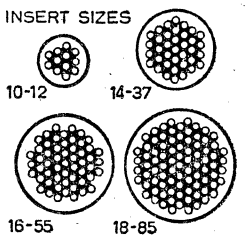
41E
CABLE RECEPTACLE



43E
"D" HOLE RECEPTACLE



26E PLUG



Selection of subminiature high-density connectors providing the user with 0.085" contact spacing. Significant advances in connector state-of-the-art recommend these connectors for applications even where size may not be a deciding factor.

Positive coupling, triple-track bayonet system with coupling ring mechanically captivated; front release, rear serviceable contacts. "No-scoop" design—impossible to damage pin contacts even when blind-mating. Ground fingers for added EMI protection. Contacts are color-marked; may be assembled to retention disc outside of connector shell for fast, accurate inspection.

Environmental performance is equivalent to MIL-C-81511B, except temp., −55° C to 150° C. Contacts are size AWG 22; accept solid or stranded wires, AWG sizes 22, 24, and 26. Wire sealing range, .030" to .054" diameter. Contact retention: serviceable condition, 4 lbs. min.; locked, 10 lbs. min. (after 10 cycles maint. aging). Voltage test: 1500 Vrms sea level; 600 Vrms, 70,000 ft. Av. shpg. wt., 2½ oz.

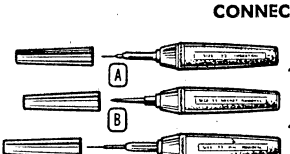
EXPLANATION OF TYPE NO.
Example: 40E-10-12P1

Shell style: 40E—Square Flange. Insert size: 10. No. of contacts: 12. Contact Style: P—pin (S—socket). 1—normal shell position.

Stock No.	Type 348-	EACH 1-9	10-24	25-99
47 D 2300	40E-10-12P1	18.51	16.88	15.25
47 D 2301	40E-10-12S1	18.94	17.27	15.60
47 D 2302	40E-14-37P1	22.35	20.38	18.41
47 D 2303	40E-14-37S1	26.26	23.95	21.63
47 D 2304	40E-16-55P1	26.05	23.75	21.45
47 D 2305	40E-16-55S1	31.46	28.69	25.91
47 D 2306	40E-18-85P1	30.24	27.58	24.91
47 D 2307	40E-18-85S1	39.14	35.69	32.23
47 D 2308	41E-10-12P1	19.20	17.50	15.81
47 D 2309	41E-10-12S1	19.63	17.89	16.16
47 D 2310	41E-14-37P1	22.17	20.22	18.26
47 D 2311	41E-14-37S1	23.54	21.46	19.38
47 D 2312	41E-16-55P1	27.48	25.06	22.63
47 D 2313	41E-16-55S1	32.90	30.00	27.09
47 D 2314	41E-18-85P1	30.32	27.64	24.97
47 D 2315	41E-18-85S1	39.18	35.72	32.26

Stock No.	Type 348-	EACH 1-9	10-24	25-99
47 D 2316	43E-10-12P1	20.74	18.91	17.08
47 D 2317	43E-10-12S1	21.20	19.33	17.46
47 D 2318	43E-14-37P1	23.36	21.30	19.24
47 D 2319	43E-14-37S1	27.16	24.76	22.37
47 D 2326	43E-16-55P1	27.73	25.29	22.84
47 D 2327	43E-16-55S1	33.11	30.19	27.27
47 D 2329	43E-18-85P1	31.43	28.65	25.88
47 D 2331	43E-18-85S1	40.29	36.73	33.18
47 D 2333	46E-10-12P1	19.52	17.80	16.07
47 D 2334	46E-10-12S1	19.88	18.12	16.37
47 D 2337	46E-14-37P1	22.60	20.61	18.62
47 D 2338	46E-14-37S1	26.15	23.85	21.54
47 D 2346	46E-16-55P1	26.23	23.91	21.60
47 D 2357	46E-16-55S1	31.36	28.59	25.82
47 D 2361	46E-18-85P1	30.57	27.87	25.17
47 D 2365	46E-18-85S1	38.96	35.52	32.09

CONNECTOR ACCESSORY TOOLS



A Type 294-278 Pin and Socket Insertion Tool.
47 D 2179. 12 oz...Each 12.31

B Type 294-286 Pin Contact Removal Tool.
47 D 2181. 12 oz....Each 8.53

C Type 294-287 Socket Contact Removal Tool.
47 D 2182. 9 oz....Each 20.29

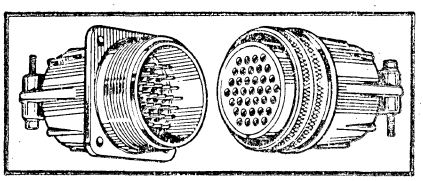
294-268 Contact Crimping Tool. 1 lb.
47 D2186.Ea 16.32

294-1551 Contact Locator. 8 oz.
47 D2187. Ea. 15.72

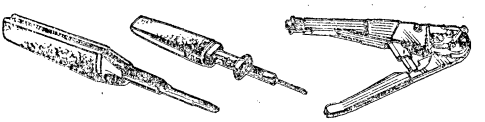
Let Allied Fill All Your Connector Needs at OEM Prices

Amphenol Series 246, 165 and 126 Connectors

SERIES 246 CONNECTORS AND ACCESSORY TOOLS



- Anti-Deflection Contact Retention Disk
- Static "O" Ring
- Environmental Sealing Grommet



Insertion Tool | Removal Tool | Crimper

See Pages 282 and 283 for Insert Arrangements

SERIES 246 CONNECTORS WITH POKE-HOME® CONTACTS

"Shrouded" retention contacts provide MIL-C-5015 performance plus "Poke-Home" speed and reliability. Rear insertable, front removable contacts permit connector circuits to be easily serviced without disassembling connector or disturbing adjacent contacts. Metal retaining clips and shrouded retention disk prevent damage to contact system. Contact retention force exceeds requirements of MIL-C-26482 and MIL-C-26500. Front servicing design makes contact replacement fast and reliable. All elastomeric parts are molded of neoprene rubber compound for excellent temperature characteristics at either extreme. Temperature range of −55° to +85° C. Monoblock construction, with bonded interfaces between dielectric components eliminates air voids and protects connectors from damaging moisture and altitude conditions. Resilient pin or socket inserts for positive mating. *No. of contacts. Av. wt., 3 oz.

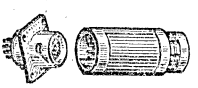
Stock No.	Type 246-	*	EACH 1-24	25-99	100-249
47 D 3424	3100R10SL-3P	3	6.63	5.28	3.97
47 D 3425	3100R10SL-3S	3	7.26	5.79	4.35
47 D 3426	3106R10SL-3P	3	6.93	5.52	4.15
47 D 3427	3106R10SL-3S	3	7.58	6.04	4.54
47 D 3428	3100R10SL-4P	2	7.46	5.95	4.47
47 D 3429	3100R10SL-4S	2	7.90	6.29	4.73
47 D 3430	3106R10SL-4P	2	7.82	6.22	4.68
47 D 3431	3106R10SL-4S	2	8.27	6.58	4.95
47 D 3432	3100R12-5P	1	6.86	5.47	4.11
47 D 3433	3100R12-5S	1	7.45	5.77	4.34
47 D 3434	3106R12-5P	1	7.53	6.00	4.51
47 D 3435	3106R12-5S	1	7.92	6.30	4.74
47 D 3436	3100R14S-9P	2	6.76	5.39	4.05
47 D 3437	3100R14S-9S	2	7.40	5.73	4.31
47 D 3438	3106R14S-9P	2	7.41	5.90	4.44
47 D 3439	3106R14S-9S	2	7.85	6.25	4.70
47 D 3440	3100R14S-7P	3	7.58	6.04	4.54
47 D 3441	3100R14S-7S	3	8.18	6.52	4.90
47 D 3442	3106R14S-7P	3	8.28	6.60	4.96
47 D 3443	3106R14S-7S	3	8.90	7.09	5.33
47 D 3444	3100R14S-2P	4	7.08	5.64	4.24
47 D 3445	3100R14S-2S	4	7.85	6.25	4.70
47 D 3446	3106R14S-2P	4	7.72	6.14	4.62
47 D 3447	3106R14S-2S	4	8.50	6.77	5.09
47 D 3448	3100R20-4P	4	8.75	6.97	5.24
47 D 3449	3100R20-4S	4	9.85	7.85	5.90
47 D 3450	3106R20-4P	4	9.75	7.77	5.84
47 D 3451	3106R20-4S	4	10.87	8.66	6.51
47 D 3452	3100R14S-5P	5	7.82	6.22	4.68
47 D 3453	3100R14S-5S	5	8.75	6.97	5.24
47 D 3454	3106R14S-5P	5	8.52	6.78	5.10
47 D 3455	3106R14S-5S	5	9.45	7.53	5.66
47 D 3456	3100R16S-1P	7	8.58	6.84	5.14
47 D 3457	3100R16S-1S	7	9.85	7.85	5.90
47 D 3458	3106R16S-1P	7	9.32	7.42	5.58
47 D 3459	3106R16S-1S	7	10.60	8.44	6.35
47 D 3460	3100R18-9P	7	9.65	7.69	5.78
47 D 3461	3100R18-9S	7	10.67	8.50	6.39
47 D 3462	3106R18-9P	7	10.82	8.62	6.48
47 D 3463	3106R18-9S	7	11.69	9.31	7.00

ACCESSORY TOOLS

Designed for easiest possible insertion and removal of Poke-Home contacts in 246 Series connectors.

Stock No.	Type 294-	Description	Wt., Oz.	EACH
47 D 5728	126	Univ. Crimp	16	108.46
47 D 5729	229	#12 Insertion	9	15.64
47 D 5730	230	#12 Removal	9	23.26
47 D 5731	192	#16 Insertion	12	16.30
47 D 5732	219	#16 Removal	12	21.20

MINIATURE TYPE AN CONNECTORS



Pressureproof and weatherproof miniature AN connectors. Widely used in instrumentation and miniaturized electronic equipment. Connectors are available in two shell sizes.

Contacts are gold over silver plating. Aluminum shells feature quick bayonet coupling. Small receptacles mount in 13/16" hole; secure through four 1/8" holes on 25/32" centers. Large receptacles require 1 1/16" hole with four 1/8" holes on 1 5/16" centers. Plugs are 2 1/16" long. Small plugs are 57/64" dia.; large plugs are 1 9/64" in dia. Rated: 500 volts rms, except *600 volts. All have strain relief clamps. Shells are aluminum with neutral-color chromium finish. Dielectric material is diallyl phthalate. All have "O" ring seals. Av. shpg. wt., 3 oz.

SMALL SHELL—5 No. 20 CONTACTS

Stock No.	Type No.	Contacts and Ampere Rating	Description	EACH 1-49	50-99
47 D 0595	165-33	*5 @ 7.5	Male Plug	3.73	2.94
47 D 0596	165-34	*5 @ 7.5	Female Plug	5.05	4.03
47 D 0597	165-35	*5 @ 7.5	Male Receptacle	2.64	2.11
47 D 0598	165-36	*5 @ 7.5	Female Receptacle	3.20	2.54

SMALL SHELL—9 No. 20 CONTACTS

47 D 0579	165-13	9 @ 7.5	Male Plug	3.87	3.09
47 D 0580	165-14	9 @ 7.5	Female Plug	5.95	4.74
47 D 0581	165-15	9 @ 7.5	Male Receptacle	2.87	2.28
47 D 0582	165-16	9 @ 7.5	Female Receptacle	3.67	2.93

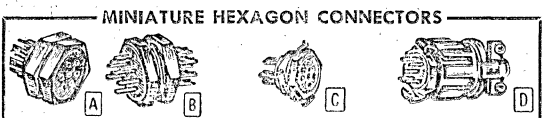
SMALL SHELL—12 No. 20 CONTACTS

47 D 0575	165-9	12 @ 7.5	Male Plug	4.08	3.25
47 D 0576	165-10	12 @ 7.5	Female Plug	6.08	4.84
47 D 0577	165-11	12 @ 7.5	Male Receptacle	3.07	2.44
47 D 0578	165-12	12 @ 7.5	Female Receptacle	5.04	4.00

LARGE SHELL—24 No. 20 CONTACTS

47 D 0587	165-25	24 @ 7.5	Male Plug	6.41	5.10
47 D 0588	165-26	24 @ 7.5	Female Plug	8.42	6.70
47 D 0589	165-27	24 @ 7.5	Male Receptacle	4.42	3.53
47 D 0590	165-28	24 @ 7.5	Female Receptacle	6.41	5.10

MINIATURE HEXAGON CONNECTORS

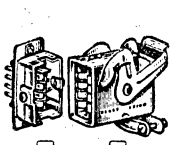


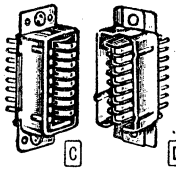
HEX NUT TYPE | LOCKING CLIP (Socket Type) | HOOD & CLAMP (Pin Type)

Molded of Amphenol Blue 1-501 dielectric (diallyl phthalate). Silver-base-plated contacts are gold-finished to prevent tarnishing or corrosion. All hardware is nickel-plated brass. Voltage breakdown: 2000 volts rms, 60 Hz at sea level; 700 volts rms, 60 Hz at 50,000 feet. Current rating, 7.5 amps. Hex-nut types are for panel mounting in 33/64" hole. Hex-nut locking-clip type requires 25/64" dia. mounting hole in panel. Locking-clip types mate with hood and cable-clamp types where the locking feature is required to provide strain relief for soldered connections. Locking ring on cable clamp swivels 30° for engaging with panel-mounted locking clip. Dia. of hex-nut types, 5/8"; cable-clamp types, 3/4" (length, 1 5/16"). Wt., 5 oz.

Stock No.	Mfr's Type	Contacts	Fig.	EACH 1-49	50-99	100-249
47 D 0632	126-010	5-Pin	B	.63	.50	.41
47 D 0634	126-191	7-Pin	B	.74	.58	.48
47 D 0636	126-012	9-Pin	B	.86	.68	.56
47 D 0644	126-217	5-Pin	D	1.40	1.11	.92
47 D 0646	126-195	7-Pin	D	1.54	1.22	1.01
47 D 0648	126-220	9-Pin	D	1.66	1.31	1.09
47 D 0638	126-216	5-Pin	C	.67	.53	.44
47 D 0640	126-197	7-Pin	C	.80	.63	.53
47 D 0642	126-219	9-Pin	C	.92	.73	.60
47 D 0633	126-011	5-Socket	A	1.01	.80	.66
47 D 0635	126-192	7-Socket	A	1.28	1.01	.84
47 D 0637	126-013	9-Socket	A	1.59	1.26	1.04
47 D 0645	126-223	5-Socket	D	1.81	1.43	1.19
47 D 0647	126-196	7-Socket	D	2.09	1.65	1.37
47 D 0649	126-222	9-Socket	D	2.39	1.89	1.57
47 D 0639	126-218	5-Socket	C	1.08	.85	.71
47 D 0641	126-198	7-Socket	C	1.35	1.07	.89
47 D 0643	126-221	9-Socket	C	1.66	1.31	1.09

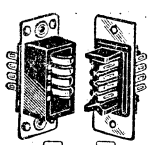
Amphenol Connectors

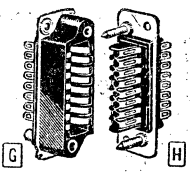




BLUE RIBBON CONNECTORS

- Self-Cleaning Spring Contacts
- Matching Positive Polarization
- Low Insertion, Removal Forces
- For Heavy-Duty Applications





For multi-circuit connection, switching and re-routing. Gold-plated spring contacts. Low insertion and removal forces. Diallyl phthalate dielectric meets government specs. Stainless steel mounting plates.

*End cable outlet; †side cable outlet. S in Type No. indicates socket contacts; P indicates plug contacts. For wire up to No. 16. Rated 5 amps at 750 volts DC. Av. shpg. wt., 4 oz.

A B SERIES 26 BARRIER POLARIZED CONNECTORS WITH KEYED LATCH SHELLS

(Fig. A) MALE							(Fig. B) FEMALE					
Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249	Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249
8	47 D 0610	26-4301-8S*	6.51	5.48	4.44	4.00	8	47 D 0618	26-4401-8P	3.23	2.72	2.21	1.98
8	47 D 2632	26-4501-8S†	6.03	5.07	4.12	3.70							
8	47 D 2633	26-4301-8P*	5.36	4.50	3.65	3.29	8	47 D 0619	26-4401-8S	3.93	3.31	2.68	2.42
8	47 D 0614	26-4501-8P†	5.36	4.50	3.65	3.29							
16	47 D 0611	26-4301-16S*	7.26	6.10	4.95	4.45	16	47 D 0620	26-4401-16P	4.25	3.57	2.90	2.61
16	47 D 2634	26-4501-16S†	7.26	6.10	4.95	4.45							
16	47 D 2635	26-4301-16P*	6.72	5.65	4.59	4.13	16	47 D 0621	26-4401-16S	4.81	4.04	3.38	2.95
16	47 D 0615	26-4501-16P†	6.72	5.65	4.59	4.13							
24	47 D 0612	26-4301-24S*	8.47	7.13	5.79	5.20	24	47 D 0622	26-4401-24P	4.78	4.02	3.27	2.93
24	47 D 2636	26-4501-24S†	8.20	6.90	5.60	5.03							
24	47 D 2637	26-4301-24P*	7.53	6.33	5.13	4.62	24	47 D 0623	26-4401-24S	5.43	4.57	3.71	3.33
24	47 D 0616	26-4501-24P†	7.53	6.33	5.13	4.62							
32	47 D 0613	26-4301-32S*	9.17	7.71	6.26	5.63	32	47 D 0630	26-4401-32P	5.31	4.47	3.62	3.27
32	47 D 2638	26-4501-32S†	9.05	7.61	6.17	5.55							
32	47 D 2639	26-4301-32P*	8.39	7.06	5.72	5.15	32	47 D 0631	26-4401-32S	6.12	5.15	4.18	3.76
32	47 D 0617	26-4501-32P†	8.39	7.06	5.72	5.15							

C D SERIES 26 BARRIER POLARIZED CONNECTORS—KEYED SHELLS

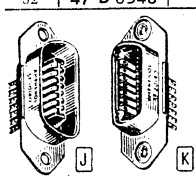
(Fig. C) MALE							(Fig. D) FEMALE					
Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249	Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249
8	47 D 0650	26-4101-8P	2.08	1.75	1.42	1.28	8	47 D 0671	26-4201-8S	2.40	2.02	1.64	1.47
16	47 D 0651	26-4101-16P	3.14	2.65	2.14	1.93	16	47 D 0672	26-4201-16S	3.26	2.75	2.23	2.00
24	47 D 0652	26-4101-24P	3.62	3.05	2.48	2.23	24	47 D 0673	26-4201-24S	3.91	3.29	2.67	2.39
32	47 D 0653	26-4101-32P	4.16	3.50	2.84	2.55	32	47 D 0674	26-4201-32S	4.53	3.82	3.09	2.78

E F SERIES 26 BARRIER POLARIZED CONNECTORS

(Fig. E) MALE							(Fig. F) FEMALE					
Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249	Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249
8	47 D 0542	26-182	1.16	.98	.79	.71	8	47 D 0543	26-183	1.83	1.53	1.25	1.12
8	47 D 0660	26-4100-8P	1.06	.89	.72	.65	8	47 D 0664	26-4200-8S	1.73	1.46	1.19	1.06
16	47 D 0661	26-4100-16P	1.98	1.67	1.35	1.22	16	47 D 0665	26-4200-16S	2.52	2.12	1.82	1.54
24	47 D 0662	26-4100-24P	2.38	2.01	1.63	1.46	24	47 D 0666	26-4200-24S	2.98	2.51	2.04	1.83
32	47 D 0663	26-4100-32P	2.77	2.33	1.89	1.70	32	47 D 0667	26-4200-32S	3.56	2.99	2.43	2.18

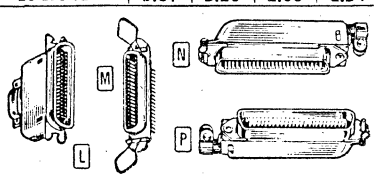
G H SERIES 26 PIN-POLARIZED CONNECTORS

(Fig. G) MALE							(Fig. H) FEMALE					
Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249	Contacts	Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249
16	47 D 0544	26-159-16	2.12	1.79	1.45	1.30	16	47 D 0545	26-190-16	2.70	2.27	1.85	1.66
24	47 D 0546	26-159-24	2.40	2.01	1.63	1.47	24	47 D 0547	26-190-24	3.23	2.72	2.21	1.98
32	47 D 0548	26-159-32	3.02	2.54	2.07	1.86	32	47 D 0549	26-190-32	3.81	3.20	2.60	2.34



SERIES 57 MICRO-RIBBON® MINIATURE CONNECTORS

- Precision Molded Diallyl Phthalate Inserts
- Self-Cleaning Ribbon Contacts for Long Life
- Gold-Plated Contacts Rated 5 Amps at 700 VDC
- High-Impact Strength for Positive Connections



Make possible routing of many circuits through one small connector. Inserts molded of diallyl phthalate with high-impact strength and excellent dielectric. Self-cleaning ribbon contacts gold-plated over silver. Float bushings allow .020". Rated 5 amps, 700 VDC.

J K Chassis-to-Chassis Connectors. Clear iridite-finished brass shells. Wire up to #22. Description above. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	EACH 1-9	10-49	50-99	100-249
47 D 0482	57-10140	14-Contact Plug	1.85	1.55	1.26	1.14
47 D 0485	57-20140	14-Contact Socket	1.90	1.60	1.29	1.17
47 D 0483	57-10240	24-Contact Plug	2.47	2.07	1.79	1.51
47 D 0486	57-20240	24-Contact Socket	2.52	2.12	1.73	1.55
47 D 0484	57-10360	36-Contact Plug	2.83	2.38	1.93	1.74
47 D 0487	57-20360	36-Contact Socket	2.90	2.44	1.98	1.78
47 D 0098	57-10500	50-Contact Plug	3.73	3.15	2.55	2.28
47 D 0099	57-20500	50-Contact Socket	3.77	3.19	2.58	2.32

L M Cable-to-Chassis Latching Connectors. Cadmium-plated brass shells; clear chromate finish. Description above. Av., 2 oz.

Stock No.	Mfr's Type	Description	EACH 1-9	10-49	50-99	100-249
47 D 1075	57-30140	14-Contact Plug	3.55	2.98	2.42	2.19
47 D 1079	57-40140	14-Contact Socket	2.33	1.97	1.60	1.44
47 D 1076	57-30240	24-Contact Plug	3.90	3.28	2.65	2.40
47 D 1082	57-40240	24-Contact Socket	2.78	2.33	1.90	1.71
47 D 1077	57-30360	36-Contact Plug	4.77	4.02	3.25	2.94
47 D 1083	57-40360	36-Contact Socket	3.00	2.52	2.04	1.83
47 D 1078	57-30500	50-Contact Plug	5.23	4.40	3.58	3.22
47 D 1084	57-40500	50-Contact Socket	3.92	3.30	2.67	2.40

N P Cable-to-Cable Connectors. Right-angle hoods with cable clamps and dust caps. Mate with 50-contact units above. Av., 2 oz.

47 D 0173	57-10500-7	50-Cont. Plug	4.42	3.73	3.03	2.62
47 D 0182	57-20500-7	50-Cont. Socket	4.70	3.96	3.22	2.88

Amphenol Poke-Home® Contacts and Shells

SERIES 220 "MICRO-RAC" CONNECTORS

52 or 104 contacts in smallest possible space. Float mounting; spring-loaded alignment posts. Polarized mono-block construction; contact identification numbers molded in. 52 contact size, 1.888″ long by .677″ wide; 1.492″ mounting centers. 104 contact, 3.017 x .677″; 2.611″ mounting centers. Less contacts, right. Av. wt., 1½ oz.

Stock No.	Mfr's Type	Contacts	Description	EACH 1-9	10-49	50-99	100-249
47 D 2245	220-1N052	52	Plug	1.67	1.38	1.11	.95
47 D 2246	220-2N052	52	Receptacle	1.02	.83	.67	.58
47 D 2888	220-5	52	Cable Clamp	1.95	1.61	1.29	1.17
47 D 2256	220-1N104	104	Plug	1.95	1.59	1.38	1.10
47 D 2257	220-2N104	104	Receptacle	1.35	1.11	.91	.78
47 D 2889	220-6	104	Cable Clamp	2.00	1.66	1.33	1.19

SERIES 221 MICRO-MINIATURE STRIP CONNECTORS

Use full length as is, or cut to specific length. Almost any configuration can be produced quickly and easily by cutting and stacking strips. Two or more strips can be staked or epoxied together for multi-row connector. When stacked, layer to layer, contact centers are .100″ for both connectors. Use guide pins at least every 3 inches for mating alignment as well as keying. Guide pins replace both a pin and socket contact; also one contact hole is utilized when staking or cutting connector. Supplied less contacts and guide pins. See listing, right. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Contacts	Description	Spacing	EACH 1-9	10-49	50-99	100-249
47 D 2197	221-1160	60	6″ Plug	.100″	1.02	.85	.69	.58
47 D 2198	221-1260	60	6″ Recept.	.100″	.70	.57	.46	.39
47 D 2199	221-2153	53	4″ Plug	.075″	1.65	1.38	1.11	.94
47 D 2200	221-2253	53	4″ Recept.	.075″	1.22	1.02	.83	.70

SERIES 222 "MIGHTY MITE" CIRCULAR CONNECTORS

Highly reliable micro-miniature connectors for cable-to-cable or cable-to-chassis applications. .085″ centers. Five keys are molded into connector to insure proper alignment. Contact identification numbers molded into the polycarbonate resin dielectric. 19-contact size, .621″ dia. x 2.618″ long; 31-contact, .746″ x 2.948″; 61-contact, .966″ x 3.530″. Less contacts, right. Av. shpg. wt., 1½ oz.

Stock No.	Mfr's Type	Contacts	Description	EACH 1-9	10-49	50-99	100-249
47 D 2238	222-11N19	19	Plug	1.00	.83	.67	.57
47 D 2201	222-12N19	19	Receptacle	.80	.67	.54	.46
47 D 2144	222-518	19	Cable Clamp	1.68	1.39	1.13	.96
47 D 2202	222-11N31	31	Plug	1.00	.82	.66	.57
47 D 2206	222-12N31	31	Receptacle	.80	.66	.54	.46
47 D 2149	222-519	31	Cable Clamp	1.80	1.48	1.20	1.02
47 D 2208	222-12N61	61	Receptacle	.85	.71	.57	.49
47 D 2209	222-520	61	Cable Clamp	4.10	3.39	2.74	2.33

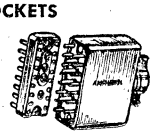
SERIES 223 "TINY TIM" RACK AND PANEL CONNECTORS

For circuit modules, either potted-in or surface mounted; micro-miniature cable-to-cable use. Meet MIL-C-83848. Contact spacing, .100″ centers on each row. Screw mount. Less contacts, right. 1½ oz.

Stock No.	Mfr's Type	Contacts	Description	Mtg. Ctrs.	EACH 1-9	10-49	50-99	100-249
47 D 2261	223-1105	5	Plug	.593″	.60	.50	.41	.35
47 D 2262	223-1205	5	Recept.	.593″	.57	.48	.38	.33
47 D 2263	223-1109	9	Plug	.793″	.53	.44	.35	.30
47 D 2264	223-1209	9	Recept.	.793″	.57	.48	.38	.33
47 D 2265	223-1117	17	Plug	1.193″	.62	.52	.42	.36
47 D 2266	223-1217	17	Recept.	1.193″	.60	.49	.39	.34

MULTICONTACT PLUGS AND SOCKETS

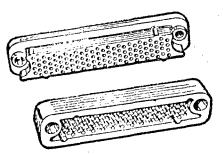
Shielded cable and chassis connectors. Non-rotating gold over silver-plated contacts. Interlocking barriers prevent shorting. 900 V, 60 Hz AC. *Insert only; all others with can. "A" in desc. column—cable type, "B"—chassis type. Av. shpg. wt., 3 oz.



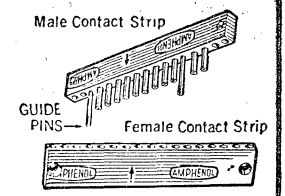
11 CONTACTS

Stock No.	Mfr's Type	Contacts #16	Contacts #20	Desc.	EACH 1-49	50-99	100-249
47 D 0530	126-804*	2	9	B—plug	.91	.72	.59
47 D 0531	126-805*	2	9	B—socket	.94	.74	.62
47 D 0532	126-809	2	9	A—plug	1.49	1.17	.97
47 D 0533	126-808	2	9	A—socket	1.52	1.20	1.00
15 CONTACTS							
47 D 0534	126-151*	3	12	B—plug	1.20	.95	.78
47 D 0535	126-150*	3	12	B—socket	.91	.72	.59
47 D 0536	126-152	3	12	A—plug	2.33	1.84	1.52
47 D 0537	126-153	3	12	A—socket	1.81	1.43	1.19
20 CONTACTS							
47 D 0538	126-806*	4	16	B—plug	1.44	1.13	.94
47 D 0539	126-807*	4	16	B—socket	1.15	.90	.75
47 D 0540	126-811	4	16	A—plug	2.31	1.82	1.51
47 D 0541	126-810	4	16	A—socket	2.02	1.59	1.32

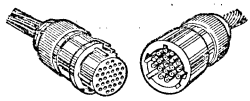
CHOOSE FROM THESE MICRO-MINIATURE SHELLS THEN PICK THE CONTACT YOU NEED



220 MICRO-RAC CONNECTORS

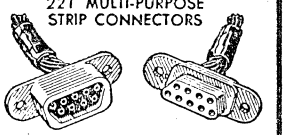


221 MULTI-PURPOSE STRIP CONNECTORS



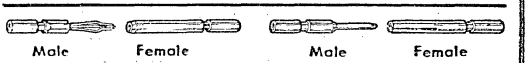
TYPE 222 PLUG AND JACK

ILLUSTRATED WITH WIRE FORM CONTACTS



223 TINY TIM RACK AND PANEL CONNECTORS

ALL CONNECTORS SUPPLIED LESS CONTACTS



"WIRE-FORM" "RELIA-TAC"

INDIVIDUAL "WIRE-FORM" AND "RELIA-TAC" CONTACTS

For Series 220-223; rated 3 amps. Both types take 22, 24, 26 solid wire; 24, 26 stranded wire. Relia-Tac also takes 28 solid wire. Wire-Form male, gold-clad copper alloy wire members in copper sleeves; both male and female, electroless gold plated over copper. Size, .403 x .050″. Relia-Tac, gold-over-nickel on copper alloy body. Male, .389 x .050″; female, .404 x .050″. Guide pins will fit either type. Note: Relia-Tac does not mate with Wire-Form. Av. shpg. wt. per pkg., 1 oz.

Stock No.	Mfr's Type	Description	PER PKG. OF 100 1-9	10-99	100-Up
47 D 2885	220-P01	Wire-Form Male	6.10	4.90	4.20
47 D 2291	220-S01	Wire-Form Female	2.80	2.20	1.90
47 D 2226	220-P02	Relia-Tac Male	3.70	2.90	2.50
47 D 2227	220-S02	Relia-Tac Female	8.90	7.10	6.10

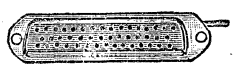
47 D 2210. 221-535 Universal Guide Pins.....Pkg. of 10 for 1.14

"WIRE-FORM" AND "RELIA-TAC" CONTACT TOOLS

Stock No.	Mfr's Type	Description	EACH
47 D 2188	294-188	Crimp Tool for Both Contacts	49.95
47 D 2183	294-123	Insertion Tool for Both Contacts	4.43
47 D 2184	294-137	Removal Tool for "Wire-Form"	8.32
47 D 2229	294-205	Removal Tool for "Relia-Tac"	8.32

SERIES 17 "MIN RAC" RACK AND PANEL CONNECTORS

Miniature connectors with "Poke-Home" contacts. Zytel 101 dielectric. Contacts are gold-over-silver plated. Cadmium-plated steel shells. Rated 5 amps. 0° to 230° F. Tools to crimping, insertion, or removal of contacts below. *Solder receptacles. †Solder plugs. ‡Cable clamp assemblies. Av. shpg. wt., 2 oz.

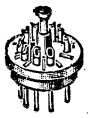


Stock No.	Mfr's Type	Contacts	EACH 1-9	10-49	50-99	100-249	250-499	500-999
47 D 2421	17-10090*	9	1.48	1.32	1.09	.97	.81	.78
47 D 2422	17-10150*	15	2.02	1.81	1.49	1.32	1.11	1.06
47 D 2423	17-10250*	25	3.04	2.72	2.23	1.99	1.67	1.60
47 D 2424	17-10370*	37	4.18	3.74	3.07	2.74	2.30	2.20
47 D 2425	17-10500*	50	5.38	4.82	3.95	3.52	2.96	2.83
47 D 2426	17-20090†	9	1.04	.93	.76	.68	.57	.55
47 D 2427	17-20150†	15	1.26	1.13	.93	.83	.69	.66
47 D 2428	17-20250†	25	1.82	1.63	1.34	1.19	1.00	.96
47 D 2497	17-20370†	37	2.50	2.24	1.84	1.63	1.38	1.31
47 D 2498	17-20500†	50	3.22	2.88	2.37	2.11	1.77	1.69
47 D 2540	17-310-01‡	9	1.13	.95	.76	.68	.57	.52
47 D 2541	17-311-01‡	15	1.18	.99	.78	.71	.59	.54
47 D 2542	17-312-01‡	25	1.24	1.02	.82	.74	.62	.57
47 D 2543	17-313-01‡	37	1.28	1.07	.86	.77	.64	.59
47 D 2544	17-314-01‡	50	1.31	1.09	.87	.79	.65	.60

47 D 2874. Model 294-136 Crimping Tool. Wt., 12 oz.....124.74
47 D 2539. Model 294-155 Insertion and Removal Tool. 4 oz... 13.28

Amphenol Standard, Miniature Plugs, Sockets

MINIATURE TYPE CP PLUGS—FOR TUBE SOCKETS



Molded from diallyl phthalate dielectric; incorporates a molded-in strain relief post. Utilizes retainer-ring mounting. Contacts gold over silver plating. Also available with rubber plug caps in end and side cable outlet styles. Voltage rating: 1500 V rms at 5 amps. Overall seated height, 1 3/16". Overall width: Type 86-896, 1 1/16"; 86-895, 55/32"; 86-897, 7/8"; 86-894, 3/4". Pin circle diameter: for 7 pin plugs, 3/8"; for 9 pin plugs, 1 5/32". Wt., 2 oz.

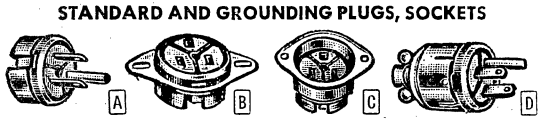
Stock No.	Mfr's Type	Description	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 2649	86-896	7-Pin	.99	.82	.692	.593	.526
47 D 2651	86-895	7-Pin with Cap	1.11	.92	.780	.668	.593
47 D 2652	86-897	9-Pin with Cap	1.38	1.15	.968	.829	.736
47 D 2653	86-894	7-Pin Side Outlet Cap	1.51	1.26	1.06	.909	.807

MINIATURE PLUGS

Compact, high-dielectric. Nickel-plated brass prongs are recessed. For cables with up to six conductors. Contacts polarized to assure proper connections. Rated 5 amps @ 500 V. Fit Amphenol Series 78-S sockets. Wt., 2 oz.

Stock No.	Mfr's Type	Prongs	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0177	71-3S	3	.11	.10	.08	.069	.061
47 D 0169	71-4S	4	.14	.11	.095	.081	.072
47 D 0149	71-5S	5	.15	.12	.102	.088	.078
47 D 0179	71-6S	6	.17	.14	.121	.104	.092

STANDARD AND GROUNDING PLUGS, SOCKETS

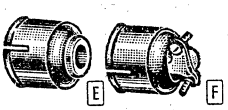


61 series is 2 pole; 160 series is 2 pole with grounding lug. Black phenolic rated 15 A at 120 V AC/DC. ■U.L. Recog. except Fig. A types which mount in 1 11/64" keyed hole with retaining ring supplied. Fig. B types have molded-in mtg. plates except, §retaining-ring-mounted plate; require 1 9/32" mtg. holes and have 5/32" slotted holes on 1 1/2" to 1 7/8" ctrs., except 61-MIP-61F, 1 3/16" mtg. hole, 5/32" holes on 1 1/2" ctrs. Fig. C types mount in 1 7/16" hole, have two 5/32" holes on 1 3/4" ctrs. †7/16" I. D. grommet instead of 3/8" clamp. Av., 3 oz.

Stock No.	Mfr's Type	Fig.	Desc.	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0675	61-M	A	male	.37	.31	.26	.223	.198
47 D 0677	61-F	A	female	.37	.31	.258	.221	.196
47 D 0680	61-M1	B	§male	.46	.39	.326	.279	.248
47 D 0682	61-F1	B	§female	.44	.37	.31	.265	.235
47 D 0085	61-MIP-61F	B	female	.40	.33	.277	.238	.211
47 D 0685	61-M10	C	male	.57	.47	.397	.34	.302
47 D 0687	61-F10	C	female	.56	.47	.396	.339	.301

Stock No.	Mfr's Type	Fig.	Desc.	EACH 1-24	25-99	100-249	250-499	500-999
47 D 2522	160-10	A	female	.85	.71	.596	.510	.453
47 D 2523	160-11	A	male	1.01	.85	.710	.608	.539
47 D 2524	160-2	B	female	.93	.78	.654	.560	.497
47 D 2525	160-3	B	male	1.10	.92	.772	.661	.587
47 D 2526	160-4	C	female	1.08	.90	.758	.649	.576
47 D 2527	160-5	C	male	1.25	1.05	.880	.754	.669
47 D 2528	160-6	†D	female	.98	.82	.685	.586	.521
47 D 2529	160-7	†D	male	1.14	.95	.797	.683	.606
47 D 2535	160-8	D	female	1.06	.88	.740	.634	.563
47 D 2536	160-9	D	male	1.22	1.02	.853	.730	.648

AC CONNECTOR ASSEMBLIES



For Amphenol 61, 160, 78S and 86CP plugs and sockets. All are sturdy, drawn steel except 61-61, cadmium-plated steel shell. 61-61 shell fits 1 7/16" hole; has 5/32" mtg. holes on 1 3/4" ctrs.; lowers bottom of sockets, plugs and connectors 1 3/16" below surface. Caps permit cable-to-chassis and cable-to-cable applications for 61, 78S and 86CP plugs and sockets. 3-13 has end rubber grommet for up to 7/16" cable. 3-24 has clamp for up to 3/8" cable. 3-13 and 3-24 have black Japan finish; are 1 1/16" long. Av. shpg. wt., 3 oz.

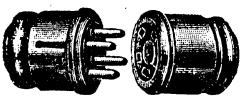
Stock No.	Mfr's Type	Fig.	Description	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 2537	3-13	E	Black plug cap	.14	.11	.098	.084	.074
47 D 2538	3-24	F	Black plug cap	.23	.19	.161	.138	.122
47 D 0086	61-61	G	Recessing shell	.14	.12	.101	.086	.077

MINIATURE SPECIAL-PURPOSE CABLE CONNECTORS

Series 91: For shielded or unshielded cables. Black phenolic elements in cadmium-plated brass shells, held by set screws in side. Polarized contact spacing prevents incorrect insertion. Accommodates cables to 1/4" dia. Suffix "L" in Type No.—long (1 3/16"); "S"—short (1 3/16"). Series 78: Receptacles, drawn-steel mounting plate. Last numeral in Type No. denotes number of contacts. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0320	91-MPF3L	H	.47	.39	.33	.283	.251
47 D 0571	91-MPF3S	H	.41	.34	.291	.249	.221
47 D 0321	91-MPF4L	H	.49	.41	.343	.294	.261
47 D 0572	91-MPF4S	H	.46	.38	.320	.274	.243
47 D 0325	91-MPM3L	J	.42	.35	.293	.251	.223
47 D 0573	91-MPM3S	J	.37	.31	.263	.225	.20
47 D 0326	91-MPM4L	J	.43	.36	.302	.259	.23
47 D 0574	91-MPM4S	J	.39	.32	.272	.233	.206
47 D 0570	91-MPM5L	J	.44	.37	.31	.265	.235
47 D 0328	91-MPM6L	J	.47	.39	.327	.280	.249
47 D 0330	78-PCG3	K	.31	.25	.218	.186	.165
47 D 0331	78-PCG4	K	.35	.28	.242	.208	.184
47 D 0332	78-PCG5	K	.39	.32	.270	.231	.205
47 D 0333	78-PCG6	K	.40	.33	.277	.238	.211

SERIES 78 AND 86 MULTI-WIRE CONNECTORS



Matching male and female protected terminals with unbreakable metal caps. Accommodate cables up to 3/8". Cap can be removed with a screwdriver. PF and PM 8 are octal. PF9, PM9, PF11, PM11, octal style. PF and PM 7S have small contacts. 86-PM12 fits Amphenol 77M1P12 socket; use 3-13 plug cap. 1 3/16 x 1 3/32". Av. wt., 3 oz.

FEMALE

Stock No.	Mfr's Type	Contacts	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0524	78-PF4	4	.41	.33	.285	.244	.216
47 D 0525	78-PF5	5	.43	.35	.299	.256	.228
47 D 0526	78-PF6	6	.45	.37	.312	.268	.238
47 D 0527	78-PF7S	7S	.47	.39	.329	.281	.250
47 D 0528	78-PF8	8	.43	.36	.304	.260	.231
47 D 0516	78-PF9	9	.46	.38	.323	.276	.245
47 D 0517	78-PF11	11	.50	.41	.350	.300	.266

MALE

Stock No.	Mfr's Type	Contacts	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0504	86-PM4	4	.45	.37	.315	.270	.240
47 D 0505	86-PM5	5	.45	.37	.318	.273	.242
47 D 0506	86-PM6	6	.47	.39	.331	.284	.252
47 D 0507	86-PM7S	7S	.57	.48	.403	.345	.306
47 D 0508	86-PM8	8	.47	.39	.333	.285	.253
47 D 0512	86-PM9	9	.48	.40	.339	.290	.258
47 D 0513	86-PM11	11	.49	.41	.345	.295	.262
47 D 2655	86-PM12	12	.50	.41	.349	.299	.265

Amphenol Cable Clamp Type 79-CC4. For above connectors. Relieves strain on soldered connections. Shpg. wt., 1 oz.
47 D 0670. 1-49.....Each .09 50-249.....Each .08
250-499....Ea. .063 500-999....Ea. .054 1000-2499....Ea. .048

SERIES 86 STANDARD TYPE CP PLUGS

Bakelite plugs for use as chassis connectors. Retainer-ring mounting. Use adapter plate below for replacement mtg. With mtg. ring for 1 11/64" holes. †Have guide post and aligning key. Av. wt., 2 oz.

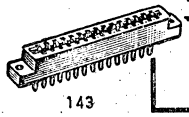
Stock No.	Mfr's Type	Pins	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0015	86-CP4	4	.23	.19	.159	.136	.121
47 D 0016	86-CP5	5	.23	.19	.162	.139	.123
47 D 0017	86-CP6	6	.25	.20	.175	.150	.133
47 D 0019	86-CP7S	7-Small	.26	.21	.181	.155	.138
47 D 0020	86-CP8†	Octal	.25	.21	.177	.151	.134
47 D 0021	86-CP9†	9	.26	.21	.183	.156	.139
47 D 0022	86-CP11†	11	.27	.22	.188	.161	.143
47 D 2654	86-CP12†	12	.28	.23	.193	.165	.147

Adapter Plate Type 12-001-03. Nickel-plated steel. For all Type CP plugs above. 1 1/2" to 1 7/8" centers. Wt., 1 oz.
47 D 0023.....Each .05

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Amphenol Printed Circuit Card Edge Connectors

SERIES 143 .156" CENTER PC CONNECTORS



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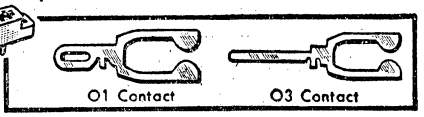
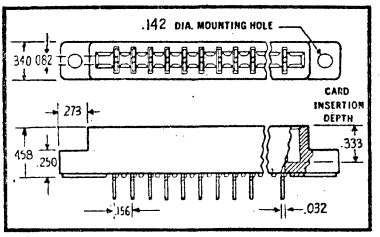
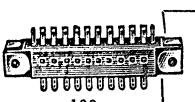




Mate with standard .054 to .070" PC board and Series 133 plugs at right. Compact bodies are molded of diallyl phthalate dielectric. Excellent insertion characteristics. Long spring base of contact prevents "setting". Drop at 2 amps is approx. 5 millivolts. May be polarized by 143-953 key when used with 133 Series. Last 2 digits in Type No. indicate tail style. Type 01, eyelet contact; Type 03, .040x.400" pin contact. Gold-flashed albaloy contacts. Rated 600 V rms at 5 amps. Breakdown voltage, 5400 VDC at sea level. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-49	50-99	100-249	250-999	1000-2499
47 D 1090	143-006-01	6	1.04	.87	.73	.63	.56
47 D 0503	143-010-01	10	1.16	.97	.82	.70	.62
47 D 2675	143-012-01	12	1.21	1.01	.85	.73	.64
47 D 0500	143-015-01	15	1.25	1.04	.88	.75	.67
47 D 0501	143-018-01	18	1.44	1.20	1.01	.86	.77
47 D 0502	143-022-01	22	1.68	1.41	1.18	1.01	.90
47 D 2850	143-006-03	6	1.14	.96	.80	.69	.61
47 D 2851	143 010-03	10	1.29	1.08	.91	.78	.69
47 D 2852	143-012-03	12	1.33	1.11	.93	.80	.71
47 D 2853	143-015-03	15	1.37	1.15	.96	.83	.73
47 D 2854	143-018 03	18	1.58	1.32	1.11	.95	.84
47 D 2855	143-022-03	22	1.87	1.57	1.31	1.13	1.00
47 D 2676	143-953	Polar Key	.02	.02	.02	.02	.015

SERIES 133 .156" CENTER PC PLUGS



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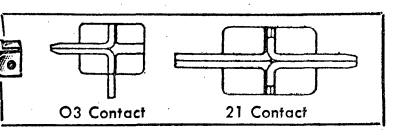
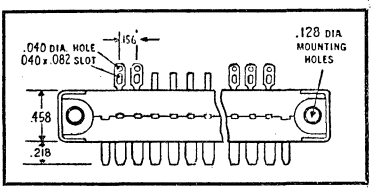
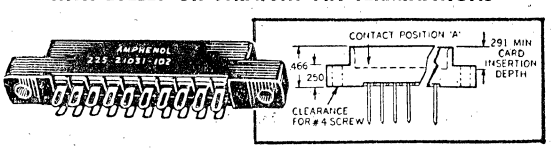




Mate with 143 Series shown at left. Molded of diallyl phthalate dielectric; have brass, cadmium-plated guide pins; cadmium-plated end caps and gold-over-albaloy-plated brass contacts. Two .128" holes for bolting to wiring board. Contacts are not subject to damage by mating or unmating at angle. Last two digits in Type No. indicate tail style. Type 03 with .042" dia. contact may be dip soldered to a board for applications similar to using the board itself for mating. Type 21 has eyelet tail for easy cable plug-in to PC board. Operating voltage rating; 600 V rms at sea level. Current rating; 5 amps. Av. contact breakdown voltage; 3250 volts DC at sea level. Wt., 2 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-49	50-99	100-249	250-999	1000-2499
47 D 2856	133-006-21	6	1.77	1.48	1.24	1.06	.94
47 D 1085	133-010-21	10	2.00	1.67	1.40	1.20	1.07
47 D 2857	133-012-21	12	2.45	2.05	1.72	1.48	1.31
47 D 1086	133-015-21	15	2.39	2.00	1.68	1.44	1.28
47 D 1087	133-018-21	18	2.70	2.26	1.90	1.63	1.44
47 D 1088	133-022-21	22	2.93	2.45	2.06	1.76	1.57
47 D 2858	133-006-03	6	1.73	1.44	1.21	1.04	.92
47 D 2859	133-010-03	10	1.93	1.62	1.36	1.16	1.03
47 D 2860	133-012-03	12	2.23	1.86	1.56	1.34	1.19
47 D 2861	133-015-03	15	2.27	1.90	1.59	1.36	1.21
47 D 2862	133-018-03	18	2.64	2.21	1.85	1.59	1.41
47 D 2863	133-022-03	22	2.77	2.31	1.94	1.66	1.48

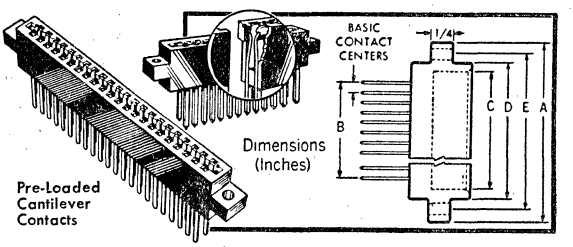
SERIES 225 PRINTED CIRCUIT RECEPTACLES WITH EYELET OR STRAIGHT PIN TERMINATIONS



Have gold-plated beryllium-copper contacts rated 5 amps at 600 VAC rms. Bifurcated design guarantees two points of positive contact. Convexity of contact face concentrates bearing pressure of mating surface reducing voltage losses to a minimum. Large mating surface provides low contact resistance. .156" centers for use with .154 to .170" printed circuit boards. Glass-filled diallyl phthalate one-piece connector body withstands physical and thermal shocks. Meet MIL-C-21097B. No loss of contact position even with polarizing key. Card slot provides guidance for misaligned boards and permits easy entry even in blind applications, alignment is not possible. Screw mount. .406" straight pin. *2 independent rows of contacts. †2 rows bridged for single readout. Solder terminations. Av., 2 oz.

Stock No.	Type 225-	Contacts	Tail Style	EACH 1-49	50-99	100-249	250-999	1000-2499
47 D 2341	21021-101*	20	Eyelet	1.66	1.39	1.17	1.00	.89
47 D 2342	21521-101*	30	Eyelet	2.31	1.93	1.62	1.39	1.23
47 D 2343	21821-101*	36	Eyelet	2.68	2.24	1.88	1.61	1.43
47 D 2344	22221-101*	44	Eyelet	2.95	2.47	2.07	1.78	1.58
47 D 2345	22821-101*	56	Eyelet	4.95	4.14	3.47	2.98	2.64
47 D 2347	21021-103*	20	Pin	1.66	1.39	1.17	1 00	.89
47 D 2348	21521-103*	30	Pin	2.31	1.93	1.62	1.39	1.23
47 D 2349	21821-103*	36	Pin	2.68	2.24	1.88	1.61	1.43
47 D 2377	22221-103*	44	Pin	2.95	2.47	2.07	1.78	1.58
47 D 2380	21031-101†	10	Eyelet	1.66	1.39	1.17	1.00	.89
47 D 2381	21531-101†	15	Eyelet	2.29	1.91	1.61	1.38	1.22
47 D 2382	21831-101†	18	Eyelet	2.33	1.95	1.64	1.40	1.24
47 D 2383	22231-101†	22	Eyelet	3.08	2.58	2.16	1.85	1.64
47 D 2384	22831-101†	28	Eyelet	4.37	3.65	3.07	2.63	2.33
47 D 2386	21031-103†	10	Pin	1.66	1.39	1.17	1.00	.89
47 D 2387	21531-103†	15	Pin	2.29	1.91	1.61	1.38	1.22
47 D 2389	22231-103†	22	Pin	3.08	2.58	2.16	1.85	1.64
47 D 2390	22831-103†	28	Pin	4.37	3.65	3.07	2.63	2.33
47 D 2435	225-594	Pol. Key		.02	.02	.02	.02	.02

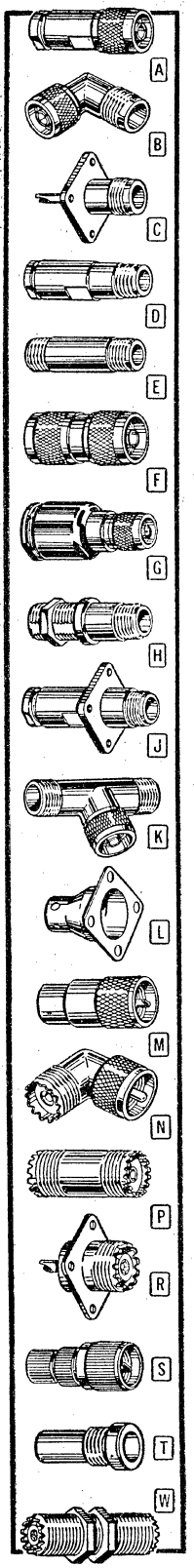
SERIES 261 WIRE-WRAP CARD EDGE CONNECTORS



High-performance edgeboard connectors with .100" centers. For dual readout of double-sided printed circuit boards. Pre-loaded cantilever-type contacts are assembled into dielectric with precise spacing for automatic solderless wrap terminations. Tail length is sufficient for three wire wraps plus space for bussing or PC board next to block. Contacts are confined in dielectric to determined pre-load force for fixed, definite separation eliminating possibility of shorts. Gold-plated phosphor bronze contacts rated at 5.0 amps. Voltage rating: 300 V rms at sea level. Minimum voltage breakdown: 1800 V rms. Contact resistance: 6.0 milliohms max. .025" square tail, with 50001-type contact. Key replaces one pair of contacts. See dimensions in table below. Av. shpg. wt., 3 oz.

Contacts	A	B	C	D	E
15	2.474	1.400	1.720	1.874	2.156
18	2.774	1.700	2.020	2.174	2.456
22	3.174	2.100	2.420	2.574	2.856
30	3.974	2.900	3.220	3.374	3.656
36	4.574	3.500	3.820	3.974	4.256
43	5.274	4.200	4.520	4.674	4.956

Stock No.	Mfr's Type	No. Contacts	EACH 1-49	50-99	100-249	250-999	1000-2499
47 D 2429	261-10015-2D1	15	2.16	1.81	1.52	1.30	1.15
47 D 2430	261-10018-2D1	18	2.48	2.07	1.74	1.49	1.32
47 D 2431	261-10022-2D1	22	2.89	2.42	2.03	1.74	1.54
47 D 2432	261-10030-2D1	30	3.62	3.03	2.54	2.18	1.93
47 D 2433	261-10036-2D1	36	4.20	3.51	2.95	2.53	2.24
47 D 2434	261-10043-2D1	43	4.89	4.09	3.43	2.94	2.61
47 D 2436	261-70005	Pol. key	.02	.02	.02	.02	.02



Amphenol Coaxial Connectors

SERIES 82 COAXIAL CONNECTORS

Highly dependable, weatherproof coaxial connectors. Meet government specifications. Av. shpg. wt., 2 oz.

TYPE N CONNECTORS. Low voltage. 50 ohms except *70 ohms.

Stock No.	Military No.	Mfr's Type	Description	Fig.	For RG/U Cables	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2459	UG-18B/U	82-86	Plug	A	5, 6, 21	1.91	1.57	1.32	.....	.....
47 D 0313	UG-21B/U	82-61	Plug	A	8, 9, 10	1.32	1.08	.91	.79	.69
47 D 2602	UG-21C/U	82-96	Plug	A	8, 9, 10	1.40	1.15	.97	.84	.74
47 D 2461	UG-21D/U	82-202	Plug	A	8, 9, 10	1.23	1.01	.85	.73	.65
47 D 0314	UG-22B/U	82-62	Panel Jack	J	8, 9, 10	1.81	1.48	1.25	1.08	.95
47 D 0315	UG-23B/U	82-63	Jack	D	8, 9, 10	1.49	1.22	1.03	.89	.78
47 D 2600	UG-23D/U	82-209	Jack	D	8, 9, 10	1.66	1.36	1.14	.99	.87
47 D 0520	UG-27A/U	82-64	Angle Adapter	B	.....	3.14	2.58	2.16	1.87	1.65
47 D 2462	UG-27B/U	82-98	Angle Adapter	B	.....	3.40	2.79	2.34	2.02	1.78
47 D 2463	UG-27C/U	82-213	Angle Adapter	B	.....	2.76	2.27	1.90	1.64	1.45
47 D 2464	UG-28A/U	82-99	"T" Adapter	K	.....	3.33	2.74	2.30	1.98	1.75
47 D 0521	UG-29A/U	82-65	Adapter	E	.....	1.93	1.59	1.33	1.15	1.01
47 D 2604	UG-29B/U	82-101	Adapter	E	.....	1.68	1.38	1.16	1.00	.88
47 D 0522	UG-30/U	82-66	Bulkhead Adapter	H	.....	3.90	3.21	2.69	1.32	2.05
47 D 2108	UG-30D/U	91100	Bulkhead Adapter	H	.....	2.99	2.46	2.06	1.78	1.57
47 D 2603	UG-57B/U	82-100	Adapter	F	.....	2.15	1.76	1.48	1.28	1.13
47 D 0499	.....	82-112*	Panel Receptacle	C	.....	1.91	1.57	1.32	1.14	1.00
47 D 0529	UG-58A/U	82-97	Panel Receptacle	C	.....	1.02	.84	.70	.61	.54
47 D 0312	UG-58/U	82-24*	Panel Receptacle	C	.....	1.00	.82	.69	.60	.53
47 D 0316	UG-94A/U	82-84*	Plug	A	11, 12, 13	2.02	1.66	1.39	1.20	1.06
47 D 2606	UG-95A/U	82-89	Jack	D	11, 12, 13	2.08	1.71	1.43	.....	.....
47 D 0519	UG-107A/U	82-36	"T" Adapter	K	.....	4.56	3.75	3.14	.....	.....
47 D 0558	UG-107B/U	82-102	"T" Adapter	K	.....	4.80	3.94	3.30	2.85	2.51
47 D 2116	UG-536/U	34000	Plug	A	58, 141	1.93	1.59	1.33	1.15	1.01
47 D 2117	UG-536B/U	34025	Plug	A	55, 58	1.47	1.20	1.01	.82	.77
47 D 2118	UG-603A/U	34525	Plug	A	59, 62, 71	2.10	1.73	1.45	1.25	.....
47 D 2465	UG-680/U	82-811	Plug	Z	.....	2.27	1.87	1.57	1.35	1.19
47 D 2466	MX-913/U	82-106	Cap & Chain	....	.....	.58	.47	.40	.....	.....
47 D 0559	UG-167A/U	82-104	Plug	G	17, 18	6.30	5.17	4.34	3.75	.....
47 D 0560	UG-1185/U	82-312	Plug	A	8, 9, 87A	1.45	1.19	1.00	.86	.76
47 D 0561	UG-1186/U	82-313	Jack	D	8, 9, 87A	1.89	1.55	1.30	1.13	.99
47 D 2467	.....	82-835	Angle Plug	B	87A	4.27	3.50	2.94	2.54	2.24

TYPE HN CONNECTORS. For high-voltage applications. 50 ohms.

47 D 0375	UG-59A/U	82-38	Straight Plug	A	8, 9, 10	3.59	2.94	2.47	2.13	1.88
47 D 0317	UG-59B/U	82-804	Straight Plug	A	8, 9, 10	3.25	2.67	2.24	1.93	1.70
47 D 2468	UG-496/U	82-92	Panel Receptacle	C	.....	2.76	2.27	1.90	1.64	1.45
47 D 0318	UG-560/U	82-805	Panel Receptacle	C	.....	3.23	2.65	2.22	1.92	1.69
47 D 0563	UG-1213/U	82-320	Straight Plug	A	8, 9, 87A	4.43	3.64	3.06	2.64	2.32
47 D 0515	UG-1215/U	82-324	Panel Jack	J	8, 9, 87A	5.30	4.35	3.65	.....	.....
47 D 2470	.....	82-833	Angle Plug	B	8, 9, 10	6.87	5.64	4.73	4.09	.....
47 D 2610	.....	82-816	Straight Plug	A	54A	4.05	3.33	2.79	2.41	.....

TYPE C AND LC CONNECTORS. For high-voltage applications. 50 ohms.

47 D 2471	UG-568/U	82-504	Panel Receptacle	Y	.....	1.89	1.55	1.30	.....	.....
47 D 0489	UG-573A/U	82-530	Plug	A	8, 9, 10	2.27	1.87	1.57	1.35	1.19
47 D 2612	UG-710A/U	82-531	Angle Plug	B	8, 9, 10	4.50	3.69	3.10	2.68	2.36

SERIES 83 UHF COAXIAL CONNECTORS AND ASTROPLATE

Meet government specs. *Polystyrene insulation. †Mica-filled insert. Non-constant impedance. Av. wt., 2 oz.

UHF SMALL SINGLE CONTACT. For any RF application. ‡For Astroplate, add —1050 to Mfr's Type.

Stock No.	Military No.	Mfr's Type	Description	Fig.	For RG/U Cables	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 0357	UG-106/U, M-360	83-1H	Hood	L	8, 9, 10, 11	.45	.37	.31	.27	.24
47 D 2450	UG-111/U	83-750	Plug	M	59, 62, 71	.96	.79	.66	.57	.50
47 D 2521 C	UG-175/U	83-185	Reducing Adapter	T	25, 55, 58	.17	.14	.12	.10	.09
47 D 2530 C	UG-176/U	83-168	Reducing Adapter	T	59, 62, 71	.17	.14	.12	.10	.09
47 D 0351	UG-177/U	83-765	Hood	L	29, 55, 58	.41	.33	.28	.24	.21
47 D 0373	UG-203/U, 49482	83-776	Plug	M	55, 59, 62, 71	1.53	1.26	1.06	.91	.80
47 D 2531 C	UG-363/U, PL-274	83-1F*	Straight Adapter	W	.....	2.65	2.18	1.83	1.58	1.39
47 D 2534 C	UG-646/U, M-359	83-1AP*	Angle Adapter	N	.....	1.62	1.33	1.11	.96	.85
47 D 2545 C	M-358, 49119	83-1T*	"T" Adapter	K	.....	2.95	2.42	2.03	1.76	1.55
47 D 2452	M-359A, 49192	83-58	Angle Adapter	N	.....	2.08	1.71	1.43	1.24	1.09
47 D 2546 C	PL-258, 49191	83-1J*	Straight Adapter	P	.....	1.15	.94	.79	.68	.60
47 D 2437 C	PL-259, 49190	83-1SP†	Plug	M	8-13, 63, 65	.59	.49	.41	.35	.31
47 D 2454	PL-259A, 49195	83-756	Plug	M	8-12	1.45	1.19	1.00	.86	.76
47 D 2438 C	PL-259A, 49195	83-1SPN†	Plug	M	8-13, 63, 65	1.02	.84	.78	.61	.54
47 D 2439 C	SO-239, 49194	83-1R†	Panel Receptacle	R	.....	.56	.46	.38	.32	.29
47 D 2453	SO-239A	83-798	Panel Receptacle	R	.....	1.30	1.07	.89	.77	.68
47 D 0358	.....	83-1AC	Cap & Chain	....	.....	.72	.60	.50	.43	.28
47 D 2455	SO-239	83-1RTY†	Panel Receptacle	R	.....	.81	.67	.56	.48	.43
47 D 2456	.....	83-59	Angle Plug	....	8-13, 63, 65	4.29	3.52	2.95	2.55	2.25
47 D 2440 C	PL-259, 49190	83-822	Plug	M	8, 9	.75	.61	.52	.45	.39

UHF SMALL TWIN CONTACT. For use with 2-conductor coax cables.

47 D 0361	UG-102/U, PL-284	83-22SP	Plug	....	.....	1.45	1.19	1.00	.86	.76
47 D 0362	UG-103/U, SO-264	83-22R	Panel Receptacle	....	.....	1.17	.96	.81	.70	.61
47 D 0374	UG-104/U, PL-293	83-22AP	Angle Adapter	....	.....	2.40	1.97	1.65	.14	1.29
47 D 2458	.....	83-65	Reducing Adapter	T	59, 62, 71	.26	.21	.18	.16	.14

SOLDERLESS TYPE UHF CONNECTORS.

47 D 0509	.....	83-850	Plug	S	11	3.10	2.54	2.14	1.33	1.17
47 D 0510	.....	83-851	Plug	S	8	2.23	1.83	1.54	.....	.....

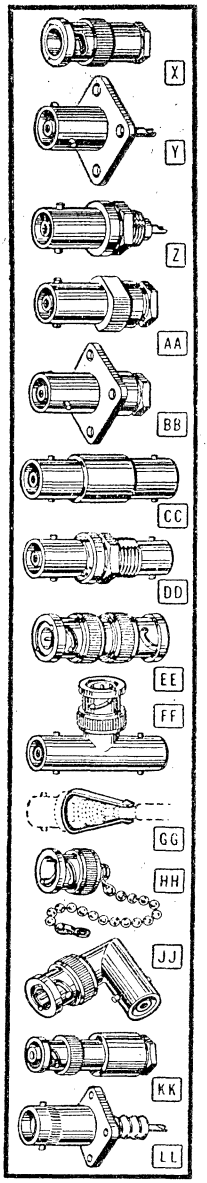
‡Astroplate Available on Those Stock Nos. with Suffix "C".

Amphenol Coaxial Connectors

SERIES 31 COAXIAL CONNECTORS—BNC TYPES AND ASTROPLATE

Small, weatherproof connectors. Low-voltage single-contact types. Feature bayonet-lock coupling for quick connect and disconnect. 50-ohm impedance. Designed for use up to 10,000 MHz, 500 volts peak. Replaces "O" size contacts in "MS" connectors. For Astroplate add—1050 to Type No. Available only on those Stock Nos. with suffix "C". *Pressurized. Av. shpg. wt., 4 oz.

Stock No.	Military No.	Mfr's Type	Description	Fig.	For RG/U Cables	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2512 C	UG-88/U	31-002	Plug	X	55, 58	.70	.58	.49	.42	.37
47 D 2513 C	UG-88B/U	31-018	Plug	X	55, 58	.81	.67	.56	.48	.43
47 D 2516 C	UG-88C/U	31-202	Plug	X	55, 58	.75	.61	.52	.45	.39
47 D 0393	UG-89/U	31-005	Jack	AA	55, 58	1.09	.89	.75	.65	.57
47 D 2621	UG-89B/U	31-205	Jack	AA	55, 58	.98	.80	.68	.58	.51
47 D 2622	CW-159/U	31-017	Cap and Chain	HH	.....	.96	.79	.66	.57	.50
47 D 2122	UG-185	4500	Panel Receptacle	Y	.....	1.13	.93	.78	.67	.59
47 D 2481	UG-254A/U	31-016*	Bulkhead Receptacle	Z	.....	4.67	3.83	3.22	2.78	2.45
47 D 2519 C	UG-260/U	31-012	Plug	X	59, 62, 71	.75	.61	.52	.45	.39
47 D 2520 C	UG-260A/U	31-021	Plug	X	59, 62, 71	.83	.68	.57	.50	.44
47 D 2507 C	UG-260B/U	31-212	Plug	X	59, 62, 71	.85	.70	.59	.51	.45
47 D 0397	UG-261/U	31-015	Jack	AA	59, 62, 71	1.23	1.01	.85	.73	.65
47 D 2623	UG-261B/U	31-215	Jack	AA	59, 62, 71	1.17	.96	.81	.70	.61
47 D 0395	UG-262/U	31-011	Panel Jack	BB	59, 62, 71	1.36	1.12	.94	.81	.71
47 D 2625	UG-262B/U	31-211	Panel Jack	BB	59, 62, 71	1.36	1.12	.94	.81	.....
47 D 2508 C	UG-274/U	31-008	"T" Adapter	FF	.....	2.29	1.88	1.58	1.36	1.20
47 D 2482	UG-274A/U	31-208	"T" Adapter	FF	.....	2.51	2.06	1.73	1.49	1.31
47 D 2509 C	UG-290/U	31-003	Panel Receptacle	Y	.....	.79	.65	.54	.47	.41
47 D 2510 C	UG-290A/U	31-203	Panel Receptacle	Y	.....	.85	.70	.59	.51	.45
47 D 2627	UG-291B/U	31-201	Panel Jack	BB	55, 58	1.23	1.01	.85	.73	.....
47 D 0399	UG-291/U	31-001	Panel Jack	BB	55, 58	1.21	1.00	.84	.72	.64
47 D 0394	UG-306/U	31-009	Angle Adapter	JJ	.....	2.06	1.69	1.42	1.23	1.08
47 D 2119	UG-414/U	47000	Panel Recept. Adapter	.....	.....	1.72	1.41	1.19	1.02	.90
47 D 2484	UG-447/U	31-817	Panel Receptacle	Y	.....	1.02	.84	.70	.61	.54
47 D 2486	UG-491A/U	31-218	Adapter	EE	.....	2.36	1.94	1.62	1.40	1.24
47 D 2511 C	UG-492A/U	31-220	Bulkhead Adapter	DD	.....	2.76	2.27	1.90	1.64	1.45
47 D 2500 C	UG-625/U	5575	Bulkhead Receptacle	Z	.....	.72	.60	.50	.43	38
47 D 2501 C	UG-625B/U	31-236	Bulkhead Receptacle	Z	.....	.79	.65	.54	.47	.41
47 D 2502 C	UG-657/U	31-102	Bulkhead Receptacle	Z	.....	1.25	1.03	.87	.75	.66
47 D 2487	UG-909/U	31-206	Bulkhead Jack	.....	55, 58	1.49	1.22	1.03	.89	.78
47 D 2488	UG-910/U	31-207	Bulkhead Jack	.....	59, 62, 71	1.53	1.26	1.06	.91	.80
47 D 2137	UG-911A/U	31-237	Bulkhead Receptacle	Z	.....	2.00	1.64	1.38	1.19	1.05
47 D 2138	UG-912/U	31-238	Bulkhead Receptacle	Z	.....	1.85	1.52	1.27	1.10	.97
47 D 2489	UG-913/U	31-204	Angle Plug	.....	55, 58	2.95	2.42	2.03	1.76	1.55
47 D 2503 C	UG-914/U	31-219	Adapter	CC	.....	1.28	1.05	.88	.76	.67
47 D 2134	UG-1033/U	84975	Plug	X	122	1.53	1.26	1.06	.91	.80
47 D 2506 C	UG-1094/U	31-221	Bulkhead Receptacle	Z	.....	.70	.58	.49	.42	.37
47 D 2492	UG-1098/U	31-222	Angle Receptacle	.....	.....	2.68	2.20	1.84	1.59	1.40
47 D 2442 C	CW-123A/U	31-026	Cap and Chain	HH	.....	.49	.40	.34	.29	.26
47 D 0491	CW-155/U	31-007	Cap Only	HH	.....	.30	.25	.21	.18	.16
47 D 2495	.....	31-304	Plug	X	.....	1.49	1.22	1.03	.89	.78
47 D 2441 C	.....	31-759	Grounding Lug	GG	.....	.15	.13	.11	.09	.08
47 D 2628	.....	31-105	Panel Receptacle	Y	.....	1.21	1.00	.84	.72	.64
47 D 2629	.....	31-301	Plug	X	55, 58C, 142	1.47	1.20	1.01	.87	.77
47 D 2630	.....	31-850	Angle Plug	.....	59, 62, 71	3.37	2.77	2.33	2.01	1.77



MHV MINIATURE HIGH-VOLTAGE CONNECTORS. Single-contact types. Feature bayonet-lock coupling for quick connect and disconnect. Av. shpg. wt., 3 oz.

Stock No.	Military No.	Mfr's Type	Description	Fig.	For RG/U Cables	EACH 1-24	25-99	100-499	500-999	1000-249
47 D 2398	UG-931/U	27000	Panel Receptacle	LL	58, 59	1.83	1.50	1.26	1.09	.96
47 D 2399	UG-932/U	28000	Straight Plug	KK	58, 59	1.89	1.55	1.30	1.13	.99

MB MINIATURE RF COAXIAL CONNECTORS

Low-cost coaxial connectors. All have bayonet lock. Maximum ratings: 500 MHz, 500 volts, 400°F. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2581	45000	Plug for RG-58/U	1.34	1.10	.92	.80	.70
47 D 2585	46025	Receptacle (Kel-F)	1.06	.87	.73	.63	.56

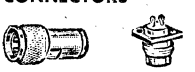
"BETWEEN-SERIES" ADAPTERS

Provide positive connection between various RF connector series. Non-constant impedance, but minimize electrical resistance. Av. shpg. wt., 3 oz.

Stock No.	Military No. UG-	Mfr's Type	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2480	201/U	31-830	2.53	2.07	1.74	1.50	1.32
47 D 2615	201A/U	31-216	1.74	1.43	1.20	1.04	.91
47 D 0493	273/U	31-028	1.40	1.15	.97	.84	.74
47 D 2484	349A/U	31-217	2.57	2.11	1.77	1.53	1.35
47 D 0046	.....	27-28	2.06	1.69	1.42	1.23	.....
47 D 2565	146/U	4400	3.31	2.72	2.28	1.97	1.74
47 D 2566	255/U	2900	2.34	1.92	1.61	1.39	1.23

TWINAX WEATHERPROOF RF CONNECTORS

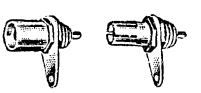
95-ohm twin-conductor weatherproof polarized connectors, for use up to 200 MHz. For use with cable type RG-22/U. Military No.: *UG-421/U; †UG-422/U. Av. shpg. wt., 2 oz.


6275 6225

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2588	6275*	RG-22/U plug	3.16	2.60	2.18	1.88	1.66
47 D 2589	6225†	Sq. flange socket.	3.31	2.72	2.28	1.97	1.74

COAXIAL RF PLUG-INS

Commonly used on drawer-type chassis for direct plug-in connections. Rated for 2000 volts. Plug and receptacle mount in 5/16" dia. hole. Military No.: *UG-1050/U; †UG-1051/U. Wt., 1 oz.

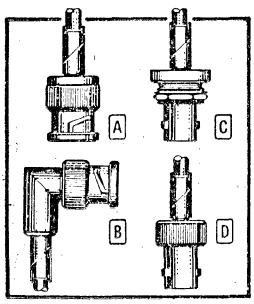

2175 2225

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2504	2225*	Male	.81	.67	.56	.48	.43
47 D 2505	2175†	Female	.94	.77	.65	.56	.49

Amphenol BNC and "Subminax" Connectors

CRIMP OR SOLDER "QUICK-CRIMP" BNC'S

Permits crimp or solder connection to cable. Even when center contact is crimped, connector maintains constant impedance. Costs are appreciably reduced because crimping cuts assembly time 66% or more. VSWR is identical to std. solder-type BNC's up to 10,000 MHz. Connectors may be used with other than 50-ohm cable for non-impedance match. Rated 500 V, max. Impedance, 50 ohms. VSWR, 1.25:1 max. (straight plug and jack). Cable retention equal to cable braid. Teflon dielectric. Bronze female and outer contact. Male contact and all other parts are brass. Center contacts gold plated; other parts silver plated. Sizes: plug, 1 17/64x9/16" dia.; right-angle plug, 1 9/16x1 1/8x9/16" dia.; cable jack, 1 11/32x9/16" dia.; bulkhead jack, 1 5/16x1 1/16" dia.—1/2" "D" mounting hole. Av. wt., 2 oz.



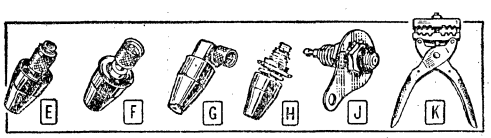
Stock No.	Mfr's Type	Fig.	Sim. to UG/-U	Description	Use With Amphenol RG/U Cable	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 0423	36775	A	88E	Plug	58, 58A, 58C, 141	1.02	.84	.70	.61	.54
47 D 0424	36875	A	88E	Plug	55, 55A, 142, 223	.98	.80	.68	.58	.51
47 D 0425	36800	D	89C	Cable Jack	58,58A,58C,59/A/B, 62, 141	1.23	1.01	.85	.73	.65
47 D 0427	34625	A	260B	Plug	71	.98	.80	.68	.58	.51
47 D 0428	68175	A	260B	Plug	59, 62, 71, 140, 210	1.00	.82	.69	.60	.53
47 D 0430	68150	D	261C	Cable Jack	59, 62, 71, 140, 210	1.38	1.14	.95	.82	.....
47 D 0431	95700	C	909B	Blkhd. Jack	55, 55A, 142, 223	1.85	1.52	1.27	1.10	.....
47 D 0433	95725	C	909B	Blkhd. Jack	58, 58A, 58C, 59 141, 210	1.81	1.48	1.25	1.08	.95
47 D 0434	95750	C	910B	Blkhd. Jack	59/A/B, 62/A/C, 140	2.19	1.80	1.51	.....	.....
47 D 0436	95775	C	910B	Blkhd. Jack	71	2.10	1.73	1.45	.....	.....
47 D 0441	95600	B	913A	Angle Plug	58, 58A, 58C, 141	3.57	2.93	2.46	2.12	1.87
47 D 0442	95625	B	913A	Angle Plug	62/A/C, 140, 59, 210	3.63	2.98	2.50	.....	.....
47 D 2493	31-026	.....	.....	Cap/Chain	Use with all receptacles	.45	.36	.31	.27	.24

CRIMPING TOOLS FOR "QUICK-CRIMP" BNC CONNECTORS

Quality industrial crimping tools for use with "Quick-Crimp" BNC connectors. Connector reliability depends on proper use of good crimping tools. These heavy-duty tools have extra-long handles and narrow jaws of cold, hardened steel. Easy spring-loaded ratchet action assures uniform, secure crimp. Highly efficient design permits crimping in less than ten seconds. Crimp is so effective that the wires will break before they can be pulled from the contact crimped section. Average shpg. wt., 1 lb.

Stock No.	Type No.	Use With Amphenol RG/U Cable	EACH
47 D 2609	227-350	55, 55B, 58, 58A, 58C, 141, 142, 223	78.00
47 D 2613	227-375	59, 59A, 59B, 62, 62A, 62C, 140, 210	78.00
47 D 3860	227-932-1	For crimping center contact of all above connectors	83.00

"SUBMINAX" CRIMP OR SOLDER RF CONNECTORS

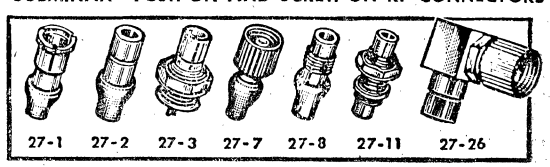


Series 5116 subminiature RF connectors feature captivated contacts for high resistance to cable strain due to mechanical stress, weather and other adverse operating conditions, etc. Female contacts are made of beryllium copper with gold over silver plating; male contacts and all other metal parts are brass with gold over silver plating. All connectors durable Teflon dielectrics. Series 5116 RF connectors offer constant impedance, low VSWR and low insertion loss for maximum electrical efficiency. They are interchangeable with other manufacturers' designs. Rated at 500 volts, peak. All RF connectors listed below have 50 ohm impedance except 057400, 95 ohms. Average shpg. wt., 1 oz. Type 227-911 crimping tool is designed for quick, easy operation—crimps cable braid to connector and assures solid secure connection. Shpg. wt., 1 lb.

Stock No.	Type 5116-	For RG Cable	Fig.	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 2320	037475	178A	F	2.55	2.09	1.76	1.52	1.34
47 D 2321	037600	178B	G	3.99	3.28	2.75	.....	.....
47 D 2322	037700	196	E	3.06	2.51	2.11	.....	.....
47 D 2323	037800	196A	H	4.14	3.40	2.85	.....	.....
47 D 2324	058350		J	3.23	2.65	2.22	.....	.....
47 D 2325	037575	174, 188, 188A	F	2.76	2.27	1.90	1.64	1.45
47 D 2328	037875	174, 188, 188A	H	4.16	3.40	2.85	.....	.....
47 D 2339	057400		J	2.93	2.41	2.02	.....	.....

47 D 2340 Type 227-911 Crimping Tool. (Fig. K).....16.00

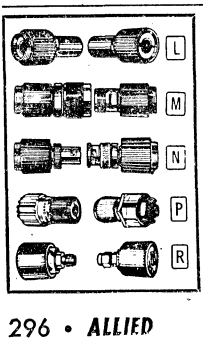
"SUBMINAX" PUSH-ON AND SCREW-ON RF CONNECTORS



Allow significant advances in the design of electronic equipment. Feature full-size electrical characteristics compressed into a space-saving and weight-saving design. For Amphenol subminiature coaxial cable. Low-resistance gold-plated bodies and contacts. Screw-on and push-on types cannot be intermixed; impedances must match. 50-ohm types except *75 ohms. Require †227-900 or ‡227-901 tool below. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999	1000-2499
47 D 0470	27-1†	Push-on	.75	.61	.52	.45	.39
47 D 0471	27-2†	Push-on	.77	.63	.53	.46	.40
47 D 0472	27-3	Push-on	1.09	.89	.75	.65	.57
47 D 0458	27-15*	Push-on	1.11	.91	.76	.66	.58
47 D 0475	27-7†	Screw-on	.70	.58	.49	.42	.37
47 D 0476	27-8†	Screw-on	.81	.67	.56	.48	.....
47 D 0477	27-9	Screw-on	.62	.51	.43	.37	.33
47 D 0478	27-10†	Screw-on	1.04	.86	.72	.62	.55
47 D 0479	27-11	Screw-on	1.66	1.36	1.14	.99	.87
47 D 0496	27-26†	Screw-on	1.72	1.41	1.19	1.02	.90
47 D 2645	27-34	Screw-on	2.02	1.66	1.39	.....	.....
47 D 0461	27-19*‡	Screw-on	.96	.79	.66	.57	.50
47 D 0463	27-21*	Screw-on	1.15	.94	.79	.68	.60

47 D 0467. Type 227-900 Crimping Tool.†.....19.50
47 D 0468. Type 227-901 Crimping Tool.‡.....19.50



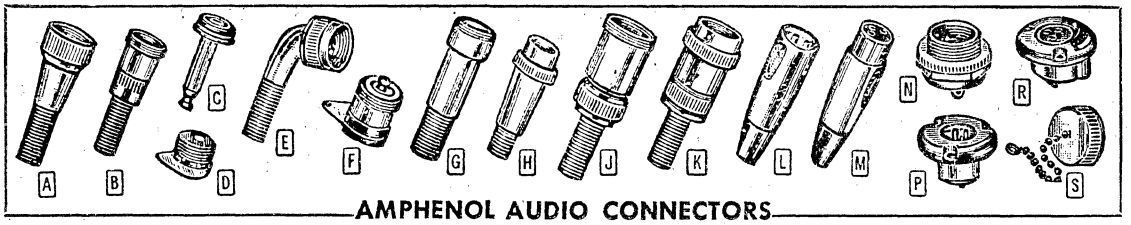
APC-7 PRECISION MICROWAVE RF CONNECTOR AND ADAPTERS

Precision 7mm 50 ohm sexless connector designed for rigid air line and ALJAK coax with frequencies up to 18 GHz. Maximum VSWR, 1.039 @ 18 GHz. Leakage level, 120 dB down. DC contact resistance, .001 ohm. Outstanding features are predictable electrical length, high degree of responsibility, low insertion loss and definable electrical and mechanical mating plane with all parts captive. With test certificate and wooden shipping case. Shpg. wt., 1 lb. Adapters make the APC-7 interchangeable with other manufacturers' connectors. *SWR @ 9 GHz. †SWR @ 12.4 GHz. Wt., 3 oz.

Stock No.	Type 131-	Adapts to	Max. SWR	Length x Dia.	Fig.	EACH
47 D 2051	1025	N Fem.	1.08*	1 43/64x1 3/16"	M	50.00
47 D 2052	1035	N Male	1.08*	1 13/16x1 3/16"	M	50.00
47 D 2053	1027	BNC Fem.	1.12	1 39/64x1 3/16"	N	50.00
47 D 2057	1037	BNC Male	1.12	1 23/32x1 3/16"	N	50.00
47 D 2059	1028	OSM Fem.	1.07†	1 11/32x1 3/16"	P	80.00
47 D 2060	1038	OSM Male	1.15	1 3/8x1 3/16"	P	80.00
47 D 2061	1022	GR 874	1.06	2 1/16x1"	R	60.00
47 D 2062	1023	GR 900	1.04	2 3/16x1 1/16"	R	110.00

L 47 D 2050, 131-1050 APC-7 Connector.....Per Pair 35.00

Amphenol and I.T.T. Cannon Audio Connectors



AMPHENOL AUDIO CONNECTORS

Receptacles are for chassis mounting; plugs and jacks are used on cables. Plugs fit either jacks or receptacles.

SERIES 75 SINGLE-BUTTON-CONTACT TYPES

Standard connectors with 5/8", 27 threads. Types marked with * require 3/8" mtg. holes. Types marked with † are miniature connectors approximately half the size and weight of standard counterparts with same specifications. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 1958	75 MC1F	A	Cable plug	.64	.53	.447	.383	.340
47 D 1955	75 MC1M	B	Cable jack	.46	.38	.32	.274	.243
47 D 1962	75 MC1P	C	Phone plug adap.	.52	.43	.364	.311	.276
47 D 1965	*75 PC1M	D	Receptacle open	.41	.35	.291	.249	.221
47 D 1959	75 MC1FA	E	90° cable jack	1.31	1.09	.917	.785	.697
47 D 1967	*75 CL PC1M	F	Recept., shorting	.67	.56	.472	.404	.359
47 D 2660	†75 3	F	Locknut receptacle	.50	.42	.349	.299	.265

SERIES 80 SINGLE AND DOUBLE-PIN-CONTACT TYPES

For shielded cables, single and two-conductor coaxial cables, photo cell leads, etc. Center contacts are pin and socket type. *Single-contact. †Polarized, double-contact. Av. shpg. wt., 4 oz.

47 D 2084	*80 C	N	Female receptacle	.54	.45	.375	.321	.285
47 D 2081	*80-M	H	Male cable plug	.67	.56	.469	.401	.356
47 D 2082	†80-MC2F	G	Female cable jack	.71	.59	.495	.424	.376
47 D 2664	†80-MC2F1	H	Female cable plug	.75	.63	.526	.45	.40
47 D 2083	†80-MC2M	H	Male cable plug	.69	.57	.482	.413	.366
47 D 2665	†80-MC2M1	G	Male cable jack	.65	.54	.453	.388	.344
47 D 2085	†80-PC2F	N	Female receptacle	.60	.50	.418	.358	.317
47 D 2666	†80 PC2M	N	Male receptacle	.57	.48	.40	.343	.304

[S] **Type 75-CCC1 Cap and Chain.** Seals open chassis units against dirt. Used with Series 75 and 80 receptacles. Shpg. wt., 2 oz.
47 D 0381. 1-49.....Each .45
50-249.....Each .37 250-499.....Each .314

[S] **Type 91-CCC3 Cap and Chain.** Seals open chassis units against harmful dirt and dust. For use with Series 91 connectors. 2 oz.
47 D 2674. 1-49.....Each .48
50-249.....Each .41 250-499.....Each .339

SERIES 91—3, 4 AND 6-CONTACT TYPES

Microphone connectors for use with portable equipment. Polarized to eliminate incorrect insertions. Clamps eliminate stress on soldered connections *3-contact type. †4-contact type. ‡6-contact type. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 1970	*91-MC3F	J	Female cable jack	1.07	.89	.749	.641	.569
47 D 2667	*91-MC3F1	K	Female cable plug	1.10	.92	.771	.66	.586
47 D 1971	*91-MC3M	K	Male cable plug	1.01	.85	.71	.608	.539
47 D 2668	*91-MC3M1	J	Male cable jack	.97	.81	.683	.585	.519
47 D 1972	*91-PC3F	N	Female receptacle	.73	.61	.515	.441	.392
47 D 2669	*91-PC3M	N	Male receptacle	1.14	.95	.80	.685	.608
47 D 1977	†91-MC4F	J	Female cable jack	1.10	.92	.774	.663	.588
47 D 2670	†91-MC4F1	K	Female cable plug	1.14	.95	.80	.685	.608
47 D 1976	†91-MC4M	K	Male cable plug	1.03	.86	.721	.618	.548
47 D 2672	†91-MC4M1	J	Male cable jack	.99	.83	.694	.594	.527
47 D 1978	†91-PC4F	N	Female receptacle	.72	.60	.505	.433	.384
47 D 2673	†91-PC4M	N	Male receptacle	.98	.82	.686	.588	.522
47 D 0170	‡91-MC6F	J	Female cable jack	1.15	.96	.809	.693	.615
47 D 0171	‡91-MC6M	K	Male cable plug	1.12	.94	.788	.675	.599
47 D 0172	‡91-PC6F	N	Female receptacle	.73	.61	.515	.441	.392

SERIES 91 "QUIK" 3 AND 4-CONTACT TYPES

Locked connection made by inserting plug in jack; released by light pressure on lock button. Gold-plated (over silver) bronze contacts. Dielectric is diallyl phthalate, shells are finished in satin nickel. *3-contact type. †4-contact type. Av. shpg. wt., 4 oz.

47 D 2065	*91-853	L	Male cable plug	1.73	1.45	1.22	1.04	.925
47 D 2066	*91-854	M	Female cable plug	2.27	1.90	1.59	1.36	1.21
47 D 2067	*91-855	P	Male receptacle	1.38	1.15	.968	.829	.736
47 D 2068	*91-856	R	Female receptacle	3.14	2.63	2.21	1.89	1.68
47 D 2069	†91-857	L	Male cable plug	1.82	1.52	1.28	1.09	.97
47 D 2070	†91-858	M	Female cable plug	2.52	2.11	1.77	1.51	1.34
47 D 2071	†91-859	P	Male receptacle	1.49	1.24	1.04	.894	.794
47 D 2072	†91-860	R	Female receptacle	3.37	2.82	2.37	2.03	1.80

I.T.T. CANNON AUDIO CONNECTORS

3 and 4-contact connectors with clamp and resilient socket insulator. Integral cable-clamp and push-action latchlock. First digit in Mfr's Type shows no. of contacts. Three 15-amp or four 10-amp contacts. *Wall-type receptacles; †panel-type receptacles. Av. wt., 4 oz.

90-DEGREE PLUGS

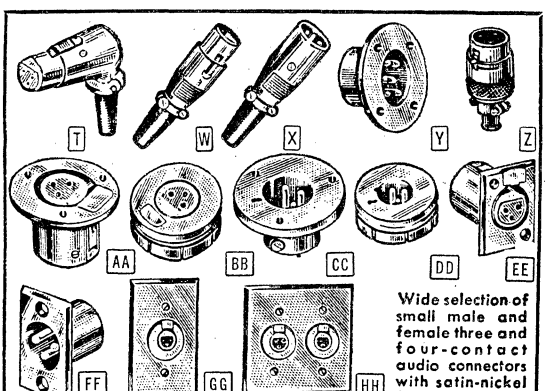
Stock No.	Mfr's Type	Fig.	Description	1-9 EA.	10-49 EA.	50-99 EA.
47 D 0948	XLR-3-15	T	Female (socket insert)	4.84	4.44	4.04
47 D 0949	XLR-4-15	T	Female (socket insert)	4.89	4.48	4.08

STRAIGHT CORD PLUGS

47 D 0790	XLR-3-11C	W	Female (socket insert)	1.57	1.44	1.31
47 D 0983	XLR-3-11SC	W	As above, steel shell	4.99	4.58	4.16
47 D 1212	XLR-4-11C	W	Female (socket insert)	1.99	1.82	1.66
47 D 0984	XLR-4-11SC	W	As above, steel shell	5.08	4.66	4.24
47 D 0791	XLR-3-12C	X	Male (pin insert)	1.36	1.25	1.14
47 D 0985	XLR-3-12SC	X	As above, steel shell	3.98	3.65	3.32
47 D 1213	XLR-4-12C	X	Male (pin insert)	1.45	1.33	1.21
47 D 0986	XLR-4-12SC	X	As above, steel shell	4.10	3.76	3.42

WALL AND PANEL RECEPTACLES

47 D 1214	XLR-3-13*	AA	Female (socket insert)	2.25	2.06	1.88
47 D 1215	XLR-4-13*	AA	Female (socket insert)	2.33	2.14	1.95
47 D 1216	XLR-3-13N†	BB	Female (socket insert)	3.05	2.80	2.55
47 D 1217	XLR-4-13N†	BB	Female (socket insert)	3.15	2.89	2.63
47 D 1218	XLR-3-14*	CC	Male (pin insert)	1.03	.94	.86
47 D 1219	XLR-4-14*	CC	Male (pin insert)	1.06	.97	.88
47 D 1223	XLR-3-14N†	DD	Male (pin insert)	2.48	2.28	2.07
47 D 1224	XLR-4-14N†	DD	Male (pin insert)	2.68	2.46	2.24
47 D 0792	XLR-3-31*	EE	Female (socket insert)	2.35	2.15	1.96
47 D 1225	XLR-4-31*	EE	Female (socket insert)	2.41	2.21	2.01
47 D 0793	XLR-3-32*	FF	Male (pin insert)	1.33	1.22	1.11
47 D 1226	XLR-4-32*	FF	Male (pin insert)	1.75	1.61	1.46
47 D 0987	XLR-3-35*	GG	Female (socket insert)	5.77	5.29	4.81
47 D 0988	XLR-3-35-2G*	HH	As above, Dual ganged	10.61	9.72	8.84



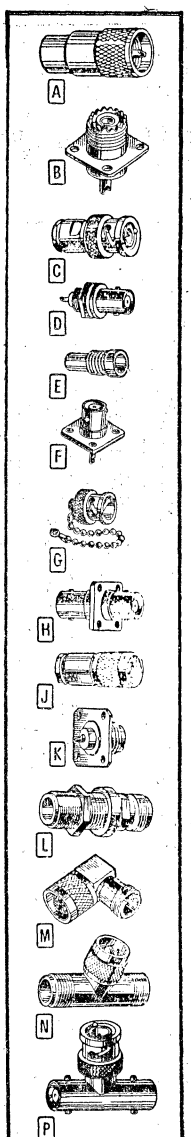
Wide selection of small male and female three and four-contact audio connectors with satin-nickel finish.

TYPE P 3-CONTACT RECEPTACLES AND PLUGS

For up to No. 10 wires. 30-amp contacts. Av. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-24	25-99	100-499
47 D 0707	P3-13	Y	Wall socket, female	5.74	4.88	4.31
47 D 0757	P3-14	Y	Wall mount, male (pin)	4.73	4.02	3.55
47 D 0724	P3-CG-11S	Z	Cable plug, female (skt)	7.84	6.66	5.88
47 D 0701	P3-CG-12S	Z	Cable plug, male (pin)	7.20	6.12	5.40

KINGS RF Connectors and K-Grips



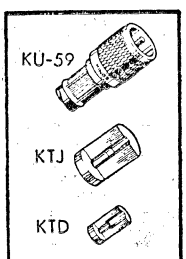
MIL SPEC TARNISH-RESISTANT RF CONNECTORS

MIL spec coax connectors. TR-4 (tarnish resistant) coated. Series HN, BNC, C, N weatherproof. Max. voltage: HN, 5000 V; BNC, 500 V; N, 1500 V. BNC and C bayonet coupling types. Numbers in "Use with K-Grip" column, refer to "Key" column in table at bottom of page. Av. wt., 3 oz.

Stock No.	Mfr's Type	MIL No.	Fig.	For RG/U Cable	Desc.	Series	Use with K-Grip	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4400	KN-56-04	UG-18D/U	J	5, 6, 21, 212	Plug	N	.....	1.54	1.28	1.07	.97	.88	.84
47 D 4401	KN-57-02	UG-21B/U	J	8, 9, 11, 213, 214	Plug	N	.....	1.28	1.07	.89	.81	.74	.70
47 D 4402	KN-56-01	UG-21D/U	J	8, 9, 11, 213, 214	Plug	N	1, 5	1.24	1.03	.86	.78	.71	.68
47 D 4403	KN-53-02	UG-21E/U	J	8, 9, 11, 213, 214	Plug	N	1, 5	1.36	1.13	.94	.85	.77	.73
47 D 4406	KN-97-01	UG-27B/U	M	.....	Adapt.	N	.....	2.82	2.35	1.96	1.78	1.62	1.54
47 D 4576	KN-98-01	UG-27C/U	M	.....	Adapt.	N	.....	2.50	2.08	1.73	1.57	1.43	1.36
47 D 4577	KN-96-03	UG-27D/U	M	.....	Adapt.	N	.....	2.50	2.08	1.73	1.57	1.43	1.36
47 D 4408	KN-94-04	UG-28A/U	N	.....	Adapt.	N	.....	3.17	2.64	2.20	2.00	1.82	1.73
47 D 4409	KN-97-03	UG-29B/U	....	.....	Adapt.	N	.....	1.52	1.27	1.06	.96	.87	.83
47 D 4411	KN-96-02	UG-30D/U	L	.....	Adapt.	N	.....	3.26	2.72	2.27	2.06	1.87	1.73
47 D 4578	KN-93-01	UG-30E/U	L	.....	Adapt.	N	.....	3.26	2.72	2.27	2.06	1.87	1.73
47 D 4412	KN-97-11	UG-57B/U	....	.....	Adapt.	N	.....	1.85	1.54	1.28	1.16	1.05	1.00
47 D 4413	KN-74-01	UG-58A/U	K	.....	Recept.	N	.....	1.10	.92	.77	.70	.64	.61
47 D 4415	KH-53-01	UG-59E/U	....	8, 9, 11, 213, 214	Plug	HN	1, 5	4.13	3.44	2.87	2.61	2.37	2.26
47 D 4416	KC-51-01	UG-88/U	C	55, 58	Plug	BNC	.....	.70	.58	.48	.44	.40	.38
47 D 4417	KC-58-01	UG-88C/U	C	55, 58, 142, 223	Plug	BNC	2, 4	.72	.60	.50	.45	.41	.39
47 D 4418	KC-56-01	UG-88D/U	C	55, 58, 142, 123	Plug	BNC	2, 4, 6	.85	.71	.59	.54	.49	.47
47 D 4419	KC-53-01	UG-88E/U	C	55, 58, 142, 223	Plug	BNC	2, 4, 6	.85	.71	.59	.54	.49	.47
47 D 4579	KC-55-01	UG-88F/U	C	55, 58, 223	Plug	BNC	2, 4, 6	.97	.81	.67	.61	.56	.53
47 D 4421	KC-38-02	UG-89C/U	....	55, 58, 142, 223	Jack	BNC	2, 4, 6	.86	.71	.59	.54	.49	.47
47 D 4423	KC-81-01	CW-123A/U	G	.....	Cap/Ch	BNC	.....	.42	.35	.29	.26	.24	.23
47 D 4425	KU-91-02	UG-175/U	E	58	Adapt.	UHF	.....	.17	.14	.12	.11	.10	.09
47 D 4426	KU-91-03	UG-176/U	E	59, 62, 71	Adapt.	UHF	.....	.17	.14	.12	.11	.10	.09
47 D 4428	KN-94-05	UG-201A/U	....	.....	Adapt.	BNC	.....	1.57	1.31	1.09	.99	.90	.86
47 D 4429	KU-71-02	SO-239	B	8, 13, 63, 65	Recept.	UHF	.....	.56	.47	.39	.35	.32	.30
47 D 4430	KC-91-01	UG-255/U	....	.....	Adapt.	BNC	.....	2.22	1.85	1.54	1.40	1.33	1.27
47 D 4431	KU-51-01	PL-259	A	8, 13, 63, 65	Plug	UHF	.....	.56	.47	.39	.35	.32	.30
47 D 4432	KV-94-06	UG-259A/U	A	.....	Adapt.	LC, HN	.....	7.25	6.04	5.03	4.57	4.15	3.95
47 D 4433	KC-51-02	UG-260/U	C	59, 62, 71, 210	Plug	BNC	.....	.73	.61	.51	.46	.42	.40
47 D 4434	KC-57-02	UG-260B/U	C	59, 62, 71, 210	Plug	BNC	3	.74	.62	.52	.47	.43	.41
47 D 4435	KC-58-02	UG-260C/U	C	59, 62, 71, 210	Plug	BNC	3	1.00	.83	.69	.63	.57	.54
47 D 4436	KC-56-02	UG-260D/U	C	59, 62, 71, 210	Plug	BNC	3	.85	.71	.59	.54	.49	.47
47 D 4580	KC-53-02	UG-260E/U	C	59, 62, 71	Plug	BNC	3	1.02	.85	.71	.64	.58	.55
47 D 4439	KC-91-02	UG-273/U	....	.....	Adapt.	BNC	.....	1.25	1.04	.87	.79	.72	.69
47 D 4440	KC-94-10	UG-274A/U	P	.....	Adapt.	BNC	.....	2.40	2.00	1.67	1.52	1.38	1.31
47 D 4441	KC-97-02	UG-274B/U	P	.....	Adapt.	BNC	.....	2.40	2.00	1.67	1.52	1.38	1.31
47 D 4442	KC-71-01	UG-290/U	F	.....	Recept.	BNC	.....	1.31	1.09	.91	.83	.75	.71
47 D 4443	KC-74-04	UG-290A/U	F	.....	Recept.	BNC	.....	.84	.70	.58	.53	.48	.46
47 D 4445	KN-94-09	UG-349A/U	....	.....	Adapt.	BNC,N	.....	2.11	1.76	1.47	1.43	1.22	1.16
47 D 4581	KC-94-09	UG-492A/U	H	.....	Adapt.	BNC	.....	2.72	2.27	1.89	1.72	1.56	1.49
47 D 4446	KC-98-01	UG-492C/U	H	.....	Adapt.	BNC	.....	2.58	2.15	1.79	1.63	1.48	1.41
47 D 4447	KC-96-01	UG-492D/U	H	.....	Adapt.	BNC	.....	2.58	2.15	1.79	1.63	1.48	1.41
47 D 4448	KN-57-05	UG-536B/U	J	55, 58, 142, 223	Plug	N	2, 4, 6	1.42	1.18	.98	.89	.81	.77
47 D 4449	KN-17-04	UG-556B/U	....	55, 58, 142, 223	Jack	N	2, 4	2.39	1.99	1.66	1.51	1.37	1.30
47 D 4454	KH-71-02	UG-560/U	....	.....	Recept.	HN	.....	2.82	2.35	1.96	1.78	1.62	1.54
47 D 4457	KD-56-03	UG-573B/U	....	8, 9, 11, 213, 214	Plug	C	1, 5	2.44	2.03	1.69	1.54	1.40	1.33
47 D 4458	KN-54-15	UG-594A/U	....	8, 11, 213	Plug	N	.....	4.76	3.97	3.31	3.01	2.74	2.61
47 D 4459	KC-77-01	UG-625B/U	D	.....	Recept.	BNC	.....	.73	.61	.51	.46	.42	.40
47 D 4460	KC-71-09	UG-657/U	D	.....	Recept	BNC	.....	1.22	1.02	.85	.77	.70	.67
47 D 4463	KC-17-06	UG-909B/U	....	55, 58, 142, 223	Jack	BNC	2, 4	1.37	1.14	.95	.86	.78	.74
47 D 4464	KC-17-07	UG-910B/U	....	59, 62, 71, 210	Jack	BNC	3	1.37	1.14	.95	.86	.78	.74
47 D 4465	KC-74-07	UG-911A/U	D	.....	Recept.	BNC	.....	1.86	1.55	1.29	1.17	1.06	1.01
47 D 4466	KC-74-10	UG-912A/U	D	.....	Recept.	BNC	.....	1.86	1.55	1.29	1.17	1.06	1.01
47 D 4468	KC-91-11	UG-914/U	H	.....	Adapt.	BNC	.....	1.16	.97	.81	.74	.67	.64
47 D 4469	KC-79-02	UG-931/U	....	.....	Recept.	MHV	.....	1.75	1.46	1.22	1.11	1.01	.96
47 D 4470	KV-54-05	UG-932A/U	....	59, 62, 71, 210	Plug	MHV	3	1.78	1.48	1.23	1.12	1.02	.97
47 D 4471	KC-74-06	UG-1094/U	D	.....	Recept.	BNC	.....	.70	.58	.48	.44	.40	.38
47 D 4472	KC-74-12	UG-1094A/U	D	.....	Recept.	BNC	.....	.79	.66	.55	.50	.45	.43
47 D 4474	KN-51-17	UG-1185/U	J	8, 9, 11, 213, 214	Plug	N	.....	1.25	1.04	.87	.79	.72	.69

"K-GRIP JR." FULLY CRIMPED PL-259-TYPE RF CONNECTORS

For faster assembly time. Use jacket and dielectric trim jigs for cable; crimp center contact, then crimp connector to cable. 2nd table shows proper tools for each connector. Crimp Tool requires dies*.

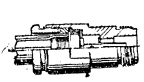


Stock No.	Mfr's Type	Series	For RG/U Cable Type	Description	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4564	KU59-46	UHF	58, 58A, 58C/U	Plug	.74	.62	.52	.47	.43	.41
47 D 4565	KU59-44	UHF	59, 59A, 59B, 62, 62A/U	Plug	.74	.62	.52	.47	.43	.41
47 D 4566	KU59-43	UHF	11, 11A/U	Plug	.74	.62	.52	.47	.43	.41
47 D 4567	KU59-42	UHF	8, 8A, 213/U	Plug	.74	.62	.52	.47	.43	.41

Conn. Type KU-	Replaces Old Type	Stock No.	Jacket Trim Jig Type No.	EA.	Stock No.	Dielectric Trim Jig Type No.	EA.	Stock No.	Crimp Tool KTH-	EA.
59-46	PL-259/UG-175	47 D 4568	KTJ-12	6.50	47 D 4570	KTD-34	3.50	47 D 1736	1000-1*	38.80
59-44	PL-259/UG-176	47 D 4568	KTJ-12	6.50	47 D 4571	KTD-33	3.50	47 D 1737	1000-2*	38.80
59-42/43	PL-259	47 D 4569	KTJ-11	6.50	47 D 4572	KTD-35	3.50	47 D 1738	1000-3*	38.80

47 D 1735. Type KTH-1000 Crimp Tool 71.00

K-GRIPS FOR RF CONNECTORS



Hold cable, eliminate braid combing, hold dielectric in position, simplify inspection.

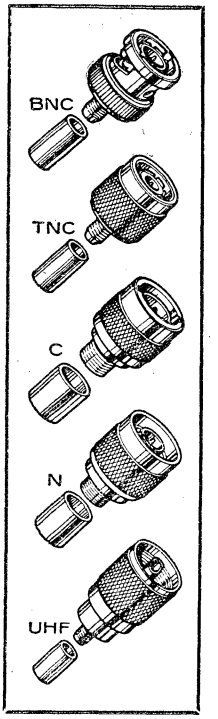
*Reference numbers used in RF connector table above. Av. wt., 2 oz.

Stock No.	Mfr's Type KS-	For RG/U Cable	Key *	EACH 1-99	100-249	250-499	500-999	Stock No.	Mfr's Type KS-	For RG/U Cable	Key *	EACH 1-99	100-249	250-499	500-999
47 D 4479	89-04	8, 11, 213	1	.68	.57	.52	.47	47 D 4484	89-17	55, 142, 223	4	.49	.41	.37	.34
47 D 4480	89-05	58	2	.53	.44	.40	.36	47 D 4487	89-24	9, 214	5	.71	.59	.54	.49
47 D 4483	89-06	59, 62, 210	3	.53	.44	.40	.36	47 D 4488	89-31	58	6	.62	.52	.47	.43

Crimp RF Connectors and "Black Boxes"

KINGS "K-GRIP JR." RF CONNECTORS

Small, lightweight versions of standard RF connectors, reduced to the essentials. Designed for fast, uniform assembly with hex forming tool and trim jigs, for mechanically strong and electrically consistent connections. Special serrations grip cable braid securely. Type TR-4 tarnish-resistant finish. **BNC Series:** Bayonet coupling for small-dia. RG/U cables of 50-ohm impedance; 1500 V rms. **TNC Series:** Positive lock thread coupling with low noise level; 50-ohm; 1500 V rms test. **C Series:** Bayonet coupling for medium-size 50-ohm cables; tested at 2500 V rms. **N Series:** Positive lock thread coupling; 50-ohm; 2500 V rms. **UHF Series:** Positive lock thread coupling. Jacks are not illustrated. Shpg. wt., 1 oz.



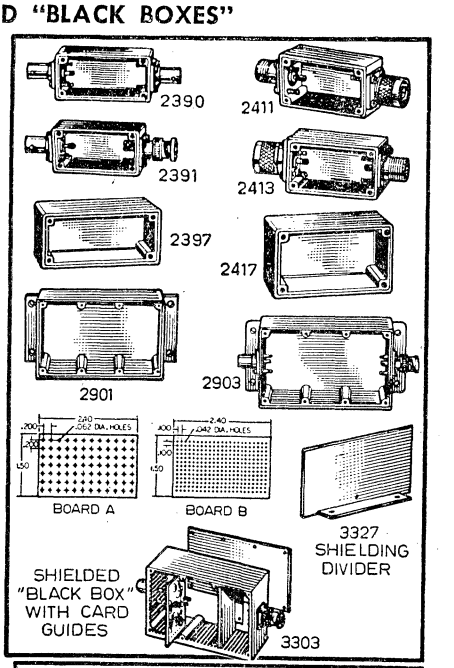
Stock No.	Mfr's Type	Series	For RG/U Cable Type	Description	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4538	KC39-26	BNC	58, 141	Jack	1.21	1.01	.84	.76	.69	.66
47 D 4539	KC39-27	BNC	55, 142, 220	Jack	1.21	1.01	.84	.76	.69	.66
47 D 4540	KC39-28	BNC	59, 62, 210	Jack	1.21	1.01	.84	.76	.69	.66
47 D 4541	KC39-29	BNC	71	Jack	1.21	1.01	.84	.76	.69	.66
47 D 4542	KC59-78	BNC	58, 141	Plug	1.00	.83	.69	.63	.57	.54
47 D 4543	KC59-79	BNC	59, 62, 120	Plug	1.01	.84	.70	.64	.58	.55
47 D 4544	KC59-80	BNC	55, 142, 223	Plug	1.00	.83	.69	.63	.57	.54
47 D 4545	KC59-81	BNC	71	Plug	1.01	.84	.70	.64	.58	.55
47 D 4546	KC59-98	BNC	58, 141	Plug	.94	.78	.65	.59	.54	.51
47 D 4530	KA39-17	TNC	58, 411	Jack	1.38	1.14	.96	.87	.79	.76
47 D 4531	KA39-18	TNC	55, 142, 220	Jack	1.38	1.14	.96	.87	.79	.76
47 D 4532	KA39-19	TNC	59, 62	Jack	1.38	1.14	.96	.87	.79	.76
47 D 4533	KA39-20	TNC	71	Jack	1.38	1.14	.96	.87	.79	.76
47 D 4534	KA59-44	TNC	58, 141	Plug	1.76	1.46	1.22	1.11	1.01	.97
47 D 4535	KA59-45	TNC	55, 142, 223	Plug	1.76	1.46	1.22	1.11	1.01	.97
47 D 4536	KA59-46	TNC	59, 62, 210	Plug	1.76	1.46	1.22	1.11	1.01	.97
47 D 4537	KA59-47	TNC	71	Plug	1.76	1.46	1.22	1.11	1.01	.97
47 D 4547	KD39-11	C	8, 11, 213	Jack	2.09	1.74	1.45	1.32	1.20	1.14
47 D 4548	KD39-12	C	9, 214	Jack	2.09	1.74	1.45	1.32	1.20	1.14
47 D 4549	KD59-51	C	8, 11, 213	Plug	2.75	2.29	1.91	1.74	1.58	1.50
47 D 4550	KD59-52	C	9, 214	Plug	2.75	2.29	1.91	1.74	1.58	1.50
47 D 4551	KN39-30	N	8, 11, 213	Jack	1.74	1.45	1.21	1.10	1.00	.95
47 D 4552	KN39-31	N	9, 214	Jack	1.74	1.45	1.21	1.10	1.00	.95
47 D 4553	KN59-67	N	8, 11, 213	Plug	1.56	1.30	1.08	.98	.89	.85
47 D 4554	KN59-68	N	9, 214	Plug	1.56	1.30	1.08	.98	.89	.85
47 D 4555	KU59-02	UHF	8, 11, 213	Plug	.74	.62	.52	.47	.43	.41
47 D 4556	KU59-07	UHF	58, 141	Plug	.74	.62	.52	.47	.43	.41
47 D 4557	KU59-08	UHF	59, 62, 210	Plug	.74	.62	.52	.47	.43	.41
47 D 4558	KU59-15	UHF	5, 6, 21, 143, 212, 222	Plug	.92	.77	.64	.58	.53	.50
47 D 4559	KU59-16	UHF	WE724, Belden 8281	Plug	.92	.77	.64	.58	.53	.50
47 D 4560	KU59-24	UHF	9, 214	Plug	.74	.62	.52	.47	.43	.41

POMONA SHIELDED AND UNSHIELDED "BLACK BOXES"

SHIELDED ALUMINUM "BLACK BOXES"

Ideal for compact packaging. Die-cast aluminum housing with blue, baked enamel finish; .040" anodized aluminum cover. With screws. Solder terminals for inside connections. Fully shielded for RF use. Operating temperature, —55° C to +150° C. Working voltage, 500 volts peak. Noise rejection, over 70 dB. Outside dimensions: 2300 Series, 0.88x1.13x2.25"; 2400 Series, 1.13x1.38x2.25"; 2900 Series including flange, 5.24x2.63x1.71"; 3300 Series, 4.13x2.63x1.66". 3300 Series, shielded with card guide. Cards below. Board A, except ‡B. *No. holes. †Copper clad one side. Av. shpg. wt., 6 oz.

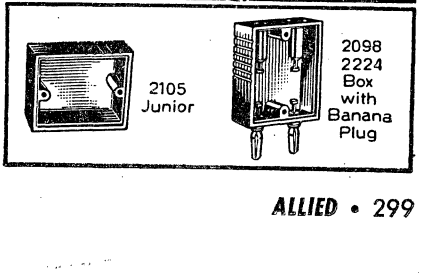
Stock No.	Mfr's Type	Connectors 1st End	2nd End	EACH 1-24	25-49	50-99	100-249
47 D 2288	2390	BNC Jack	BNC Jack	6.85	6.17	5.84	4.80
47 D 2289	2391	BNC Jack	BNC Plug	7.85	7.05	6.67	4.59
47 D 2290	2397	None	None	1.50	1.35	1.28	1.05
47 D 2292	2413	UHF Jack	UHF Plug	10.85	9.75	9.22	7.58
47 D 2293	2411	"N" Jack	"N" Plug	9.85	8.88	8.38	6.90
47 D 2294	2417	None	None	1.50	1.35	1.28	1.05
47 D 5375	2901	None	None	5.85	5.27	4.97	4.10
47 D 5376	2903	BNC Jack	BNC Plug	10.85	9.75	9.22	7.58
47 D 5377	3302	BNC Jack	BNC Jack	9.85	8.88	8.38	6.90
47 D 5378	3303	BNC Jack	BNC Plug	10.85	9.75	9.22	7.58
47 D 5379	3304	"N" Jack	"N" Jack	9.85	8.88	8.38	6.90
47 D 5380	3305	"N" Jack	"N" Plug	12.85	11.57	10.92	9.00
47 D 5381	3301	None	None	6.85	6.17	5.84	4.80
47 D 5382	3321	Paper Epoxy Card 12x7*		.50	.45	.43	.35
47 D 5383	3323	Glass Epoxy Card 12x7*		.65	.59	.55	.46
47 D 5384	3325	Glass Epoxy Card 12x7*†		.75	.68	.64	.53
47 D 5385	3326	Glass Epoxy Card 23x13*‡		.85	.77	.72	.60
47 D 5386	3327	Shielding Divider		.75	.68	.64	.53



UNSHIELDED PHENOLIC "BLACK BOXES"

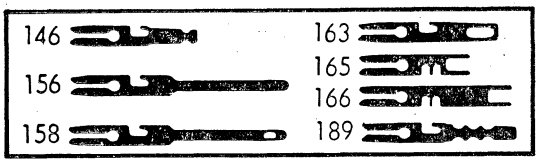
For potting and encapsulating. Molded housing of thermosetting electrical grade phenolic; cover of punched XXP laminated paper base phenolic. Operating temperature, —25° C to +125° C. Cover mounts with two self-tapping screws, included. Black color. Types 2098 and 2224 have .166" banana jacks at top, .166" banana plugs at bottom on ¾" centers. Working voltage, 5000 VDC. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Description	Size	EACH 1-24	25-49	50-99	100-249
47 D 2295	2105	Junior Size	1.75x1.44x0.69"	.75	.68	.64	.53
47 D 2296	2103	Queen Size	2.25x1.00x1.00"	.75	.68	.64	.53
47 D 2297	2104	King Size	2.38x1.53x1.53"	.75	.68	.64	.53
47 D 2283	2098	Banana Plug	2.48x1.44x0.69"	3.45	3.10	2.93	2.42
47 D 2285	2224	Banana Plug	3.11x1.53x1.53"	3.45	3.10	2.93	2.42



Elco Varicon® Receptacles and Plugs

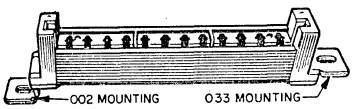
VARICON CONTACT TYPES



HOW TO ORDER RECEPTACLES. Specify Stock Number, then Type Number. In place of ***, indicate Type Number of contact desired. Example: 47 D 8000 A (Stk. No.)—00-5006-012-**146**-001 (Type No.).

SPECIFICATIONS. All Series. Diallyl phthalate insulation. Gold-flashed, nickel-plated phosphor-bronze contacts rated 10 amps. Maximum contact resistance, 0.006 milliohm.

SERIES 5006 .200″ RECEPTACLES



Type 003 Bracket Type 005 Bracket

Connectors for Varipak enclosures. Single row of contacts on .200″ spacing. Mating guides molded in sections of the connector. Accepts 1/16″ module card. Can be positioned with polarizing tab (see 5009 Series). Mates with Series 5001 contact strips on facing page. Specify type no. of contact termination desired in place of ***. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	No. of Contacts	EACH 1-99	100-249	250-999
47 D 8000 A	00-5006-012-***-001	12	1.85	1.44	1.24
47 D 8000 A	00-5006-015-***-001	15	2.25	1.75	1.50
47 D 8000 A	00-5006-020-***-001	20	2.88	2.24	1.92
47 D 8000 A	00-5006-023-***-001	23	3.22	2.51	2.15

Above, with brackets (last 3 digits in Type No.). 003 (above chassis mtg.) or 005 (below chassis mtg.). Specify contact Type.

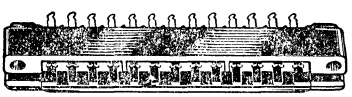
47 D 8000 A	00-5006-012-***-003	12	2.21	1.72	1.48
47 D 8000 A	00-5006-012-***-005	12	2.00	1.55	1.33
47 D 8000 A	00-5006-015-***-003	15	2.61	2.03	1.74
47 D 8000 A	00-5006-015-***-005	15	2.39	1.86	1.60
47 D 8000 A	00-5006-020-***-003	20	3.24	2.52	2.16
47 D 8000 A	00-5006-020-***-005	20	3.02	2.35	2.02
47 D 8000 A	00-5006-023-***-003	23	3.58	2.79	2.39
47 D 8000 A	00-5006-023-***-005	23	3.37	2.62	2.24

SERIES 5007 .200″ RECEPTACLES

Similar to Series 5006, but end sections have guides and mounting holes for direct mounting to chassis. Mate with Series 5000 plugs and strips, facing page. Accept 1/16″ module card, have card guide. .200″ spacing. Specify Type Number of contact termination desired in place of ***. Wt., 2 oz.

47 D 8000 A	00-5007-012-***-001	12	1.85	1.44	1.24
47 D 8000 A	00-5007-019-***-001	19	2.74	2.13	1.82
47 D 8000 A	00-5007-020-***-001	20	2.88	2.24	1.92
47 D 8000 A	00-5007-024-***-001	24	3.38	2.63	2.26

SERIES 5009 .200″ RECEPTACLES



Single row of contacts on .200″ spacing. Two .128″ mounting holes. Polarize without loss of contacts. Mate with Series 5000 contact strips. Open-end card slot for any width 1/16″ module card, except ‡3/32″. Position with polarizing tabs below. Specify Type Number of contact termination desired in place of ***. Av. shpg. wt., 2 oz.

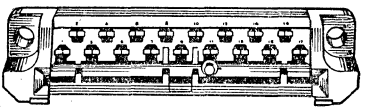
Stock No.	Mfr's Type	No. of Contacts	EACH 1-99	100-249	250-999
47 D 8000 A	00-5009-012-***-001	12	1.89	1.47	1.26
47 D 8000 A	00-5009-016-***-001	16	2.36	1.83	1.57
47 D 8000 A	‡00-5009-022-***-002	22	3.08	2.39	2.05
47 D 5467	60-5006. 3414 Pol. Tab for 1/16″ Card		Pkg. of 50 for 1.00		
47 D 5470	60-5006. 3424 Pol. Tab for 3/32″ Card		Pkg. of 10 for .20		

SERIES 7021 .100″ PLUGS

Double-tier plugs with .100″ spacing. For circuit boards 1/16″ thick. Mate with 7000 Series receptacles which do not have card guides. Rigid insulator maintains exact spacing between contacts, reduces card warp. Av. shpg. wt., 2 oz.

47 D 2890	00-7021-017-000-001	17	1.78	1.39	1.19
47 D 2891	00-7021-023-000-001	23	2.18	1.69	1.45
47 D 2892	00-7021-029-000-001	29	2.58	2.00	1.72
47 D 2893	00-7021-035-000-001	35	2.95	2.30	1.97
47 D 2894	00-7021-041-000-001	41	3.28	2.55	2.18

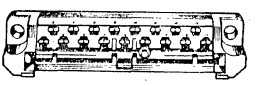
SERIES 7001 .100″ RECEPTACLES



Double row of contacts on .200″ spacing, .125″ between rows. Mate with Series 7022 or with 7000 Series Contact Strips (next page). For 1/16″ module card except †no card guide. Specify Type Number of contact termination desired in place of ***. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-99	100-249	250-999
47 D 8000 A	00-7001-017-***-001	17	3.43	2.30	1.91
47 D 8000 A	†00-7001-017-***-002	17	3.43	2.30	1.91
47 D 8000 A	00-7001-023-***-001	23	3.96	2.64	2.20
47 D 8000 A	†00-7001-023-***-002	23	3.96	2.64	2.20
47 D 8000 A	00-7001-029-***-001	29	4.33	2.89	2.41
47 D 8000 A	†00-7001-029-***-002	29	4.33	2.89	2.41
47 D 8000 A	00-7001-035-***-001	35	4.91	3.27	2.73
47 D 8000 A	00-7001-041-***-001	41	5.45	3.63	3.03
47 D 8000 A	†00-7001-041-***-002	41	5.45	3.63	3.03
47 D 8000 A	00-7001-047-†**-001	47	6.06	4.05	3.37

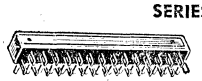
SERIES 7008 .100″ RECEPTACLES



Double row contacts, .125″ between rows, .200″ centers. Rows are offset .100″. Mate with Series 7022 plugs or with Series 7000 Contact Strips (next page). For 1/16″ PC cards except †no card guides. Specify Type No. of contact termination desired in place of ***. Av. shpg. wt., 2 oz.

47 D 8000 A	00-7008-017-***-001	17	3.43	2.30	1.91
47 D 8000 A	†00-7008-017-***-002	17	3.43	2.30	1.91
47 D 8000 A	00-7008-023-***-001	23	3.96	2.64	2.20
47 D 8000 A	†00-7008-023-***-002	23	3.96	2.64	2.20
47 D 8000 A	00-7008-029-***-001	29	4.33	2.89	2.41
47 D 8000 A	†00-7008-029-***-002	29	4.33	2.89	2.41
47 D 8000 A	00-7008 035-***-001	35	4.91	3.27	2.73
47 D 8000 A	†00-7008-035-***-002	35	4.91	3.27	2.73
47 D 8000 A	00-7008-041-***-001	41	5.45	3.63	3.03
47 D 8000 A	†00-7008-041-***-002	41	5.45	3.63	3.03
47 D 5467	60-5006, 3414 Polarizing Tab		Pkg. of 50 for 1.00		

SERIES 7022 .100″ PLUGS



Double-tier miniature plugs. .100″ spacing. Fit boards 1/16″ thick. Mate with 7000 Receptacles above.

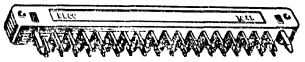
47 D 5541	00-7022-017-000-001	17	1.78	1.39	1.19
47 D 5544	00-7022-023-000-001	23	2.18	1.69	1.45
47 D 5621	00-7022-029-000-001	29	2.58	2.00	1.72
47 D 5622	00-7022-035-000-001	35	2.95	2.30	1.97
47 D 5545	00-7022-041-000-001	41	3.28	2.55	2.18
47 D 2895	00-7022-047-000-001	47	3.71	2.88	2.47

SERIES 7024 MINIATURE .100″ VARICON RECEPTACLES

Double row. Mate with 7023. Polarized at even positions. Open ended 1/16″ card slot, guide socket. Specify contact for ***. Av. shpg. wt., 2 oz.

47 D 8000 A	00-7024-017-***-001	17	3.26	2.28	1.96
47 D 8000 A	00-7024-023-***-001	23	3.70	2.59	2.22
47 D 8000 A	00-7024-029-***-001	29	4.16	2.91	2.50
47 D 8000 A	00-7024-035-***-001	35	4.66	3.26	2.80
47 D 8000 A	00-7024-041-***-001	41	5.14	3.60	3.08
47 D 5467	60-5006.3414 Polarizing Tab		Pkg. of 50 for 1.00		

SERIES 7023 MINIATURE .100″ VARICON PLUGS

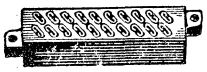


Mate with 7024 above. Mtg. flanges have .128″ diameter holes. For 1/16″ PC card. Guide pins. Av. wt., 2 oz.

47 D 5739	00-7023-023-000-001	23	2.61	2.03	1.74
47 D 5740	00-7023-029-000-001	29	3.01	2.34	2.00
47 D 5741	00-7023-035-000-001	35	3.38	2.63	2.26
47 D 5742	00-7023-041-000-001	41	3.78	2.94	2.52

Elco Varicon® Contact Strips, Pin Receptacles

VARITWIN-PIN .100″ TAPER-PIN RECEPTACLES



7014-Bottom

7009 & 7012 - Top

These Elco receptacles (per MIL-C-21097B and MIL-E-19600) feature Varitwin-Pin bifurcated contact terminations and guides that are integrally molded into the end sections. Mounting holes are .128″ diameter. Each receptacle consists of two rows of contacts, spaced .200″ within each row. Rows are .125″ apart and offset .100″ from each other. Accept a 1/16″ printed circuit card. Can be polarized without losing contact. Phosphor-bronze contacts are nickel-plated and gold-flashed for superior conductivity. Rated 10 amps. Insulation: Diallyl phthalate, glass-filled per MIL-M-14F Type SDGF specifications. Accept type 53 taper-pin. Av. shpg. wt., 6 oz.

SERIES 7009

Permits mounting of adjacent receptacles on .600″ centers. *Supplied without board guides. †Polarizing tab. For 7022 plugs or 7000 Contact Strips.

Stock No.	Mfr's Type	No. of Contacts	EACH 1-99	100-249	250-999
47 D 5430	00-7009-024-193-001	24	6.81	4.54	3.87
47 D 5431	00-7009-034-193-001	34	7.43	4.95	4.13
47 D 5755	00-7009-034-193-002*	34	7.43	4.95	4.13
47 D 5434	00-7009-040-193-001	40	8.17	5.45	4.54
47 D 5756	00-7009-040-193-002*	40	8.17	5.45	4.54
47 D 5467	†60-5006. 3414 Pol. Tab.	Pkg. of 50			1.00

SERIES 7012 Supplied only with board guides.

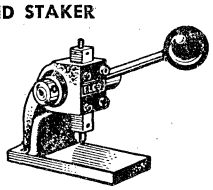
47 D 5724	00-7012-023-193-001	23	6.56	4.59	3.94
47 D 5725	00-7012-035-193-001	35	7.50	5.25	4.50
47 D 5726	00-7012-047-193-001	47	8.48	5.94	5.09

SERIES 7014

Straight through, open-end card slot. Supplied without card guides.

Stock No.	Mfr's Type	No. of Contacts	EACH 1-99	100-249	250-999
47 D 5727	00-7014-020-193-001	20	7.06	4.94	4.24

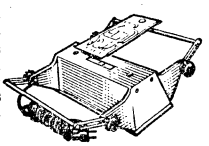
MODEL 06-1856-01 HAND STAKER



Specifically designed for proper staking of Varicon contacts. Contact retention, 45 lbs. after staking. For general laboratory and experimental uses. Ram dimensions, 1/2x1/2x2 1/2″. Ram stroke, 1 3/16″. Height of opening, 1 1/8″. Throat depth from center of ram, 1″. Working surface, 2x2 7/8″. Rugged metal construction. Shpg. wt., 3 lbs.

47 D 5459.....35.00

MODEL 06-1751-02 HEATING PLATEN

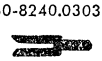


Varicon PC contacts are supplied on plastic strips to facilitate staking and soldering operations. Heating platen supplies proper heat to melt plastic strips and facilitate removal after contacts have been staked and soldered to board, avoids possibility of bending contacts. 10″ long. 110-120 V, AC or DC. Wt., 5 lbs.

47 D 5461.....39.50

VARICON "MICROCON" CONTACTS

60-8240.0303



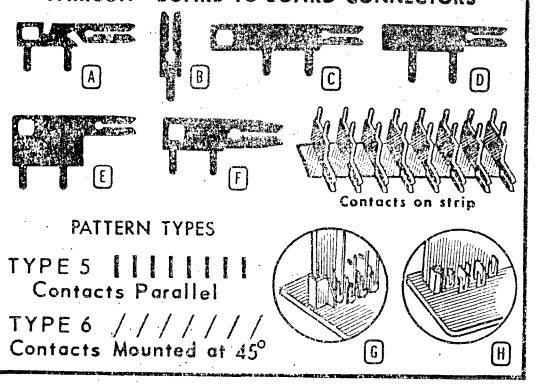
60-8200.0513

Miniature "Varicon" contacts, see above right. For .100″ in line and .050″ offset contact spacing patterns. "Stand-off" types have a single stake termination. 90° card edge mounted types have terminations for staking to printed circuit base or module cards. Type 60-8200.0213 has an extended tail. Type 60-8240.0313 same as 60-8240.0303 illustrated, except for 1/16″ PC. Contacts are phosphor bronze, nickel-plated, gold-flashed. 100 per pkg. Wt., 1 1/2 oz.

Stock No.	Mfr's Type	For PC	Application	Per Pkg.
47 D 5720	60-8200.0213	1/16″	"Stand-Off"	3.50
47 D 5721	60-8240.0303	1/32″	Card Edge	3.50
47 D 5722	60-8240.0313	1/16″	Card Edge	3.50
47 D 5723	60-8200.0513	1/16″	"Stand-Off"	3.50

Allied is a member of Elco's ADAP (Authorized Distributor Assembly Program), and can supply the complete Varicon series from stock, even in sizes not listed. Connectors for other board thicknesses may also be supplied. Contact the Allied facility nearest you for complete price and delivery information.

VARICON® BOARD-TO-BOARD CONNECTORS



PC module card is punched or drilled, and contacts are staked in and soldered to form male part of connector. Contact staking is accomplished by using contacts supplied in plastic strip for handling and support. Hole pattern on .200″ grid, .052″ hole dia.

Varicon Contact Strips. 30 contacts mounted on a plastic strip with .200″ spacing. Varicon fork-like contacts have four mating coined surfaces. Made of phosphor-bronze, contacts are nickel-plated and gold-flashed. Rated at 10 amps. *Pattern Type. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	*	Description	EACH 1-33
47 D 5400	02-030-111-5200	A	5	45° for 1/16″ Board	1.35
47 D 5402	02-030-113-6200	B	6	Stand-off for 1/16″	1.35
47 D 5403	02-030-114-6200	B	6	Stand-off for 3/32″	1.35
47 D 5404	02-030-115-6200	B	6	Stand-off for 1/8″	1.35
47 D 5405	02-030-135-5200	C	5	Lower Board 1/16″	1.50
47 D 5406	02-030-147-5200	D	5	Lower Board less wire hole	1.35
47 D 5409	02-030-137-5200	E	5	Upper Board 1/16″	1.50
47 D 5411	02-030-013-5200	F	5	Plug—Ser. 5000 1/16″	1.35

Guide Pins and Brackets. Series 5101 brackets are mounted either to the mother or module board with furnished eyelets. Series 5201 brackets are for mounting to mother board. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Description	For PC Board	EACH
47 D 5637	62-5101.4012	G	Guide Bracket	1/16″	.07
47 D 5639	62-5201.4012	G	Rt. Guide Bracket	1/16″	.06
47 D 5640	62-5201.4022	G	Left Guide Bracket	1/16″	.05
47 D 5643	62-5301.4012	H	Female Guide Pin	1/16″	.05
47 D 5644	62-5301.4112	H	Male Guide Pin	1/16″	.05

F PLUGS FOR ALL SERIES 5000 RECEPTACLES

For 5006, 5007, 5009 Series receptacles on facing page. Phosphor bronze, nickel-plated gold-flashed contacts rated 10 amps. For 1/16″ cards. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	No. of Contacts	EACH
47 D 5685	02-012-013-5200	12	.54
47 D 5331	02-014-013-5200	14	.63
47 D 5686	02-015-013-5200	15	.68
47 D 5798	02-016-013-5200	16	.72
47 D 5688	02-019-013-5200	19	.86
47 D 5689	02-020-013-5200	20	.90
47 D 5799	02-022-013-5200	22	.99
47 D 5690	02-023-013-5200	23	1.04
47 D 5697	02-024-013-5200	24	1.08
47 D 5411	02-030-013-5200	30	1.35

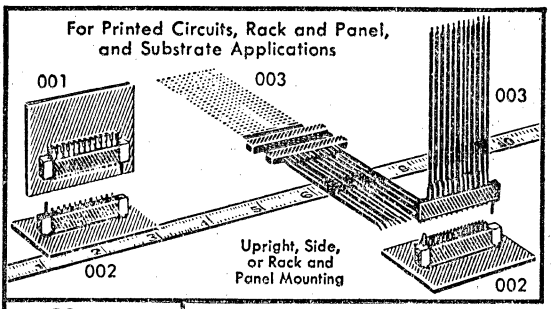
PLUGS FOR ALL SERIES 7000 RECEPTACLES

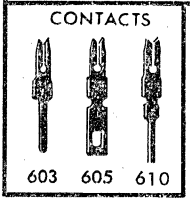
Hole pattern on .100″ grid. .052″ hole diameter. Require two contact strips, one for lower tier and one for upper tier. 2 oz.

Stock No.	Contacts	Fig.	Mfr's Type	Tier	EACH
47 D 5807	24	C	02-012-135-5200	Lower	.54
47 D 5809		E	02-012-137-5200	Upper	.60
47 D 5802	29	C	02-015-135-5200	Lower	.68
47 D 5803		E	02-014-137-5200	Upper	.75
47 D 5810	34	C	02-017-135-5200	Lower	.77
47 D 5811		E	02-017-137-5200	Upper	.85
47 D 5812	35	C	02-018-135-5200	Lower	.81
47 D 5811		E	02-017-137-5200	Upper	.85
47 D 5815	40	C	02-020-135-5200	Lower	.90
47 D 5816		E	02-020-137-5200	Upper	1.00
47 D 5817	47	C	02-024-135-5200	Lower	1.08
47 D 5818		E	02-023-137-5200	Upper	1.15
47 D 5336	51	C	02-026-135-5200	Lower	1.17
47 D 5335		E	02-025-137-5200	Upper	1.25

Elco Varicon® and PC Card-Edge Connectors

SERIES 8129 SUBMINIATURE VARICON CONNECTORS





For printed circuit, flexible cable, rack and panel, substrate applications. One-piece diallyl phthalate insulator. Pin and socket arrangement for guidance and polarization. Single row of contacts on .100″ spacing. 3 types (illus., left): Type 603 (upright mounting) and Type 610 (side mounting) have printed circuit termination for cards to 3/32″; Type 605 (rack and panel) has wire-hole taper tab for .078″ base tab. Tabs can be bent as installation requires. Wt., 2 oz.

WITH SIDE-MOUNTING BRACKETS FOR RECESSED MOUNTING

Stock No.	Mfr's Type 00-8129-	Contact Type	No. of Contacts	EACH 1-99	100-249	250-999
47 D 5476	006-610-001	610	6	1.06	.85	.75
47 D 5477	009-610-001	610	9	1.20	.94	.83
47 D 5478	012-610-001	610	12	1.24	1.01	.87
47 D 5479	015-610-001	610	15	1.30	1.04	.92

WITH UPRIGHT MOUNTING BRACKETS

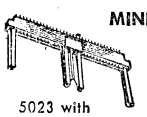
47 D 5765	006-603-002	603	6	1.06	.85	.75
47 D 5766	009-603-002	603	9	1.20	.94	.83
47 D 5767	012-603-002	603	12	1.24	1.01	.87
47 D 5768	015-603-002	603	15	1.30	1.04	.92

WITHOUT MOUNTING BRACKETS

47 D 5769	006-603-003	603	6	.88	.70	.63
47 D 5770	009-603-003	603	9	1.00	.79	.70
47 D 5771	012-603-003	603	12	1.06	.85	.75
48 D 5772	015-603-003	603	15	1.13	.90	.79
47 D 5773	006-605-003	605	6	.88	.70	.63
47 D 5774	009-605-003	605	9	1.00	.79	.70
47 D 5775	012-605-003	605	12	1.06	.85	.75
47 D 5776	015-605-003	605	15	1.13	.90	.79

47 D 5468. Model 60-8129. 4311 Polarizing Pin. Takes up one contact position.....(Pkg. of 10) Each .20

MINIATURE VARICON CONNECTORS


5023 with Center Guides

For 1/16″ module cards. Can be polarized without losing contact. Long molded card guides. Series 5023 shown with center guide (sold less guide). When guide is used, 2—14-contact receptacles are formed. *Less contacts, below. Mates with 5000 series strip, Page 301.

SERIES 5023 RECEPTACLES

One row of contacts on .200″ ctrs. Two .128″ mtg. holes. 4 oz.

Stock No.	Mfr's Type 00-5023-	Contact Type	No. of Contacts	EACH 1-99	100-249
47 D 5327	014-217-001	Wire Hole	14	4.00	2.80
47 D 5328	033-217-001	Wire Hole	33	5.62	3.93
47 D 5329	014-000-001	Varilok*	14	1.84	1.29
47 D 5330	033-000-001	Varilok*	33	2.12	1.49

60-5023.3117 Center Guide. For 33-contact size only. Wt., 1 oz.
47 D 5339..... .28

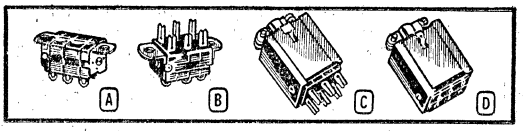
TABS AND CONTACTS

Stock No.	Mfr's Type	Description	EACH
47 D 5467	60-5006.3414	Polarizing Tab (Pkg. of 50)	1.00
47 D 5823	60-8017.0313	Varilok Contact (Pkg. of 100)	6.00

SERIES 7020 RECEPTACLES

Double row of contacts on .200 ctrs. Rows .125″ apart off-set .100″ from each other. 51 contact size. Have two .150″ mtg. holes. Wire-hole terminations. 4 oz. Mates with 7000 contact strip.

Stock No.	Mfr's Type	Description	1-99, Ea.	100-249, Ea.
47 D 5333	00-7020-051-158	Receptacle	5.88	4.12
47 D 5469	60-7020.3219	Polarizing Tab (Pkg. of 10)		1.10



VARICON CONNECTORS

Designed primarily for quick and easy soldering of wire, or for solderless connections to contacts. Connectors with almost any number of contacts can be assembled from standard Varicon components. Identical fork-like contacts for female and male connectors have wiping action that remains positive under all operating conditions. Full-length 45° bevel provides greater contact area. Contacts cannot be overstressed or overstrained. They maintain continuous pressure, unaffected by insertions and withdrawals. Polarity combinations can be varied on individual units with same number of contacts, preventing accidental mating of dissimilar combinations. Miniature size makes them ideal for restricted areas.

PANEL, CHASSIS AND CABLE CONNECTORS

All have nickel-silver contacts. Rated: 9 amps at 115 volts; 2000 volts test. Figs. B and C are male; Figs. A and D are female. *Indicates each end section is 1/16″ thicker for extra strength and durability. U.L. Listed. Blue-black vinyl finish. Av. wt., 3 oz.

WITH BRACKET FOR CHASSIS OR PANELS

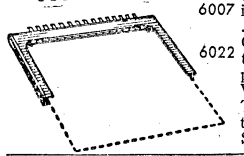
Stock No.	Mfr's Type	Fig.	Contacts	Outlet	EACH 1-99	100-249	250-999	1000-2499
47 D 5571	01-3104-111	A	4	Top	.72	.58	.50	.43
47 D 5572	01-3108-111	A	8	Top	.78	.62	.55	.47
47 D 5573	01-4112-111*	A	12	Top	.90	.72	.63	.54
47 D 5574	01-4118-111*	A	18	Top	1.20	.96	.84	.72
47 D 5564	01-1104-111	B	4	Top	.72	.58	.50	.43
47 D 5565	01-1108-111	B	8	Top	.74	.59	.52	.44
47 D 5566	01-2112-111*	B	12	Top	.90	.72	.63	.54
47 D 5567	01-2118-111*	B	18	Top	1.20	.96	.84	.72

COVERED PLUGS AND RECEPTACLES WITH CABLE CLAMP

47 D 5578	01-1104-105	C	4	Side	1.90	1.52	1.33	1.14
47 D 5579	01-1108-104	C	8	Top	2.16	1.73	1.51	1.30
47 D 5580	01-2112-104*	C	12	Top	2.30	1.84	1.61	1.38
47 D 5581	01-2118-104*	C	18	Top	2.62	2.10	1.83	1.57
47 D 5585	01-3104-105	D	4	Side	1.90	1.52	1.33	1.14
47 D 5587	01-4112-104*	D	12	Top	2.30	1.84	1.61	1.38
47 D 5588	01-4118-104*	D	18	Top	1.62	2.10	1.83	1.57

SERIES 6007-6022 PC CARD-EDGE CONNECTORS

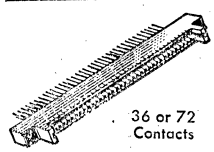
6007


6022

One-piece card-edge connectors for 1/16″ module boards. Ribbon-type, phosphor bronze contacts, gold-plated over nickel base plating. 7.5-amp rating. Dual-contact terminations are .046″ by .125″ straight tab wire hole. Glass-filled, diallyl phthalate insulation. Polarization: between contact positions, without losing any contacts. With .128″ diameter mounting holes. Type 6022 same as 6007 but with extended card guides. .156″ spacing. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-99	100-249	250-999	1000-4999
47 D 5417	00-6007-022-940-002	22	1.86	1.33	1.14	1.03
47 D 5418	00-6007-036-980-002	36	2.10	1.50	1.28	1.16
47 D 5419	00-6007-044-980-002	44	2.35	1.68	1.44	1.30
47 D 5421	00-6022-022-940-002	22	1.95	1.69	1.48	1.34
47 D 5420	00-6022-044-980-001	44	2.45	2.14	1.87	1.68

47 D 5466. 60-6002.3124 Polarizing Tab. Type B (Pkg. of 50) **Ea. 1.00**


36 or 72 Contacts

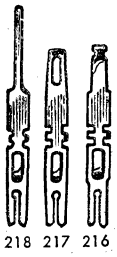
SERIES 6309 CARD-EDGE RECEPTACLE

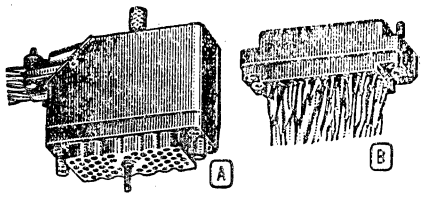
Designed for use on chassis or PC boards. Available with 36 or 72 contacts. Accommodates a 1/16″ PC card. Features a compact insulator that can be mounted on .300″ centers, a .100″ square grid contact spacing, and contacts designed for programed wire wrap termination. Dual-readout type contacts. Glass-filled nylon insulation. Contact resistance 8 milliohms. Rating, 3 A. Size, 4.470x.292x.66″. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-99	100-249	250-999
47 D 5432	00-6309-036-397-002	36	2.16	1.87	1.61
47 D 5433	00-6309-072-397-001	72	3.98	3.45	2.97

Elco Rack and Panel Connectors, Accessories

8016 MINIATURE RACK, PANEL CONNECTORS





Cable clamp on cover available for top or side entrance. Can be polarized in 36 positions. Diallyl phthalate insulation. Contact rating 8.5 amps. FN, fixed nut; AS, actuating screw. *Indicates no. of contacts. Available with or without installed contacts. Specify 216, 217 or 218 in place of XXX in Mfr's Type for installed contacts. Order separate Varicon contacts or Varilok crimp-type contacts below, right. Av. shpg. wt., 8 oz.

A RECEPTACLES (Less Contacts and Cover)

Stock No.	Mfr's Type 00-8016-	Lock	*	EACH 1-9	10-49	50-99	100-249
47 D 8201 A	-020-000-707	FN	20	1.76	1.67	1.52	1.23
47 D 8202 A	-020 000-708	AS	20	2.84	2.69	2.45	1.98
47 D 8203 A	-038-000-707	FN	38	2.12	2.01	1.83	1.48
47 D 8204 A	-038-000 708	AS	38	3.20	3.03	2.76	2.23
47 D 8205 A	-056-000-707	FN	56	2.57	2.43	2.22	1.79
47 D 8206 A	-056-000-708	AS	56	3.65	3.45	3.15	2.54
47 D 8207 A	-090 000 707	FN	90	3.19	3.01	2.74	2.21
47 D 8208 A	-090-000-708	AS	90	4.27	4.03	3.67	2.96
47 D 8209 A	-120-000-707	FN	120	3.58	3.38	3.08	2.49
47 D 8210 A	-120-000 708	AS	120	4.66	4.40	4.01	3.24

RECEPTACLES with Installed Contact, Less Cover

47 D 8000 A	-020 XXX-707	FN	20	3.20	3.03	2.76	2.23
47 D 8000 A	-020-XXX-708	AS	20	4.28	4.05	3.69	2.98
47 D 8000 A	-038-XXX-707	FN	38	4.88	4.61	4.20	3.39
47 D 8000 A	-056-XXX-707	FN	56	6.61	6.24	5.69	4.59
47 D 8000 A	-056-XXX-708	AS	56	7.69	7.26	6.62	5.34
47 D 8000 A	-090-XXX-707	FN	90	9.67	9.13	8.32	6.71
47 D 8000 A	-120-XXX-707	FN	120	12.22	11.54	10.52	8.49
47 D 8000 A	-120-XXX-708	AS	120	13.30	12.56	11.45	9.24

B PLUGS (Less Contacts and Cover Assembly)

47 D 8211 A	-020-000-701	AS	20	2.66	2.52	2.29	1.85
47 D 8212 A	-020-000-702	FN	20	1.58	1.50	1.36	1.10
47 D 8213 A	-038-000-701	AS	38	3.02	2.86	2.60	2.10
47 D 8214 A	-038-000-702	FN	38	1.94	1.84	1.67	1.35
47 D 8215 A	-056-000-701	AS	56	3.47	3.28	2.99	2.41
47 D 8216 A	-056-000-702	FN	56	2.39	2.26	2.06	1.66
47 D 8217 A	-090 000 701	AS	90	4.09	3.86	3.52	2.84
47 D 8218 A	-090-000-702	FN	90	3.01	2.84	2.59	2.09
47 D 8219 A	-120-000-701	AS	120	4.48	4.23	3.86	3.11
47 D 8220 A	-120-000-702	FN	120	3.40	3.21	2.93	2.36

PLUGS with Installed Contact, Less Cover Assembly

47 D 8000 A	-020-XXX-701	AS	20	4.10	3.88	3.53	2.85
47 D 8000 A	-020-XXX-702	FN	20	3.02	2.86	2.60	2.10
47 D 8000 A	-038-XXX-701	AS	38	5.76	5.44	4.96	4.00
47 D 8000 A	-038-XXX-702	FN	38	4.68	4.42	4.03	3.25
47 D 8000 A	-056-XXX-701	AS	56	7.51	7.09	6.46	5.21
47 D 8000 A	-090-XXX-701	AS	90	10.57	9.98	9.10	7.34
47 D 8000 A	-120-XXX-701	AS	120	13.12	12.39	11.30	9.11
47 D 8000 A	-120-XXX-702	FN	120	12.04	11.37	10.37	8.36

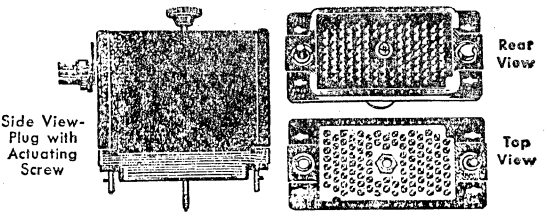
COVER ASSEMBLIES (**Cable Clamp Mounting)

Stock No.	Mfr's Type	**	Size	EACH 1-9	10-49	50-99	100-249
47 D 8221 A	30-8016-9890	Side	20	1.80	1.70	1.55	1.25
47 D 8222 A	30-8016-9811	Top	20	1.80	1.70	1.55	1.25
47 D 8223 A	30-8016-9810	Side	38	1.89	1.79	1.63	1.31
47 D 8224 A	30-8016-9820	Top	38	1.89	1.79	1.63	1.31
47 D 8225 A	30-8016-9830	Side	56	1.98	1.87	1.71	1.38
47 D 8226 A	30-8016-9840	Top	56	1.98	1.87	1.71	1.38
47 D 8227 A	30-8016-9812	Side	90	2.16	2.04	1.86	1.50
47 D 8228 A	30-8016-9813	Top	90	2.16	2.04	1.86	1.50
47 D 8229 A	30-8016-9814	Side	120	2.52	2.38	2.17	1.75
47 D 8230 A	30-8016-9815	Top	120	2.52	2.38	2.17	1.75

LARGE WIRE CLAMP COVERS

47 D 8231 A	30-8016-9850	Side	38	1.89	1.79	1.63	1.31
47 D 8232 A	30-8016-9860	Top	38	1.89	1.79	1.63	1.31
47 D 8233 A	30-8016-9870	Side	56	1.98	1.87	1.71	1.38
47 D 8234 A	30-8016-9880	Top	56	1.98	1.87	1.71	1.38

SERIES 8017 RACK AND PANEL CONNECTORS



Connectors have 36 possible polarization positions. Exceptionally high contact density. Contact rating, 10 amps. Insulator, glass-filled diallyl phthalate. *Plugs with actuating screw. †Plugs with fixed screw. ‡Receptacle with actuating nut. §Receptacle with fixed nut. Order Varilok crimp-type contacts or Varicon 216, 217 or 218 contacts below. Av. shpg. wt., 12 oz.

PLUGS (Less Cover)

Stock No.	Mfr's Type 00-8017-	No. of Contacts	EACH 1-9	10-49	50-99	100-249
47 D 5632	-075-000-001*	75	5.49	5.19	4.73	3.81
47 D 5649	-075-000-002†	75	3.46	3.26	2.98	2.40
47 D 5658	-100-000-001*	100	5.56	5.25	4.79	3.86
47 D 5668	-100-000-002†	100	3.53	3.33	3.04	2.45
47 D 5698	-130-000-001*	130	5.87	5.54	5.05	4.08
47 D 5699	-130-000-002†	130	3.83	3.62	3.30	2.66

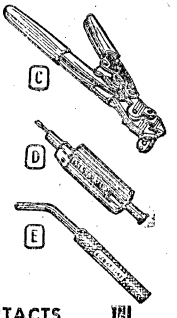
RECEPTACLES (Less Cover)

47 D 5458	-075-000-007§	75	3.98	3.76	3.43	2.76
47 D 5481	-100-000-007§	100	4.10	3.88	3.53	2.85
47 D 5703	-130-000-007§	130	4.39	4.15	3.78	3.05
47 D 5705	-075-000-008‡	75	5.45	5.15	4.70	3.79
47 D 5707	-100-000-008‡	100	6.03	5.70	5.19	4.19
47 D 5709	-130-000-008‡	130	6.26	5.92	5.39	4.35

COVER ASSEMBLIES (**Cable Clamp Mounting)

Stock No.	Mfr's Type	**	Size	EACH 1-9	10-49	50-99	100-249
47 D 5712	30-8017-8410	Top	75	2.34	2.21	2.02	1.63
47 D 5714	30-8017-9020	Side	75	2.34	2.21	2.02	1.63
47 D 5719	30-8017-9032	Top	100	2.61	2.47	2.25	1.81
47 D 5733	30-8017-9042	Side	100	2.61	2.47	2.25	1.81
47 D 5734	30-8017-9050	Top	130	3.33	3.15	2.87	2.31
47 D 5735	30-8017-9060	Side	130	3.33	3.15	2.87	2.31

VARILOK CRIMPING EQUIPMENT

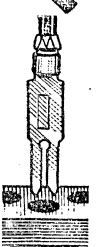


C Type 06-7515-01 Hand Crimper. Designed for Varilok contact #60-8017-0313 in lab, model shop and prototype applications.
47 D 5439. Shpg. wt., 3 lbs.....37.50

D Type 06-1877-02 Extraction Tool. Designed to extract Varilok contacts from their insulator quickly and easily without damage to either contacts or insulator.
47 D 5814. Shpg. wt., 10 oz.....Each 3.75

E Type 06-1742-04 Insertion Tool. Provides positive method for inserting contacts into insulator by applying pressure on contacts directly at end of insulation crimp.
47 D 5813. Shpg. wt., 10 oz.....Each 3.00

VARILOK CRIMPED-WIRING CONTACTS



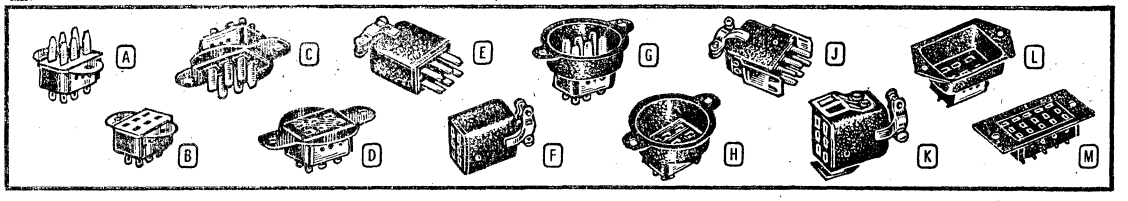
Ingenious self-locking, crimp-type contacts. Make solderless connections between wire and contact by simply crimping wire directly to the contact. A portion of the crimped contact grips the wire insulation for strain relief. Designed to accommodate all sizes of wire from 18 gauge to 30 gauge. Can be crimped to the wire independently of other assembling procedures, then easily be inserted into any insulator hole location. When inserted, Varilok contacts lock into position using spring balance for permanence, and will not twist, turn, or bend out of alignment. Easily removed with extraction tool. 8.5 amp rating. Available loose in packages of 100 or on reels of 1800 contacts per reel.

47 D 5823. Type 60-8017-0313. Wt., 2 oz.....Per Pkg. of 100 6.00
47 D 5425. Type 60-8017-0323. Wt., 4 lbs..Per Reel of 1800 117.00

VARICON CONTACTS

For Series 8016 and 8017 rack and panel connectors. Available in packages of 100. Av. shpg. wt. per package, 2 oz.
47 D 8235 A. Model 216. Has .078" taper tab term..Per Pkg. 4.50
47 D 8236 A. Model 217. Solder/.098" taper tab term Per Pkg. 4.50
47 D 8237 A. Model 218. Wire wrap termination.....Per Pkg. 4.50

Cinch-Jones Series 300 Plugs and Sockets



Compact multi-circuit connectors. Phosphor-bronze "knife-switch" type socket contacts engage both sides of flat plug contacts. All plugs and sockets are polarized to eliminate possibility of incorrect insertion. Plugs having from 24 to 33 contacts have special long polarizing pin in approximate center position to assure correct insertion and removal. Heavy-duty plug and socket contacts are cadmium-plated. Plug contacts are 5/32" wide by 3/64" thick. Black bakelite body is encased in black, crystal-finish metal cap. All caps have fiber insulators. DB Type sockets have a deep bracket for recessed mountings. SB Types have shallow bracket for flush mounting. Built to eliminate internal moisture traps. Snap-in socket contacts permit external prewiring and are "locked-in" to withstand wiring stress. Rated at 730 volts rms at 10 amps. *2-contact units have round shells; others are rectangular. 7 oz.

A AB PLUGS FOR CHASSIS MOUNTING

Contacts	Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
2*	47 D 0870	P-302-AB	.30	.24	.21	.17	.16
3	47 D 0871	P-303-AB	.34	.27	.23	.19	.18
4	47 D 0872	P-304-AB	.38	.30	.26	.21	.20
6	47 D 0873	P-306-AB	.47	.38	.32	.25	.24
8	47 D 0874	P-308-AB	.53	.42	.35	.28	.27
10	47 D 0875	P-310-AB	.61	.48	.41	.33	.31
12	47 D 0876	P-312-AB	.68	.55	.45	.36	.34
15	47 D 0816	P-315-AB	.92	.73	.61	.48	.46
18	47 D 0817	P-318-AB	1.10	.88	.73	.59	.56
21	47 D 0818	P-321-AB	1.38	1.10	.92	.73	.70
24	47 D 0819	P-324-AB	1.67	1.34	1.11	.89	.85
33	47 D 0822	P-333-AB	2.52	2.02	1.68	1.34	1.28

B AB SOCKETS FOR CHASSIS MOUNTING

2*	47 D 0880	S-302-AB	.32	.26	.22	.18	.17
3	47 D 0881	S-303-AB	.36	.29	.24	.20	.19
4	47 D 0882	S-304-AB	.40	.32	.27	.22	.21
6	47 D 0883	S-306-AB	.51	.40	.34	.27	.26
8	47 D 0884	S-308-AB	.61	.48	.41	.33	.31
10	47 D 0885	S-310-AB	.71	.57	.48	.38	.35
12	47 D 0886	S-312-AB	.85	.67	.57	.45	.42
15	47 D 0864	S-315-AB	1.07	.86	.71	.57	.54
18	47 D 0865	S-318-AB	1.23	.98	.82	.66	.62
21	47 D 0866	S-321-AB	1.51	1.22	1.01	.80	.77
24	47 D 0867	S-324-AB	1.80	1.44	1.21	.96	.92
27	47 D 0868	S-327-AB	2.09	1.67	1.39	1.11	1.06
30	47 D 0869	S-330-AB	2.40	1.92	1.60	1.28	1.22
33	47 D 0877	S-333-AB	2.68	2.14	1.78	1.42	1.36

C FP PLUGS WITH FLUSH PLATE

6	47 D 1312	P-306-FP	.67	.54	.44	.35	.34
8	47 D 1313	P-308-FP	.73	.59	.49	.39	.37
12	47 D 1317	P-312-FP	.88	.70	.59	.46	.44

D FP SOCKETS WITH FLUSH PLATE

2*	47 D 1318	S-302-FP	.53	.42	.35	.28	.26
3	47 D 1319	S-303-FP	.55	.44	.37	.29	.28
4	47 D 1366	S-304-FP	.60	.47	.40	.32	.30
6	47 D 1377	S-306-FP	.70	.56	.46	.37	.35
8	47 D 1378	S-308-FP	.80	.64	.54	.43	.41
10	47 D 1379	S-310-FP	.91	.72	.61	.48	.46
12	47 D 1380	S-312-FP	1.03	.82	.69	.56	.53

E CCT PLUGS WITH CABLE CLAMPS

2*	47 D 0802	P-302-CCT	.62	.49	.41	.33	.31
3	47 D 0803	P-303-CCT	.68	.55	.45	.36	.34
4	47 D 0804	P-304-CCT	.72	.58	.48	.38	.36
6	47 D 0806	P-306-CCT	.82	.66	.55	.43	.41
8	47 D 0808	P-308-CCT	.89	.71	.60	.47	.45
10	47 D 0810	P-310-CCT	.98	.78	.66	.53	.49
12	47 D 0812	P-312-CCT	1.06	.85	.71	.57	.54
15	47 D 0805	P-315-CCT	1.41	1.13	.95	.75	.72
18	47 D 0807	P-318-CCT	1.65	1.32	1.10	.88	.83
21	47 D 0809	P-321-CCT	1.97	1.58	1.32	1.05	1.00
24	47 D 0811	P-324-CCT	2.31	1.84	1.55	1.24	1.17
27	47 D 0813	P-327-CCT	2.65	2.11	1.76	1.41	1.34
30	47 D 0814	P-330-CCT	2.98	2.38	1.99	1.59	1.50
33	47 D 0815	P-333-CCT	3.30	2.64	2.20	1.76	1.67

F CCT SOCKETS WITH CABLE CLAMPS

2*	47 D 0852	S-302-CCT	.64	.52	.43	.34	.33
3	47 D 0853	S-303-CCT	.70	.56	.46	.37	.35
4	47 D 0854	S-304-CCT	.74	.60	.49	.39	.38
6	47 D 0856	S-306-CCT	.86	.68	.57	.45	.43

F CCT SOCKETS WITH CABLE CLAMPS (Cont'd)

8	47 D 0858	S-308-CCT	.96	.76	.64	.52	.48
10	47 D 0860	S-310-CCT	1.08	.87	.72	.58	.55
12	47 D 0862	S-312-CCT	1.23	.98	.81	.65	.62
15	47 D 0850	S-315-CCT	1.57	1.26	1.05	.83	.79
18	47 D 0851	S-318-CCT	1.78	1.42	1.19	.95	.90
21	47 D 0855	S-321-CCT	2.11	1.69	1.41	1.12	1.07
24	47 D 0857	S-324-CCT	2.44	1.96	1.63	1.30	1.24
27	47 D 0859	S-327-CCT	2.77	2.22	1.85	1.48	1.40
30	47 D 0861	S-330-CCT	3.13	2.50	2.09	1.67	1.59
33	47 D 0863	S-333-CCT	3.45	2.76	2.31	1.84	1.75

G RP PLUGS WITH RECESSED PLATES

2*	47 D 1440	P-302-RP	.58	.46	.39	.31	.30
4	47 D 1442	P-304-RP	.65	.52	.43	.35	.33
6	47 D 1443	P-306-RP	.74	.60	.49	.39	.38
8	47 D 1444	P-308-RP	.86	.68	.57	.45	.43

H RP SOCKETS WITH RECESSED PLATES

2*	47 D 1418	S-302-RP	.61	.48	.40	.32	.31
4	47 D 1420	S-304-RP	.67	.54	.45	.36	.34
6	47 D 1421	S-306-RP	.77	.62	.52	.41	.39
8	47 D 1426	S-308-RP	.92	.73	62	.49	.46

J CCT-L PLUGS WITH CABLE CLAMPS AND LATCHES

2*	47 D 1513	P-302-CCT-L	.77	.62	.52	.41	.39
3	47 D 1514	P-303-CCT-L	.83	.67	.56	.44	.42
4	47 D 1515	P-304-CCT-L	.88	.70	.59	.46	.44
6	47 D 1516	P-306-CCT-L	.98	.78	.65	.52	.49
8	47 D 1517	P-308-CCT-L	1.04	.83	.70	.56	.53
10	47 D 0112	P-310-CCT-L	1.13	.91	.76	.61	.58
12	47 D 0125	P-312-CCT-L	1.22	.97	.81	.65	.62
15	47 D 0140	P-315-CCT-L	1.57	1.26	1.05	.83	.79
21	47 D 0142	P-321-CCT-L	2.12	1.70	1.42	1.13	1.08

K CCT-K SOCKETS WITH KEEPERS

2*	47 D 1481	S-302-CCT-K	.79	.64	.54	.42	.40
3	47 D 1482	S-303-CCT-K	.86	.68	.57	.45	.43
4	47 D 1483	S-304-CCT-K	.90	.72	.60	.47	.45
6	47 D 1484	S-306-CCT-K	1.01	.80	.67	.54	.51
8	47 D 1485	S-308-CCT-K	1.11	.89	.74	.60	.57
10	47 D 1486	S-310-CCT-K	1.24	.99	.82	.66	.63
12	47 D 1487	S-312-CCT-K	1.38	1.10	.92	.73	.70

L DB RECESSED SOCKETS FOR CHASSIS MOUNTING

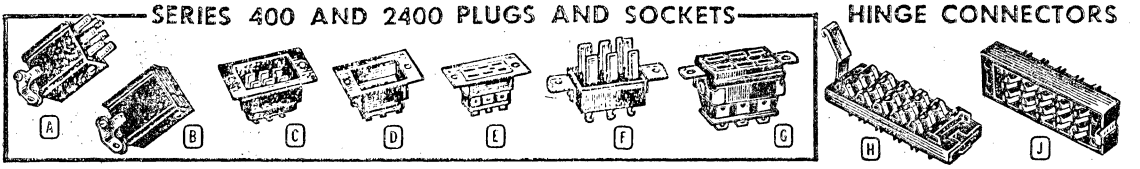
4	47 D 0061	S-304-DB	.81	.65	.55	.43	.41
6	47 D 0063	S-306-DB	.92	.73	.61	.48	.46
8	47 D 0064	S-308-DB	1.02	.81	.68	.55	.52
12	47 D 0224	S-312-DB	1.26	1.00	.83	.67	.64
15	47 D 0225	S-315-DB	1.49	1.20	1.00	.79	.75
18	47 D 0226	S-318-DB	1.73	1.38	1.15	.93	.88
21	47 D 0227	S-321-DB	2.06	1.65	1.37	1.09	1.04
30	47 D 0279	S-330-DB	3.05	2.44	2.04	1.63	1.55

M SB FLUSH SOCKETS FOR CHASSIS MOUNTING

15	47 D 0281	S-315-SB	1.49	1.20	1.00	.79	.75
18	47 D 0286	S-318-SB	1.73	1.38	1.15	.93	.88
21	47 D 0287	S-321-SB	2.06	1.65	1.37	1.09	1.04
24	47 D 0290	S-324-SB	2.39	1.91	1.60	1.28	1.21
27	47 D 0293	S-327-SB	2.71	2.16	1.80	1.44	1.37
30	47 D 0299	S-330-SB	3.05	2.44	2.04	1.63	1.55
33	47 D 0300	S-333-SB	3.37	2.70	2.25	1.79	1.71

Plugs, Sockets and Connectors

SERIES 400 AND 2400 PLUGS AND SOCKETS — HINGE CONNECTORS



Series 400 and 2400. Series 400 rated 1100 V rms @ 15 amps. Series 2400 rated 1700 V rms @ 15 amps. Polarizing pins. Prongs are ¼" wide, 1/16" thick. Bakelite. Phosphor bronze contacts. Series 2400 mates with Series 400—interchangeable mechanically. Wt., 7 oz.

A CCT PLUGS WITH CABLE CLAMPS

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0911	P-404-CCT	4	1.39	1.11	.93	.74	.70
47 D 0912	P-406-CCT	6	1.60	1.28	1.07	.86	.81
47 D 0913	P-408-CCT	8	1.77	1.41	1.18	.95	.90
47 D 0914	P-410-CCT	10	2.04	1.63	1.36	1.09	1.03
47 D 0915	P-412-CCT	12	2.23	1.78	1.48	1.19	1.12
47 D 0833	P-2402-CCT	2	1.29	1.03	.86	.68	.65
47 D 0834	P-2404-CCT	4	1.46	1.16	.98	.78	.74
47 D 0836	P-2406-CCT	6	1.64	1.31	1.09	.88	.83
47 D 0837	P-2408-CCT	8	1.81	1.45	1.22	.97	.92
47 D 0838	P-2410-CCT	10	2.00	1.60	1.33	1.06	1.01
47 D 0839	P-2412-CCT	12	2.09	1.68	1.40	1.11	1.06

B CCT SOCKETS WITH CABLE CLAMPS

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0920	S-402-CCT	2	1.38	1.10	.92	.73	.70
47 D 0921	S-404-CCT	4	1.65	1.32	1.10	.88	.83
47 D 0922	S-406-CCT	6	1.92	1.54	1.28	1.02	.97
47 D 0923	S-408-CCT	8	2.18	1.75	1.46	1.16	1.11
47 D 0924	S-410-CCT	10	2.46	1.96	1.65	1.32	1.25
47 D 0925	S-412-CCT	12	2.74	2.18	1.82	1.46	1.39
47 D 0626	S-2406-CCT	6	1.73	1.38	1.15	.93	.88
47 D 0627	S-2408-CCT	8	1.92	1.54	1.28	1.02	.97
47 D 0628	S-2410-CCT	10	2.10	1.68	1.40	1.12	1.06
47 D 0629	S-2412-CCT	12	2.29	1.83	1.52	1.22	1.16

C DB RECESSED PLUGS FOR CHASSIS MOUNTING

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0950	P-402-DB	2	.98	.78	.65	.52	.49
47 D 0955	P-404-DB	4	1.19	.95	.79	.63	.60
47 D 0951	P-406-DB	6	1.39	1.11	.93	.74	.70
47 D 0952	P-408-DB	8	1.60	1.28	1.07	.86	.81
47 D 0953	P-410-DB	10	1.81	1.44	1.21	.97	.92
47 D 0954	P-412-DB	12	2.02	1.62	1.35	1.07	1.02

D DB RECESSED SOCKETS FOR CHASSIS MOUNTING

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0184	S-2404-DB	4	1.26	1.01	.85	.67	.64
47 D 0185	S-2406-DB	6	1.44	1.15	.96	.76	.73
47 D 0186	S-2408-DB	8	1.62	1.29	1.08	.87	.81
47 D 0187	S-2410-DB	10	1.79	1.43	1.19	.96	.91
47 D 0192	S-2412-DB	12	1.97	1.58	1.32	1.05	1.00

E SB FLUSH SOCKETS FOR CHASSIS MOUNTING

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0794	S-402-SB	2	1.06	.85	.71	.57	.54
47 D 0795	S-404-SB	4	1.35	1.08	.91	.72	.69
47 D 0796	S-406-SB	6	1.65	1.32	1.10	.88	.83
47 D 0797	S-408-SB	8	1.94	1.56	1.30	1.03	.98
47 D 0798	S-410-SB	10	2.24	1.78	1.49	1.20	1.13
47 D 0799	S-412-SB	12	2.52	2.02	1.69	1.35	1.28
47 D 0842	S-2406-SB	6	1.36	1.09	.91	.72	.69
47 D 0843	S-2408-SB	8	1.54	1.23	1.03	.82	.78
47 D 0845	S-2412-SB	12	1.90	1.51	1.27	1.01	.96

F AB PLUGS WITH ANGLE BRACKETS

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0891	P-404-AB	4	.90	.72	.60	.47	.45
47 D 0892	P-406-AB	6	1.06	.85	.71	.57	.54
47 D 0893	P-408-AB	8	1.23	.98	.81	.65	.62
47 D 0894	P-410-AB	10	1.38	1.10	.93	.74	.70
47 D 0895	P-412-AB	12	1.55	1.24	1.03	.82	.78

G AB SOCKETS WITH ANGLE BRACKETS

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0901	S-404-AB	4	1.10	.88	.73	.59	.56
47 D 0902	S-406-AB	6	1.35	1.08	.91	.72	.69
47 D 0903	S-408-AB	8	1.60	1.28	1.06	.85	.80
47 D 0905	S-412-AB	12	2.09	1.67	1.39	1.11	1.06

Series 37. Maximum no. contacts in minimum space. Designed for easy engagement and disengagement to eliminate contact damage. Castings of black bakelite. Heavy duty phosphor-bronze, cadmium-plated contacts, rated at 4.5 amperes. Wt., 9 oz.

H SOCKET WITHOUT LOCK

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0280	37F20	20	2.73	2.18	1.82	1.45	1.38
47 D 0288	37F30	30	3.27	2.62	2.18	1.74	1.66
47 D 0301	37F40	40	3.82	3.05	2.54	2.04	1.94
47 D 0302	37F50	50	4.36	3.49	2.90	2.32	2.20
47 D 0303	37F60	60	4.91	3.92	3.27	2.62	2.49
47 D 0308	37F100	100	7.08	5.67	4.72	3.77	3.59

J MATING PLUG WITH LOCK

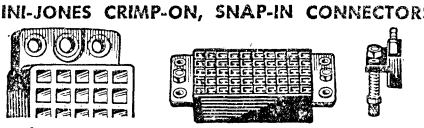
Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0363	37M20L	20	3.04	2.42	2.02	1.62	1.54
47 D 0364	37M30L	30	3.59	2.86	2.39	1.91	1.82
47 D 0365	37M40L	40	4.13	3.29	2.75	2.20	2.09
47 D 0366	37M50L	50	4.68	3.73	3.11	2.50	2.37
47 D 0367	37M60L	60	5.21	4.16	3.48	2.78	2.64
47 D 0368	37M70L	70	5.76	4.60	3.84	3.07	2.92
47 D 0371	37M100L	100	7.39	5.91	4.93	3.95	3.74

CONNECTORS CAPS FOR SERIES 37

Black wrinkle finish. Formed fiber liners. Cable hole size: 20-contact units, ¾"; 30, 40, 50-contact units, 1 3/16x1"; 60 and 100-contact units, 1 3/16x1½". Wt., 3 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0219	37C20	20	4.22	3.38	2.82	2.26	2.15
47 D 0220	37C30	30	4.27	3.41	2.85	2.28	2.17
47 D 0221	37C40	40	4.31	3.45	2.88	2.30	2.19
47 D 0222	37C50	50	4.36	3.49	2.90	2.32	2.20
47 D 0223	37C60	60	4.40	3.52	2.94	2.34	2.24
47 D 0232	37C100	100	4.59	3.66	3.06	2.44	2.32

MINI-JONES CRIMP-ON, SNAP-IN CONNECTORS



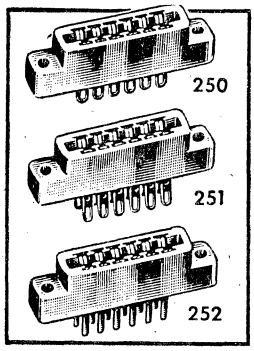
25 contacts per sq. in. Unassembled, assemble without tools. Correct number of contacts with connector. Polarized. Contacts hold wire sizes 18-24 AWG (will hold two #22 or #24). Spring-loaded stud locks avail. for type II only. Type II with stud locks is type III. Mfr's Type MJP is male plug. MJS female socket. *Type I, †Type II. Black phenolic body. 4.0 A at 830 V rms. Wt., 4 oz.

Stock No.	Mfr's Type	Contacts	EACH 1-24	25-49	50-99	100-249	250-499
47 D 2001	MJP-19*	19	2.31	1.85	1.54	1.23	1.17
47 D 2003	MJP-29*	29	2.73	2.18	1.82	1.45	1.38
47 D 2004	MJP-39*	39	3.14	2.51	2.09	1.67	1.58
47 D 2005	MJP-48*	48	3.47	2.84	2.31	1.85	1.76
47 D 2007	MJP-2-19†	19	3.30	2.64	2.20	1.76	1.67
47 D 2011	MJP-2-29†	29	3.72	2.97	2.48	1.98	1.88
47 D 2015	MJP-2-39†	39	4.13	3.30	2.75	2.20	2.09
47 D 2016	MJP-2-48†	48	4.46	3.56	2.97	2.38	2.26
47 D 2019	MJP-2-68†	68	5.28	4.22	3.52	2.82	2.67
47 D 2020	MJS-19*	19	2.07	1.65	1.38	1.10	1.05
47 D 2021	MJS-29*	29	2.35	1.88	1.57	1.25	1.19
47 D 2022	MJS-39*	39	2.64	2.11	1.76	1.41	1.34
47 D 2024	MJS-48*	48	2.85	2.28	1.90	1.52	1.44
47 D 2030	MJS-2-29†	29	3.34	2.67	2.23	1.78	1.69
47 D 2032	MJS-2-39†	39	3.63	2.90	2.42	1.94	1.84
47 D 2033	MJS-2-48†	48	3.84	3.07	2.56	2.05	1.95
47 D 2035	MJS-2-68†	68	4.41	3.53	2.95	2.35	2.23
47 D 2036	Type MJP-P Plug Pin					Per Pkg. of 100,	3.30
47 D 2037	Type MJS-C Socket Contact					Per Pkg. of 100,	3.30
47 D 2038	Type MJ-SL Screw Lock Spring					Each	.44
47 D 2041	Type CT-5B Crimp Tool					Each	43.75
47 D 2042	Type CT-5A Removal Tool					Each	.75

Other Sizes of Mini-Jones Connectors Available on Request

Cinch-Jones Connectors and Terminal Strips

BIFURCATED-CONTACT EDGE CONNECTORS



For 1/16" PC boards with .156" contact spacing. Glass-filled diallyl phthalate insulation, SDGF per MIL-M-14F. Phosphor-bronze contacts with .00003" minimum Sel-Rex gold plate. Two flexing surfaces instead of one for positive contact, offsets irregularities in PC boards.

Unassembled, plastic polarizing key included except with MIL types. Series 250 and 251 have wiring tails. Series 252 have contact tails for dip soldering to fit .051" dia. holes. "M" in type no. indicates beryllium copper contacts with 50 micro-inches gold finish per MIL-C-2109 A. Av. shpg. wt., 2 oz.

250 SERIES SINGLE-READOUT

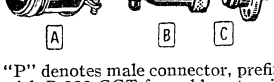
Stock No.	Mfr's Type 50-	Contact Pos.	No. of Cont.	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0319	6A-20	6	6	1.25	1.00	.84	.67	.63
47 D 0134	6A-20M	6	6	1.61	1.29	1.07	.86	.82
47 D 0322	10A-20	10	10	1.68	1.35	1.12	.90	.86
47 D 0135	10A-20M	10	10	2.25	1.80	1.50	1.20	1.14
47 D 0323	12A-20	12	12	1.90	1.52	1.26	1.01	.96
47 D 0324	15A-20	15	15	2.22	1.77	1.48	1.18	1.12
47 D 0138	15A-20M	15	15	3.05	2.44	2.04	1.63	1.55
47 D 0327	18A-20	18	18	2.54	2.03	1.69	1.36	1.29
47 D 0139	18A-20M	18	18	3.54	2.83	2.36	1.89	1.80
47 D 0329	22A-20	22	22	2.97	2.38	1.98	1.58	1.50
47 D 0145	22A-20M	22	22	4.18	3.35	2.78	2.22	2.12
47 D 0152	25A-20	25	25	3.54	2.83	2.36	1.89	1.80

251 SERIES DOUBLE-READOUT

47 D 0334	12A-30	6	12	1.25	1.00	.84	.67	.63
47 D 0337	20A-30	10	20	1.68	1.35	1.12	.90	.86
47 D 0147	20A-30M	10	20	2.25	1.80	1.50	1.20	1.14
47 D 0340	24A-30	12	24	1.90	1.52	1.26	1.01	.96
47 D 0341	30A-30	15	30	2.22	1.77	1.48	1.18	1.12
47 D 0148	30A-30M	15	30	3.05	2.44	2.04	1.63	1.55
47 D 0150	36A-30M	18	36	3.54	2.83	2.36	1.89	1.80
47 D 0343	44A-30	22	44	2.97	2.38	1.98	1.58	1.50
47 D 0151	44A-30M	22	44	4.18	3.35	2.78	2.22	2.12
47 D 0153	50A-30	25	50	3.54	2.83	2.36	1.89	1.80

252 SERIES DOUBLE-READOUT

47 D 0344	12B-10	6	12	1.25	1.00	.84	.67	.63
47 D 0345	20B-10	10	20	1.68	1.35	1.12	.90	.86
47 D 0346	24B-10	12	24	1.90	1.52	1.26	1.01	.96

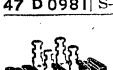


202 CONNECTORS

Dependable, two-contact polarized connectors with 3/4"-27 threaded fittings. P-202-B and S-202-B have 1" mounting centers. In Mfr's Type No. prefix "P" denotes male connector, prefix "S" denotes female. Use S-202B with P-202-CCT for cable extension. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0980	P-202-CCT	B	1.09	.86	.73	.58	.54
47 D 0831	S-202-CCT	A	1.11	.88	.74	.59	.56
47 D 0989	P-202-B	C	1.39	1.14	.96	.76	.72
47 D 0982	S-202-B	C	1.32	1.06	.88	.70	.67
47 D 0981	S-202-CCT-THR	A	1.46	1.18	.98	.77	.74

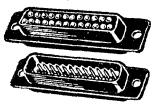
SERIES 170 TERMINAL STRIPS



Extra-heavy-duty solder terminals. Sturdy black molded bakelite base is 5/16" wide, 1/4" thick. Solder terminals are .032" tinned brass; on 3/8" centers. Double notched to insure good, easy mechanical connection. Mounting holes are 3/8" from center of end terminals. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0991	2-170	2	.28	.23	.19	.16	.15
47 D 0992	3-170	3	.36	.28	.24	.19	.18
47 D 0993	4-170	4	.42	.34	.27	.22	.21
47 D 0994	5-170	5	.47	.38	.32	.25	.24
47 D 0995	6-170	6	.53	.42	.36	.28	.26
47 D 0996	7-170	7	.60	.47	.40	.32	.29
47 D 0997	8-170	8	.65	.51	.44	.36	.34
47 D 0999	10-170	10	.79	.62	.51	.42	.40

"D" SUBMINIATURE CONNECTORS



Have pin and socket insert, gold-plated copper alloy contacts, cadmium-plated steel shells. **Mark I Golden "D"**: monoblock with diallyl phthalate glass fiber insulation. Meets MIL-M-14F Type SDG. Insul. res., over 5000 megohms, per MIL-STD-202A, method 302. **"Original D"** connectors have 2-piece nylon insert. *Digits indicate number of contacts. "F" in Mfr's Type No., indicates floating mtg. Suffix "P," male connector; "S," female. Shpg. wt., 2 oz.

ORIGINAL "D"

Stock No.	*Mfr's Type	Flange Size	EACH 1-9	10-49	50-99	100-249	250-499
47 D 0110	DE-9P	$1\frac{13}{64}x\frac{31}{64}$"	1.18	1.07	.90	.71	.66
47 D 0111	DE-9S	$1\frac{13}{64}x\frac{31}{64}$"	1.70	1.52	1.28	1.02	.93
47 D 0101	DA-15P	$1\frac{17}{32}x\frac{31}{64}$"	1.68	1.50	1.27	1.01	.92
47 D 0102	DA-15S	$1\frac{17}{32}x\frac{31}{64}$"	2.48	2.24	1.86	1.48	1.36
47 D 4000	DAF-15P	$1\frac{17}{32}x\frac{31}{64}$"	2.38	2.14	1.78	1.42	1.30
47 D 4001	DAF-15S	$1\frac{17}{32}x\frac{31}{64}$"	3.18	2.86	2.39	1.92	1.75
47 D 0104	DB-25P	$2\frac{5}{64}x\frac{31}{64}$"	2.43	2.18	1.82	1.45	1.33
47 D 0105	DB-25S	$2\frac{5}{64}x\frac{31}{64}$"	3.80	3.42	2.85	2.29	2.09
47 D 4002	DBF-25P	$2\frac{5}{64}x\frac{31}{64}$"	3.20	2.88	2.41	1.93	1.76
47 D 4003	DBF-25S	$2\frac{5}{64}x\frac{31}{64}$"	4.57	4.12	3.43	2.75	2.51
47 D 0106	DC-37P	$2\frac{23}{32}x\frac{31}{64}$"	3.30	2.97	2.47	1.99	1.82
47 D 0107	DC-37S	$2\frac{23}{32}x\frac{31}{64}$"	5.39	4.85	4.04	3.23	2.97
47 D 0108	DD-50P	$2\frac{5}{8}x\frac{39}{64}$"	4.30	3.87	3.22	2.59	2.37
47 D 0109	DD-50S	$2\frac{5}{8}x2\frac{9}{64}$"	7.10	6.39	5.33	4.25	3.90

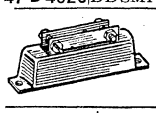
MARK I GOLDEN "D"

47 D 0770	DEM-9P	$1\frac{13}{64}x\frac{31}{64}$"	2.35	2.11	1.76	1.41	1.29
47 D 0771	DEM-9S	$1\frac{13}{64}x\frac{31}{64}$"	3.24	2.91	2.44	1.96	1.79
47 D 0772	DAM-15P	$1\frac{17}{32}x\frac{31}{64}$"	3.39	3.05	2.53	2.03	1.86
47 D 0773	DAM-15S	$1\frac{17}{32}x\frac{31}{64}$"	4.81	4.33	3.61	2.88	2.65
47 D 0774	DBM-25P	$2\frac{5}{64}x\frac{31}{64}$"	4.99	4.49	3.75	3.00	2.75
47 D 0775	DBM-25S	$2\frac{5}{64}x\frac{31}{64}$"	7.41	6.66	5.56	4.44	4.07
47 D 0776	DCM-37P	$2\frac{23}{32}x\frac{31}{64}$"	6.97	6.27	5.23	4.18	3.83
47 D 0777	DCM-37S	$2\frac{23}{64}x\frac{31}{64}$"	10.55	9.50	7.91	6.32	5.81
47 D 0778	DDM-50P	$2\frac{5}{8}x\frac{39}{64}$"	9.03	8.13	6.77	5.43	4.96
47 D 0779	DDM-50S	$2\frac{5}{8}x\frac{39}{64}$"	13.84	12.46	10.38	8.30	7.61

MARK II GOLDEN "D"

Plugs have snap-in crimp type contacts in monoblock insulator—improves temp. characteristics, moisture resistance. Snap-in crimp type contacts eliminate soldering and cut assembly time. Shock, vibration, insulation, moisture and corrosion resistance stds. meet MIL-STD-202A. Takes up to #20 AWG stranded wire. 5 amp rating. Has stainless steel float mtg. rivets and washers. Shpg. wt., 2 oz.

47 D 4004	DESM-9P	$1\frac{7}{32}x\frac{31}{64}$"	3.33	3.13	2.78	2.49	2.22
47 D 4005	DESM-9S	$1\frac{7}{32}x\frac{31}{64}$"	3.93	3.61	3.29	2.96	2.63
47 D 4006	DESMF-9P	$1\frac{7}{32}x\frac{31}{64}$"	4.01	3.75	3.30	2.90	2.60
47 D 4007	DESMF-9S	$1\frac{7}{32}x\frac{31}{64}$"	4.61	4.22	3.79	3.37	3.00
47 D 4008	DASM-15P	$1\frac{35}{64}x\frac{31}{64}$"	5.08	4.65	4.23	3.81	3.38
47 D 4009	DASM-15S	$1\frac{35}{64}x\frac{31}{64}$"	6.16	5.65	5.14	4.62	4.11
47 D 4010	DASMF-15P	$1\frac{35}{64}x\frac{31}{64}$"	5.76	5.26	4.75	4.22	3.75
47 D 4011	DASMF-15S	$1\frac{35}{64}x\frac{31}{64}$"	6.84	6.27	5.65	5.04	4.48
47 D 4012	DBSM-25P	$2\frac{3}{32}x\frac{31}{64}$"	7.71	6.73	6.13	5.19	4.65
47 D 4013	DBSM-25S	$2\frac{3}{32}x\frac{31}{64}$"	9.30	8.52	7.76	6.31	5.60
47 D 4014	DBSMF-25P	$2\frac{3}{32}x\frac{31}{64}$"	8.39	7.34	6.64	5.60	5.02
47 D 4016	DBSMF-25S	$2\frac{3}{32}x\frac{31}{64}$"	9.98	9.14	8.27	6.73	5.97
47 D 4019	DCSM-37P	$2\frac{47}{64}x\frac{31}{64}$"	8.96	8.21	7.50	6.73	5.97
47 D 4020	DCSM-37S	$2\frac{47}{64}x\frac{31}{64}$"	12.79	11.73	10.66	9.13	8.37
47 D 4022	DCSMF-37P	$2\frac{47}{64}x\frac{31}{64}$"	9.64	8.83	8.01	7.14	6.34
47 D 4023	DCSMF-37S	$2\frac{47}{64}x\frac{31}{64}$"	13.47	12.35	11.18	9.54	8.74
47 D 4024	DDSM-50P	$2\frac{41}{64}x\frac{39}{64}$"	13.86	12.68	11.36	8.92	8.18
47 D 4025	DDSM-50S	$2\frac{41}{64}x\frac{39}{64}$"	17.25	15.81	14.38	11.90	10.82
47 D 4026	DDSMF-50S	$2\frac{41}{64}x\frac{39}{64}$"	17.93	16.43	14.89	12.31	11.19



JUNCTION SHELLS

Low-carbon steel clamp with weather resistant cadmium plating. Exceeds 50-hour salt spray test; meet MIL-STD-202A. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	EACH 1-9	10-49	50-99	100-249	250-499
47 D 0780	DA-19678-1	1.04	.94	.78	.63	.57
47 D 0781	DB-19678-2	1.23	1.10	.93	.74	.68
47 D 0782	DC-19678-3	1.46	1.32	1.10	.88	.80
47 D 0783	DD-19678-4	1.61	1.44	1.19	.96	.88

Screw Lock Assemblies. For junction shells above. Same corrosion-resistant construction. *Female; †male. Shpg. wt., 1 oz.

Stock No.	Type D20-	For Shell Size	EACH 1-9	10-49	50-99	100-249	250-499
47 D 0550	*418-2	DA, DB, DC, DD, DE	.40	.36	.31	.25	.23
47 D 0551	†419	DA, DB, DC, DE	.25	.23	.19	.15	.14
47 D 0552	†420	DD	.37	.34	.28	.23	.21

Cinch-Jones Barrier Blocks and Strips

SERIES 500 BARRIER BLOCKS

High, wide barriers permit high-voltage ratings. Material between the terminals at the base strengthens the entire strip and maintains same contact-to-contact and contact-to-ground creepage distance. Minimum warpage and shrinkage. Designations can be printed on base. Closed bottoms require no insulation. Knockouts in base can be removed for "Y" terminals.

Series 540. Have double 5-40x3/16" binder, head screw terminals. Creepage distance is 1/2". 1 1/8" wide by 39/64" high. Terminals are 3/8" center to center with .160" diameter holes. Av. wt., 14 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249
47 D 0384	2-540	2	.52	.41	.35	.28
47 D 0385	3-540	3	.71	.57	.47	.38
47 D 0386	4-540	4	.87	.69	.58	.47
47 D 0387	5-540	5	.91	.72	.61	.48
47 D 0388	6-540	6	1.03	.82	.69	.55
47 D 0389	7-540	7	1.16	.93	.77	.62
47 D 0390	8-540	8	1.29	1.03	.87	.69
47 D 0400	9-540	9	1.41	1.13	.95	.75
47 D 0401	10-540	10	1.55	1.24	1.03	.82
47 D 0410	12-540	12	1.80	1.44	1.21	.96
47 D 0420	14-540	14	2.06	1.65	1.38	1.10
47 D 0421	15-540	15	2.18	1.75	1.46	1.16
47 D 0422	16-540	16	2.32	1.85	1.55	1.24
47 D 0435	18-540	18	2.58	2.06	1.72	1.37
47 D 0439	20-540	20	2.83	2.27	1.90	1.51
47 D 0451	22-540	22	3.09	2.47	2.06	1.65
47 D 0453	24-540	24	3.35	2.68	2.24	1.78
47 D 0455	26-540	26	3.61	2.88	2.41	1.93
47 D 0460	30-540	30	4.12	3.30	2.75	2.19
47 D 0465	31-540	31	4.25	3.40	2.83	2.27

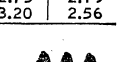
Series 541. Have double 6-32x1/4" binder head screw terminals. Creepage distance is 5/8". 1 3/8" wide by 11/16" high. Terminals are 7/16" center to center with .175-.180" diameter holes. Wt., 14 oz.

47 D 0702	2-541	2	.64	.52	.43	.34
47 D 0703	3-541	3	.77	.62	.52	.41
47 D 0704	4-541	4	.91	.72	.61	.48
47 D 0705	5-541	5	1.03	.82	.69	.55
47 D 0706	6-541	6	1.16	.93	.77	.62
47 D 0708	7-541	7	1.32	1.05	.88	.70
47 D 0710	8-541	8	1.44	1.15	.96	.76
47 D 0712	10-541	10	1.70	1.36	1.13	.91
47 D 0720	12-541	12	1.98	1.59	1.32	1.05
47 D 0722	14-541	14	2.24	1.78	1.49	1.19
47 D 0726	16-541	16	2.49	1.99	1.66	1.33
47 D 0728	18-541	18	2.76	2.20	1.84	1.47
47 D 0730	20-541	20	3.03	2.42	2.02	1.62
47 D 0732	22-541	22	3.31	2.64	2.20	1.76
47 D 0734	24-541	24	3.56	2.85	2.38	1.90
47 D 0736	26-541	26	3.82	3.06	2.55	2.04
47 D 0740	30-541	30	4.36	3.48	2.90	2.33

Series 542. Have double 8-32x5/16" binder head screw terminals. Creepage distance is 3/4". 1 5/8" wide by 7/8" high. Wt., 14 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249
47 D 0741	2-542	2	.69	.55	.46	.37
47 D 0743	4-542	4	1.03	.82	.69	.55
47 D 0745	6-542	6	1.37	1.09	.92	.73
47 D 0747	8-542	8	1.72	1.37	1.14	.92
47 D 0749	10-542	10	2.06	1.65	1.37	1.09
47 D 0751	12-542	12	2.40	1.92	1.60	1.28
47 D 0753	14-542	14	2.74	2.19	1.83	1.46
47 D 0756	16-542	16	3.09	2.47	2.06	1.65
47 D 0759	18-542	18	3.43	2.74	2.29	1.83
47 D 0761	20-542	20	3.78	3.02	2.52	2.02
47 D 0763	22-542	22	4.12	3.30	2.75	2.19
47 D 0769	26-542	26	4.81	3.84	3.20	2.56

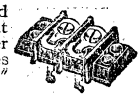
SERIES 150 BARRIER BLOCKS



Bakelite barriers with nickel-plated brass screws. Fit 50-amp solder lugs—#6 stranded wire. 10-32x 5/16" terminals on 1 1/16" ctrs. 3/4x1 13/16". Wt., 6 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249	250-499
47 D 1887	2-150	2	.77	.62	.52	.41	.39
47 D 1888	3-150	3	1.08	.87	.72	.58	.55
47 D 1889	4-150	4	1.40	1.12	.94	.74	.71
47 D 1891	5-150	5	1.72	1.37	1.14	.92	.87
47 D 1892	6-150	6	2.03	1.63	1.36	1.08	1.03
47 D 1893	7-150	7	2.35	1.87	1.57	1.25	1.19
47 D 1894	8-150	8	2.67	2.13	1.78	1.42	1.35
47 D 1899	10-150	10	3.30	2.64	2.20	1.76	1.67

SERIES 140-Y, 141-Y, 142-Y BARRIER BLOCKS



Barriers between each terminal provide increased insulation; follow edge of strips and terminate at base. Molded bakelite base. All have brass solder terminals with hot-tin dipped finish. Size: Series 140-Y, 7/8" wide x 5/8" high; 141-Y, 1 1/8" wide x 1/2" high; 142-Y, 1 5/16" wide x 5/8" high.

Series 140-Y. Leakage path between terminals, 3/8". Designed for use with Series 160 fanning strips on page 301. Av. wt., 5 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249	250-499
47 D 2702	2-140-Y	2	.29	.23	.20	.16	.15
47 D 2705	3-140-Y	3	.36	.29	.24	.19	.18
47 D 2706	4-140-Y	4	.47	.38	.32	.25	.24
47 D 2707	5-140-Y	5	.58	.46	.39	.31	.30
47 D 2708	6-140-Y	6	.68	.55	.45	.36	.34
47 D 2709	7-140-Y	7	.78	.63	.53	.41	.39
47 D 2711	8-140-Y	8	.89	.71	.60	.47	.45
47 D 2712	9-140-Y	9	1.00	.79	.67	.54	.50
47 D 2713	10-140-Y	10	1.10	.89	.74	.59	.56
47 D 2714	11-140-Y	11	1.19	.96	.80	.64	.61
47 D 2715	12-140-Y	12	1.31	1.04	.88	.70	.66
47 D 2716	13-140-Y	13	1.41	1.13	95	.75	.72
47 D 2720	14-140-Y	14	1.52	1.22	1.02	.81	.77
47 D 2721	15-140-Y	15	1.63	1.30	1.08	.87	.82
47 D 2722	16-140-Y	16	1.72	1.38	1.15	.92	.88
47 D 2734	18-140-Y	18	1.94	1.55	1.29	1.03	.98
47 D 2735	19-140-Y	19	2.03	1.63	1.36	1.08	1.03
47 D 2743	20-140-Y	20	2.13	1.71	1.42	1.13	1.08
47 D 2744	21-140-Y	21	2.25	1.80	1.50	1.19	1.14

Series 141-Y. Leakage path, 7/16". For Series 161 fanning strips, listed on page 301. Av. shpg. wt., 5 oz.

47 D 2745	2-141-Y	2	.35	.28	.23	.18	.17
47 D 2746	3-141-Y	3	.47	.38	.32	.25	.24
47 D 2758	4-141-Y	4	.63	.50	.42	.33	.32
47 D 2759	5-141-Y	5	.76	.61	.50	.40	.38
47 D 2760	6-141-Y	6	.88	.70	.59	.46	.44
47 D 2761	7-141-Y	7	1.03	.82	.69	.55	.53
47 D 2762	8-141-Y	8	1.15	.92	.77	.62	.59
47 D 2763	9-141-Y	9	1.28	1.02	.85	.68	.65
47 D 2764	10-141-Y	10	1.42	1.13	.95	.76	.72
47 D 2767	12-141-Y	12	1.69	1.35	1.12	.90	.85
47 D 2769	14-141-Y	14	1.97	1.58	1.32	1.05	1.00
47 D 2770	15-141-Y	15	2.10	1.68	1.40	1.12	1.06
47 D 2772	16-141-Y	16	2.25	1.80	1.50	1.19	1.14
47 D 2776	18-141-Y	18	2.52	2.02	1.69	1.35	1.28
47 D 2779	20-141-Y	20	2.81	2.25	1.87	1.50	1.42

Series 142-Y. Leakage path, 9/16". For Series 162 fanning strips, listed on page 301. Av. shpg. wt., 5 oz.

47 D 2780	2-142-Y	2	.42	.34	.28	.22	.21
47 D 2782	4-142-Y	4	.76	.61	.50	.40	.38
47 D 2783	5-142-Y	5	.92	.73	.62	.49	.46
47 D 2784	6-142-Y	6	1.10	.88	.73	.59	.56
47 D 2785	7-142-Y	7	1.27	1.01	.84	.68	.64
47 D 2786	8-142-Y	8	1.43	1.14	.96	.76	.72
47 D 2788	10-142-Y	10	1.78	1.42	1.18	.95	.90
47 D 2789	11-142-Y	11	1.94	1.56	1.30	1.03	.98
47 D 2795	12-142-Y	12	2.11	1.69	1.41	1.12	1.07
47 D 2875	14-142-Y	14	2.45	1.96	1.64	1.31	1.25
47 D 2877	16-142-Y	16	2.80	2.25	1.87	1.49	1.42
47 D 2878	17-142-Y	17	2.97	2.37	1.98	1.59	1.59

SERIES 171, 172, 173 MINIATURE BARRIER STRIP

Series 171 single 2-56x3/16" binding head screw terminals on 1/4" ctrs.; 5/16x1 1/2". Series 172 double 2-56x3/16" screw terminals on 1/4" ctrs.; 5/8x5/16". Series 173 single 4-40x5/16" screw terms. on 3/8" ctrs.; 3/8x1/2". Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249	250-499
47 D 2949	4-171	4	.41	.33	.28	.22	.21
47 D 2973	6-171	6	.55	.43	.36	.29	.28
47 D 2975	8-171	8	.67	.54	.44	.35	.34
47 D 2978	4-172	4	.74	.60	.49	.39	.38
47 D 2980	6-172	6	1.00	.79	.67	.54	.50
47 D 2982	8-172	8	1.26	1.00	.83	.67	.64
47 D 2984	10-172	10	1.51	1.22	1.01	.80	.77
47 D 2988	12-172	12	1.77	1.41	1.18	.95	.90
47 D 2990	14-172	14	2.03	1.62	1.35	1.08	1.03
47 D 2991	2-173	2	.28	.22	.19	.15	.14
47 D 2993	4-173	4	.48	.39	.33	.26	.25
47 D 2995	6-173	6	.69	.55	.46	.37	.35
47 D 2997	8-173	8	.89	.70	.59	.47	.44
47 D 2999	10-173	10	1.08	.87	.72	.58	.55

Cinch-Jones Terminal, Fanning, Marker Strips

SERIES 140, 141, 142 BARRIER-TYPE TERMINALS

Barriers interposed between terminal positions for more insulation. Follow edge of strips, terminate at base. Insure positive contact with strips at right. Series 140, 5-40x3/16" binder-head screws; 141, 6-32x1/4"; 142, 8-32x5/16".

Series 140. Leakage path between terminals is 3/8". Base is 7/8" wide x5/8" high. Use with Series 160 fanning strips. Av. wt., 14 oz.

Stock No.	Mfr's Type	Terminals	EACH 1-24	25-49	50-99	100-249	250-499
47 D 1580	1-140	1	.19	.15	.13	.11	.10
47 D 1800	2-140	2	.23	.19	.16	.13	.12
47 D 1801	3-140	3	.27	.22	.18	.15	.14
47 D 1803	4-140	4	.34	.27	.23	.19	.18
47 D 1807	5-140	5	.42	.33	.28	.23	.22
47 D 1802	6-140	6	.48	.38	.32	.26	.25
47 D 1581	7-140	7	.55	.44	.37	.29	.28
47 D 1804	8-140	8	.63	.50	.42	.33	.32
47 D 1582	9-140	9	.70	.56	.46	.37	.35
47 D 1805	10-140	10	.77	.62	.52	.41	.39
47 D 1583	11-140	11	.83	.67	.56	.44	.42
47 D 1806	12-140	12	.92	.73	.61	.48	.46
47 D 1584	13-140	13	.98	.78	.66	.53	.49
47 D 1585	14-140	14	1.06	.84	.71	.57	.54
47 D 1586	15-140	15	1.13	.91	.75	.60	.58
47 D 1587	16-140	16	1.19	.96	.80	.64	.61
47 D 1588	17-140	17	1.27	1.01	.84	.68	.64
47 D 1589	18-140	18	1.34	1.07	.90	.71	.68
47 D 1590	19-140	19	1.41	1.12	.94	.75	.71
47 D 1591	20-140	20	1.47	1.18	.99	.78	.75
47 D 1592	21-140	21	1.56	1.25	1.04	.82	.78

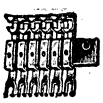
Series 141. Leakage path between terminals is 7/16". Base is 1 1/8" wide x 1/2" high. Use with Series 161 fanning strips. Av. wt., 14 oz.

47 D 1835	2-141	2	.26	.20	.17	.14	.13
47 D 1836	3-141	3	.34	.27	.23	.18	.17
47 D 1837	4-141	4	.44	.35	.30	.24	.23
47 D 1842	5-141	5	.54	.42	.36	.29	.27
47 D 1838	6-141	6	.61	.48	.41	.33	.31
47 D 1831	7-141	7	.72	.58	.48	.38	.36
47 D 1839	8-141	8	.80	.64	.54	.43	.41
47 D 1739	9-141	9	.89	.71	.60	.47	.45
47 D 1840	10-141	10	.99	.79	.66	.53	.50
47 D 1740	11-141	11	1.07	.85	.72	.58	.55
47 D 1841	12-141	12	1.16	.93	.77	.62	.59
47 D 1741	13-141	13	1.22	1.00	.83	.67	.64
47 D 1876	14-141	14	1.35	1.07	.90	.72	.68
47 D 1742	15-141	15	1.43	1.14	.96	.76	.72
47 D 1877	16-141	16	1.52	1.22	1.02	.81	.77
47 D 1743	17-141	17	1.62	1.29	1.08	.87	.81
47 D 1878	18-141	18	1.71	1.37	1.14	.91	.87
47 D 1744	19-141	19	1.80	1.44	1.21	.96	.92
47 D 1879	20-141	20	1.90	1.51	1.27	1.01	.96

Series 142. Leakage path between terminals is 9/16". Base is 1 5/16" wide x 5/8" high. Use with Series 162 fanning strips. Av. wt., 14 oz.

47 D 1670	2-142	2	.30	.24	.20	.16	.15
47 D 1671	3-142	3	.41	.32	.27	.22	.21
47 D 1672	4-142	4	.53	.42	.35	.28	.27
47 D 1673	5-142	5	.64	.50	.42	.34	.32
47 D 1674	6-142	6	.75	.60	.50	.40	.38
47 D 1679	7-142	7	.87	.69	.58	.46	.44
47 D 1676	8-142	8	.98	.78	.65	.52	.49
47 D 1681	9-142	9	1.08	.87	.72	.58	.55
47 D 1678	10-142	10	1.21	.97	.80	.64	.61
47 D 1682	11-142	11	1.32	1.05	.88	.70	.67
47 D 1680	12-142	12	1.43	1.14	.96	.76	.72
47 D 1881	13-142	13	1.55	1.24	1.03	.82	.78
47 D 1882	14-142	14	1.66	1.33	1.11	.89	.84
47 D 1883	15-142	15	1.78	1.42	1.18	.95	.90
47 D 1884	16-142	16	1.90	1.51	1.27	1.01	.96
47 D 1886	17-142	17	2.01	1.61	1.34	1.07	1.02

FANNING STRIPS



Laminated 3/32" bakelite strips; hole in either end for fastening the cable with a clamp or lacing twine assures positive connections. Left hand mtg. .032" cadmium-plated brass terminals. 2 thru 20 terminals are available in all series. Prefix in Type no. indicates no. of terminals.

Series 160L. Fit Series 140 barrier terminals on 3/8" ctrs. 1/2" wide.

Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
47 D 1814	6-160L	.48	.39	.32	.25	.24
47 D 1810	7-160L	.56	.44	.36	.29	.28
47 D 1817	8-160L	.61	.48	.41	.33	.31
47 D 1811	9-160L	.69	.56	.47	.36	.35
47 D 1818	10-160L	.77	.62	.52	.41	.40
47 D 1819	12-160L	.95	.76	.64	.51	.48

FANNING STRIPS (Cont'd)

Series 161L. Fit Series 141 barrier terminals on 7/16" ctrs. 5/8" wide.

Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
47 D 1824	4-161L	.36	.29	.25	.20	.19
47 D 1827	5-161L	.44	.35	.31	.24	.23
47 D 1829	8-161L	.64	.51	.43	.34	.33
47 D 1832	10-161L	.79	.64	.53	.43	.41
47 D 1833	12-161L	.98	.78	.66	.52	.50

Series 162L. Fit Series 142 barrier terminals on 9/16" ctrs. 5/8" wide.

47 D 1847	8-162L	.69	.56	.47	.36	.35
47 D 1848	10-162L	.83	.66	.56	.44	.42
47 D 1849	12-162L	1.03	.83	.69	.56	.52

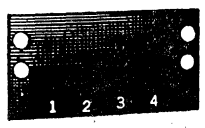
ADAPTER SOLDER TERMINALS FOR BARRIER BLOCKS

"Y" "¾W" "141J, 95B"

Permit topside or underside solder connections to barrier blocks. Types ¾W and W for topside; Type Y for underside. Types 141-J and 95B are jumpers used for making permanent connections between adjacent barrier block terminals. Tinned brass. In pkgs. of 50. Wt., 4 oz.

Stock No.	Mfr's Type	For Series	PER PKG. OF 50 1-4	5-9	10-Up
47 D 1400	¾W-140	140	3.50	3.00	2.50
47 D 1401	¾W-141	141	3.50	3.00	2.50
47 D 1402	¾W-142	142	4.00	3.50	3.00
47 D 1403	W-140	140	3.50	3.00	2.50
47 D 1407	Y-140	140	3.50	3.00	2.50
47 D 1408	Y-141	141	3.50	3.00	2.50
47 D 1409	Y-142	142	4.00	3.50	3.00
47 D 1410	141-J	140 & 141	2.75	2.20	1.65
47 D 1411	95B	142	5.00	4.50	4.00

MARKER STRIPS



Used for labeling terminal positions on barrier strips. Also act as insulators. 1/32" black fiber. Mounting holes match those in corresponding barrier strips. Middle figure in Type No. indicates number of contacts; last 3 figures indicate barrier series. Strips are numbered sequentially from 1 with white numerals. 1 oz.

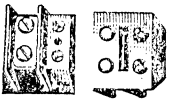
Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249	250-499
47 D 3300	MS-2-140	.13	.10	.09	.08	.07
47 D 3302	MS-3-140	.13	.10	.09	.08	.07
47 D 3303	MS-4-140	.13	.10	.09	.08	.07
47 D 3304	MS-5-140	.13	.10	.09	.08	.07
47 D 3305	MS-6-140	.13	.10	.09	.08	.07
47 D 3306	MS-7-140	.15	.12	.10	.09	.08
47 D 3307	MS-8-140	.15	.12	.10	.09	.08
47 D 3308	MS-9-140	.15	.12	.10	.09	.08
47 D 3309	MS-10-140	.17	.13	.11	.10	.09
47 D 3310	MS-11-140	.17	.13	.11	.10	.09
47 D 3311	MS-12-140	.17	.13	.11	.10	.09
47 D 3313	MS-14-140	.19	.15	.13	.11	.10
47 D 3314	MS-15-140	.19	.15	.13	.11	.10
47 D 3315	MS-16-140	.21	.17	.14	.12	.11
47 D 3317	MS-18-140	.21	.17	.14	.12	.11
47 D 3318	MS-19-140	.23	.19	.16	.13	.12
47 D 3319	MS-20-140	.23	.19	.16	.13	.12
47 D 3320	MS-21-140	.23	.19	.16	.13	.12
47 D 3321	MS-2-141	.13	.10	.09	.08	.07
47 D 3322	MS-3-141	.13	.10	.09	.08	.07
47 D 3323	MS-4-141	.13	.10	.09	.08	.07
47 D 3324	MS-5-141	.15	.12	.10	.09	.08
47 D 3325	MS-6-141	.15	.12	.10	.09	.08
47 D 3326	MS-7-141	.15	.12	.10	.09	.08
47 D 3327	MS-8-141	.17	.13	.11	.10	.09
47 D 3329	MS-10-141	.17	.13	.11	.10	.09
47 D 3331	MS-12-141	.19	.15	.13	.11	.10
47 D 3333	MS-14-141	.21	.17	.14	.12	.11
47 D 3334	MS-15-141	.23	.19	.16	.13	.12
47 D 3335	MS-16-141	.23	.19	.16	.13	.12
47 D 3340	MS-18-141	.26	.20	.17	.14	.13
47 D 3342	MS-20-141	.27	.22	.18	.15	.14
47 D 3343	MS-2-142	13	10	.09	.08	.07
47 D 3344	MS-3-142	.13	.10	.09	.08	.07
47 D 3345	MS-4-142	.15	.12	.10	.09	.08
47 D 3346	MS-5-142	.15	.12	.10	.09	.08
47 D 3347	MS-6-142	.15	.12	.10	.09	.08
47 D 3349	MS-8-142	.17	.13	.11	.10	.09
47 D 3350	MS-9-142	.19	.15	.13	.11	.10
47 D 3353	MS-12-142	.23	.19	.16	.13	.12
47 D 3357	MS-16-142	.29	.23	.20	.16	.15
47 D 3358	MS-17-142	.32	.25	.21	.17	.16

Allied is the World's Foremost Supplier of Electronic Components to Industry

Military and Commercial Terminal Boards

Kulka

CLOSED-BACK TERMINAL BOARDS



Molded phenolic. Nickel-plated brass screws, terms. Voltage rating, ⅓ breakdown voltage. *Suffix No. equals No. of terminals. Av., 12 oz.

670 Series. Have 4 thru holes for mounting. Wire sizes: AWG #22 to 16. Current rating: 15 amps. Voltage rating: 2500 volts rms.

Stock No.	Mfr's Type*	Lgth. In.	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 5926	670-2	1 13/32	.23	.19	.16	.12	.11	.10
47 D 5837	670-3	1 25/32	.27	.22	.18	.14	.13	.12
47 D 5927	670-4	2 5/32	.34	.27	.23	.18	.16	.15
47 D 5928	670-5	2 17/32	.42	.34	.28	.22	.20	.19
47 D 5929	670-6	2 29/32	.48	.38	.32	.26	.23	.22
47 D 5930	670-7	3 9/32	.55	.44	.37	.29	.26	.25
47 D 5931	670-8	3 21/32	.62	.50	.42	.33	.30	.29
47 D 5932	670-10	4 13/32	.77	.62	.52	.41	.37	.36
47 D 5933	670-12	5 5/32	.91	.73	.61	.48	.44	.42
47 D 5934	670-14	5 29/32	1.06	.85	.71	.56	.51	.49
47 D 5935	670-15	6 9/32	1.13	.90	.75	.60	.54	.53
47 D 5936	670-16	6 21/32	1.19	.95	.80	.64	.57	.55
47 D 5937	670-18	7 13/32	1.34	1.07	.89	.71	.64	.62
47 D 5938	670-20	8 5/32	1.47	1.18	.98	.78	.71	.68
47 D 5939	670-22	8 29/32	1.62	1.30	1.08	.86	.78	.75
47 D 5940	670-24	9 21/32	1.83	1.46	1.22	.98	.88	.85
47 D 5941	670-26	10 13/32	2.02	1.61	1.35	1.08	.97	.94
47 D 5942	670-28	11 5/32	2.16	1.73	1.44	.86	.78	.75
47 D 5943	670-30	11 29/32	2.31	1.85	1.54	1.23	1.11	1.08

671 Series. Has 4 thru holes for mounting. Wire sizes: AWG #16 to 14. Current rating: 20 amps. Voltage rating: 3000 volts rms.

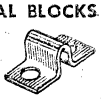
47 D 5944	671-2	1 5/8	.26	.20	.17	.14	.12	.11
47 D 5945	671-3	2 1/16	.35	.28	.23	.18	.17	.16
47 D 5946	671-4	2 1/2	.44	.35	.30	.24	.21	.20
47 D 5947	671-5	2 15/16	.53	.43	.36	.28	.26	.24
47 D 5948	671-6	3 3/8	.61	.49	.41	.32	.29	.28
47 D 5949	671-7	3 13/16	.72	.58	.48	.38	.35	.34
47 D 5974	671-8	4 1/4	.80	.64	.54	.43	.39	.37
47 D 5975	671-9	4 11/16	.89	.71	.59	.47	.42	.41
47 D 5976	671-10	5 1/8	.99	.79	.66	.53	.48	.46
47 D 5977	671-12	6	1.16	.92	.77	.62	.55	.53
47 D 5978	671-14	6 7/8	1.34	1.07	.90	.72	.64	.63
47 D 5979	671-16	7 3/4	1.52	1.22	1.02	.81	.73	.71
47 D 5980	671-18	8 5/8	1.70	1.36	1.14	.91	.82	.79
47 D 5981	671-20	9 1/2	1.89	1.51	1.26	1.01	.91	.88
47 D 5982	671-22	10 3/8	2.08	1.66	1.39	1.11	1.00	.96
47 D 5983	671-24	11 1/4	2.28	1.82	1.52	1.22	1.09	1.06
47 D 5984	671-26	12 1/8	2.55	2.04	1.70	1.36	1.22	1.19
47 D 5985	671-30	13 7/8	3.02	2.41	2.01	1.61	1.45	1.41

672 Series. Has 4 thru holes for mounting. Wire sizes: AWG #14 to 12. Current rating: 30 amps. Voltage rating: 3300 volts rms.

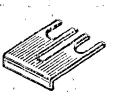
47 D 5986	672-2	2 3/32	.31	.25	.21	.16	.15	.14
47 D 5987	672-3	2 21/32	.42	.34	.28	.22	.20	.19
47 D 5988	672-4	3 7/32	.53	.42	.35	.28	.25	.24
47 D 5989	672-5	3 25/32	.63	.50	.42	.34	.30	.29
47 D 5990	672-6	4 11/32	.75	.60	.50	.40	.36	.35
47 D 5991	672-7	4 25/32	.86	.69	.58	.46	.41	.40
47 D 5992	672-8	5 15/32	.98	.78	.65	.52	.47	.46
47 D 5993	672-9	6 1/32	1.08	.86	.72	.58	.52	.50
47 D 5994	672-10	6 19/32	1.20	.96	.80	.64	.57	.56
47 D 5995	672-12	7 23/32	1.43	1.14	.95	.76	.68	.67
47 D 5996	672-14	8 27/32	1.66	1.34	1.11	.88	.80	.77
47 D 5997	672-15	9 13/32	1.77	1.42	1.18	.94	.85	.83
47 D 5998	672-16	9 31/32	1.89	1.51	1.26	1.01	.91	.88
47 D 5999	672-18	11 3/32	2.11	1.69	1.41	1.12	1.01	.98
47 D 5838	672-20	12 7/32	2.37	1.90	1.58	1.26	1.14	1.11

JUMPERS FOR TERMINAL BLOCKS

For series 670, 671, 672 terminal boards, shown above. RJS are series jumpers; suffix indicates number of terminals. Available for 2 to 23 terminals. Nickel-plated brass. Av. wt., per 100, 8 oz.



601-J



600-RJS

Stock No.	Mfr's Type	For Series	PKG. OF 100
47 D 3744	600J	670	1.93
47 D 3745	601J	671	2.20
47 D 3746	602J	672	2.48

Stock No.	Mfr's Type	For Series	EACH 1-24	25-49	50-99
47 D 3747	600RJS-2	670	.27	.22	.18
47 D 3748	600RJS-4	670	.49	.39	.33
47 D 3749	600RJS-5	670	.56	.44	.37
47 D 3750	600RJS-6	670	.69	.55	.46
47 D 3751	600RJS-8	670	.82	.65	.55

MIL-T-55164 CLOSED-BACK TERMINAL BOARDS

Terminal and reinforcement plates at mounting holes are molded into diallyl phthalate (type GDI-30F per MIL-M-19833) body. Screws (per QQ-W-321) and terminal plates (per QQ-B-613) brass, nickel-plated (per QQ-N-290). Holes molded, not drilled, for unbroken surfaces. Test voltages, per MIL-T-55164, are min., not breakdown voltage. *Last 2 digits in Mfr's Type No. is number of terminals. Av. wt., 12 oz.

37TB Series. Dielectric withstanding voltage: 3000 volts rms. 15-amp current rating. Accommodates wire sizes AWG #22 to 16.

Stock No.	*Mfr's Type	MIL. No.	EACH 1-9	10-24	25-49	50-99	100-249
47 D 5857	20002	37TB-2	1.53	1.15	.92	.77	.61
47 D 5858	20003	37TB-3	1.97	1.48	1.18	.99	.79
47 D 5859	20004	37TB-4	2.31	1.73	1.39	1.16	.92
47 D 5860	20005	37TB-5	2.55	1.91	1.53	1.28	1.02
47 D 5861	20006	37TB-6	2.80	2.10	1.68	1.40	1.12
47 D 5862	20007	37TB-7	3.18	2.39	1.91	1.59	1.27
47 D 5863	20008	37TB-8	3.52	2.64	2.11	1.76	1.41
47 D 5664	20009	37TB-9	3.74	2.81	2.24	1.87	1.50
47 D 5865	20010	37TB-10	4.04	3.03	2.42	2.02	1.62
47 D 5866	20011	37TB-11	4.31	3.23	2.59	2.16	1.72
47 D 5867	20012	37TB-12	4.80	3.60	2.88	2.40	1.92
47 D 5870	20015	37TB-15	5.67	4.25	3.40	2.84	2.27
47 D 5872	20017	37TB-17	6.28	4.71	3.77	3.14	2.51
47 D 5873	20018	37TB-18	6.55	4.91	3.93	3.28	2.62
47 D 5874	20019	37TB-19	6.91	5.18	4.15	3.46	2.76
47 D 5875	20020	37TB-20	7.14	5.36	4.28	3.57	2.86
47 D 5876	20021	37TB-21	7.42	5.57	4.45	3.71	2.97
47 D 5877	20022	37TB-22	7.76	5.82	4.66	3.88	3.10
47 D 5878	20023	37TB-23	8.12	6.09	4.87	4.06	3.25
47 D 5880	20025	37TB-25	8.81	5.61	5.29	4.41	3.52
47 D 5881	20026	37TB-26	9.30	6.98	5.58	4.65	3.72
47 D 5882	20027	37TB-27	9.63	7.22	5.78	4.82	3.85
47 D 5885	20030	37TB-30	10.52	7.89	6.31	5.26	4.21
47 D 5886	20031	37TB-31	10.78	8.09	6.47	5.37	4.31

38TB Series. Dielectric withstanding voltage: 3400 volts rms. 20-amp current rating. Accommodates wire sizes AWG #16 to 14.

47 D 5887	21002	38TB-2	2.05	1.54	1.23	1.03	.82
47 D 5888	21003	38TB-3	2.23	1.67	1.34	1.12	.89
47 D 5889	21004	38TB-4	2.47	1.85	1.48	1.24	.99
47 D 5890	21005	38TB-5	2.81	2.11	1.69	1.41	1.12
47 D 5891	21006	38TB-6	3.24	2.43	1.94	1.62	1.30
47 D 5892	21007	38TB-7	3.81	2.86	2.29	1.91	1.52
47 D 5893	21008	38TB-8	4.27	3.20	2.56	2.14	1.71
47 D 5895	21010	38TB-10	5.27	3.95	3.16	2.64	2.11
47 D 5897	21012	38TB-12	6.23	4.67	3.74	3.12	2.49
47 D 5899	21014	38TB-14	7.21	5.41	4.33	3.61	2.88
47 D 5900	21015	38TB-15	7.44	5.58	4.46	3.72	2.98
47 D 5903	21018	38TB-18	8.32	6.24	4.99	4.16	3.33
47 D 5905	21020	38TB-20	9.06	6.80	5.44	4.53	3.62

39TB Series. Dielectric withstanding voltage: 4000 volts rms. 30-amp current rating. Accommodates wire sizes AWG #14 to 12.

47 D 5909	22002	39TB-2	3.51	2.63	2.11	1.76	1.40
47 D 5910	22003	39TB-3	4.03	3.02	2.42	2.02	1.61
47 D 5911	22004	39TB-4	4.56	3.42	2.74	2.28	1.82
47 D 5912	22005	39TB-5	4.90	3.68	2.94	2.45	1.96
47 D 5913	22006	39TB-6	5.25	3.94	3.15	2.63	2.10
47 D 5914	22007	39TB-7	5.86	4.40	3.52	2.93	2.34
47 D 5915	22008	39TB-8	6.30	4.75	3.78	3.15	2.52
47 D 5916	22009	39TB-9	6.83	5.12	4.10	3.42	2.73
47 D 5917	22010	39TB-10	7.34	5.51	4.40	3.67	2.94
47 D 5919	22012	39TB-12	8.13	6.10	4.88	4.07	3.25
47 D 5923	22016	39TB-16	10.91	8.18	6.55	5.46	4.36
47 D 5924	22017	39TB-17	11.32	8.49	6.79	5.66	4.53

NAVY MIL-T-16784B TERMINAL BOARDS

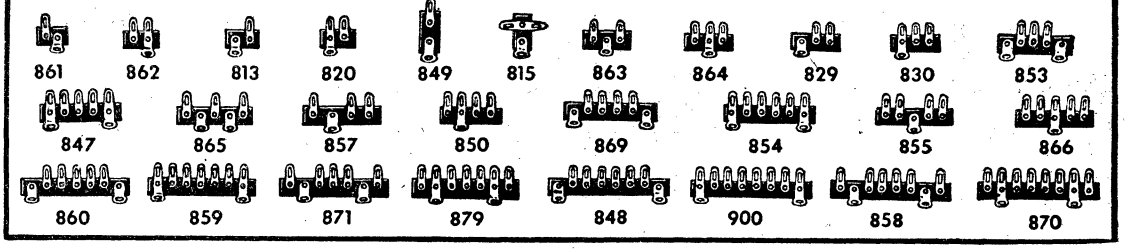
For use in fused circuits where normal operating power does not exceed 2000 watts per term. Max. voltage rating 600, except: 8TB, 300. Amp rating 30, except: 7TB, 40. *Double row. †Single row, through connection. ‡Double row linked. Last digit in Type No. indicates No. of terminals. Av. wt., 5 oz.

6TB 7TB 8TB

Stock No.	Type Des.	Federal Stk. No.	EACH 1-9	10-24	25-49	50-99	100-249	250-499
47 D 5842	6TB6*	500-5373	4.62	3.47	2.77	2.31	1.85	1.66
47 D 5845	7TB8†	502-8476	6.71	5.03	4.03	3.36	2.68	2.42
47 D 5847	8TB2‡	500-5388	2.64	1.98	1.58	1.32	1.06	.95
47 D 5848	8TB6‡	542-8546	4.62	3.47	2.77	2.31	1.85	1.66
47 D 5849	8TB8‡	502-4522	5.39	4.04	3.23	2.70	2.16	1.94
47 D 5850	8TB10‡	518-9611	6.27	4.70	3.76	3.14	2.51	2.26

Terminal Strips, Plugs, Jacks and Spring Clips

H. H. SMITH LUG-TYPE TERMINAL STRIPS



Dark brown bakelite strips, measuring 1/16" thick x 3/8" wide. For a wide variety of applications in electronics. Equipped with solder-coated steel lugs that have 3/8" centers. 9/64" diameter mounting holes. 10 terminal strips per package. Av. wt. per pkg., 5 oz.

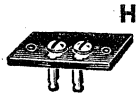
Stock No.	Mfr's Type	PER PKG. OF 10 1-9	10-99	100-249	250 Up	Stock No.	Mfr's Type	PER PKG. OF 10 1-9	10-99	100-249	250 Up	Stock No.	Mfr's Type	PER PKG. OF 10 1-9	10-99	100-249	250 Up
47 D 4320	861	.27	.24	.21	.19	47 D 4329	830	.36	.30	.27	.24	47 D 4338	866	.48	.40	.36	.32
47 D 4321	862	.29	.24	.22	.20	47 D 4330	853	.54	.45	.41	.36	47 D 4339	860	.72	.60	.54	.48
47 D 4322	813	.30	.25	.23	.20	47 D 4331	847	.66	.55	.50	.44	47 D 4340	859	.72	.60	.54	.48
47 D 4323	820	.30	.25	.23	.20	47 D 4332	865	.54	.45	.41	.36	47 D 4341	871	.66	.55	.50	.44
47 D 4324	849	.36	.30	.27	.24	47 D 4333	857	.48	.40	.36	.32	47 D 4342	879	.78	.65	.59	.52
47 D 4325	815	.38	.32	.29	.26	47 D 4334	850	.48	.40	.36	.32	47 D 4343	848	.80	.67	.60	.54
47 D 4326	863	.36	.30	.27	.24	47 D 4335	869	.61	.51	.46	.41	47 D 4344	900	.78	.65	.59	.52
47 D 4327	864	.36	.30	.27	.24	47 D 4336	854	.66	.55	.50	.44	47 D 4345	858	.84	.70	.63	.56
47 D 4328	829	.34	.28	.25	.23	47 D 4337	855	.42	.35	.32	.28	47 D 4346	870	.86	.72	.65	.58

H. H. SMITH SERIES 3000 TERMINAL STRIPS

Terminals are made of steel, with cadmium plating for easy soldering. Spaced on 5/16" centers. Insulated strip is constructed of rugged molded bakelite. Sturdy, cadmium-plated steel mounting base. Mounting holes provided at each end of the base for No. 6 screws. Wt. per pkg. 5 oz.

Stock No.	Mfr's Type	Terminals	Mtg. Ctrs.	PER PKG. OF 5 1-19	20-199	200-499	500-Up
47 D 1462	3002	2	1"	.36	.30	.27	.24
47 D 1463	3003	3	1 5/16"	.42	.35	.32	.28
47 D 1464	3004	4	1 5/8"	.48	.40	.36	.32
47 D 1465	3005	5	1 15/16"	.54	.45	.41	.36
47 D 1466	3006	6	2 1/4"	.60	.50	.45	.40
47 D 1467	3007	7	2 9/16"	.66	.55	.50	.44
47 D 1468	3008	8	2 7/8"	.68	.57	.51	.46
47 D 1469	3009	9	3 3/16"	.73	.61	.55	.99
47 D 1470	3010	10	3 1/2"	.79	.66	.59	.53
47 D 1475	3012	12	4 1/8"	.90	.75	.68	.60
47 D 1476	3013	13	4 7/8"	.98	.82	.74	.66

H. H. SMITH TERMINAL STRIPS



For a variety of connecting applications—antenna terminals, output terminals, etc. Made of black 3/32" bakelite. Screw-type terminals are cadmium-plated with tinned lugs. Av., wt. 4 oz.

Stock No.	Mfr's Type	Term.	Mtg. Ctrs.	EACH 1-24	25-99	100-499	500-Up
47 D 1875	902	2	1 1/2"	.24	.20	.18	.16
47 D 1880	903	3	2"	.26	.22	.20	.18
47 D 1885	904	4	2 1/2"	.32	.27	.24	.22
47 D 1890	905	5	3"	.40	.33	.30	.26
47 D 1895	906	6	3 1/2"	.48	.39	.35	.30
47 D 1898	908	8	4 1/2"	.60	.50	.45	.40

FAHNESTOCK and H.H. SMITH SPRING CLIPS

Offer positive, reliable contact. Easy to connect and disconnect. *Made of bronze; †H. H. Smith clips are brass, nickel-plated. All others solid brass. Av. shpg. wt., per pkg. of 10, 3 oz.

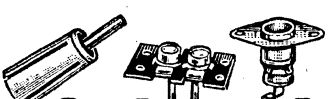
Stock No.	Mfr's Type	Fig.	Length	Width	Max. Wire	Mtg. Hole	PER PKG. OF 10 1-9	10-99	100-Up
47 D 1700	2	A	1"	3/8"	#10	#8	.25	.22	.21
47 D 1701	534†	A	1"	3/8"	#10	#6	.40	.36	.34
47 D 1702	3	A	1 1/16"	3/8"	#10	#8	.32	.28	.24
47 D 1705	10	A	3/4"	5/16"	#14	#6	.20	.18	.17
47 D 1706	533†	A	3/4"	5/16"	#14	#6	.28	.25	.24
47 D 1711	539†	A	5/8"	7/32"	#16	#4	.28	.25	.24
47 D 1703	5	B	1 1/16"	3/8"	#10	#8	.36	.32	.30
47 D 1707	15*	B	1/2"	7/32"	#16	#4	.20	.18	.17
47 D 1714	535†	C	1 1/2"	5/16"	#14	#6	1.10	.98	.93
47 D 1716	536†	C	2 1/16"	3/8"	#10	#8	1.30	1.15	1.10

H. H. SMITH SCREW-TYPE TERMINAL STRIPS

For multiple outputs. 1/16" thick; 3/32". Solder-coated brass terms. on 7/16" centers. 9/64" mounting holes. Bakelite. In packages of 5. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Term.	Mtg. Ctrs.	PER PKG. OF 5 1-9	10-49	50-99	100-Up
47 D 4079	872	2	1 15/16"	.44	.37	.33	.30
47 D 4080	873	3	1 3/4"	.66	.55	.50	.44
47 D 4081	874	4	2 3/16"	.80	.67	.60	.54
47 D 4082	875	5	2 5/8"	1.02	.85	.77	.68
47 D 4083	876	6	3 1/16"	1.18	.98	.88	.78
47 D 4084	877	7	3 15/16"	1.36	1.13	1.02	.90
47 D 4085	928	8	3 15/16"	1.44	1.20	1.08	.96
47 D 4086	929	9	4 3/8"	1.68	1.40	1.26	1.12
47 D 4087	930*	10	4 13/16"	1.92	1.60	1.44	1.28

H. H. SMITH MOTOROLA-TYPE PLUG, JACK; RCA PHONO JACKS

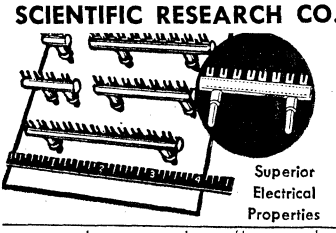


Type 1200. Motorola-type plug designed to connect coaxial antenna lead-in to automobile radio; pin dimeter 1/8". Shpg. wt., 1 oz. Type 1207. Motorola female connector mounts in 15/32" hole. 1 oz.

Type 1214. Two standard RCA-type phono jacks on a 1 1/2x1" base. Use on phono players and recording units. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Description	PER PKG. OF 5 1-19	20-199	200-499	500 Up
47 D 1135	1200	D	Motorola Type Plug	.70	.53	.48	.36
47 D 1138	1214	E	Double Phono Jack	.60	.51	.45	.40
47 D 1137	1207	F	Motorola Jack	1.08	.90	.81	.72

SCIENTIFIC RESEARCH CO. MOUNTING STRIPS



Superior Electrical Properties

Light, unbreakable polypropylene strips for compact circuitry. Dielectric constants are 400% better than phenolic, 200% better than ceramic. Loss factors are 200 times better than phenolic, 30 times better than ceramic. Fastened and pressure fitted by 6-32 speed nut. Wt./pkg. 4 oz.

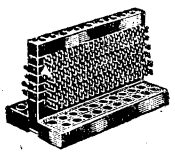
Stock No.	Mfr's Type	Term.	Lgth.	PER PKG. OF 5 1-19	20-99	100-199	200-999
47 D 3106	MS-1-PP-2	2	1 9/32"	.63	.53	.45	.44
47 D 3107	MS-1-PP-3	3	5 7/32"	.63	.53	.45	.44
47 D 3108	MS-1-PP-4	4	1 5/16"	.83	.70	.60	.56
47 D 3109	MS-1-PP-5	5	1 15/32"	.83	.70	.60	.56
47 D 3110	MS-1-PP-7	7	2 1/16"	.83	.70	.60	.56
47 D 3111	MS-1-PP-9	9	2 31/32"	.98	.83	.71	.67
47 D 3112	MS-1-PP-11	11	3 15/64"	.98	.83	.71	.67

Allied Is the World's Foremost Supplier of Electronic Components to Industry

Terminal Blocks, Strips, Plugs, Jacks and Snaps

ADC PRODUCTS TERMINAL BLOCKS

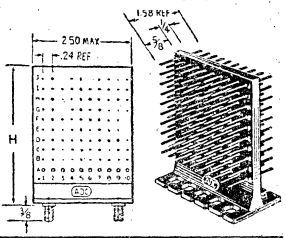
SOLDER-TYPE TERMINAL BLOCKS



Rugged units for design and construction use in telephone circuits, computers, recording studios, broadcast stations, or wherever many circuits are in operation. Each unit has a one-piece molded black phenolic base; individual terminal separators are also of molded black phenolic. Polished phenolic surface surrounding terminals assures easy removal of solder flash. Terminals are .040" thick plated brass, 20 terminals per row. Terminal rows are graduated in length for ease of wiring, and are identified by numbering imprinted along the top row. Base, 6 1/16x3". Av. shpg. wt., 1 1/2 lbs.

Stock No.	Mfr's Type	No. Rows	No. of Terms.	Block Height	EACH 1-9	EACH 10-24
47 D 0695	PJ-102	2	40	2 1/4"	4.65	3.88
47 D 0696	PJ-103	3	60	2 19/32"	5.85	4.88
47 D 0697	PJ-104	4	80	2 15/16"	7.05	5.88
47 D 0698	PJ-105	5	100	3 9/32"	8.25	6.88
47 D 0699	PJ-106	6	120	3 5/8"	9.45	7.88

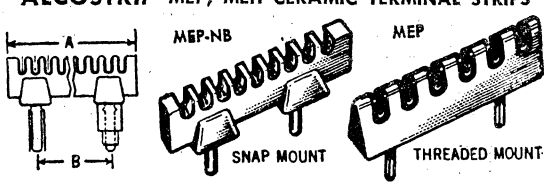
"WRAPID" SOLDERLESS TERMINAL BLOCKS



Use any wrapping tool to make 100 solderless, wrapped wire connections in a 3 3/8x 2 1/2" space—with Type PJ-610 (illus. at right). Even inexperienced operators can make one connection each 5 seconds. Block and fanning strip are molded of high-impact rubber-modified acrylic plastic. Brass terminals. Letters and numbers identify terminals. Cadmium-chromate plated mtg. studs. 4 oz.

Stock No.	Mfr's Type	No. of Terminals	"H" Dimension	EACH 1-24	EACH 25-49
47 D 0826	PJ-604	40	1.75"	2.91	2.42
47 D 0827	PJ-606	60	2.25"	3.57	2.97
47 D 0828	PJ-608	80	2.75"	4.23	3.52
47 D 0829	PJ-610	100	3.25"	4.89	4.07

ALCOSTRIP MEP, MEH CERAMIC TERMINAL STRIPS



Simplify component replacement. Permanent bond between metal and ceramic. Especially suitable where components need to be resoldered and removed again. Tinned copperplate on silvered ceramic facilitates soldering of components and leads. Withstand excessive heat. Snap or thread mounting. Dielectric Strength: more than 10 seconds at 1500 VDC between terminals. Insulation Resistance: over 1000 megohms at 500 VDC megger. Dip Solder Test: no exfoliation at 250°C for 5 seconds. Materials: terminal strip, steatite; bushing, polypropolyne. Mfd. in Japan under license by Tektronix. *Indicates number of terminals. Shpg. wt., 4 oz.

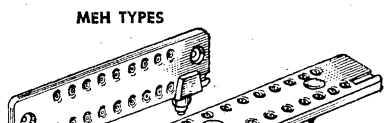
SNAP MOUNT TYPES

Stock No.	Type MEP-	Dimensions "A"	Dimensions "B"	PER PKG. OF 5 1-4	5-19	20-99	100-199
47 D 6764	NB-5*	.885"	.490"	3.30	2.25	1.98	1.78
47 D 6765	NB-7*	1.165"	.490"	4.05	2.73	2.40	2.18
47 D 6766	NB-9*	1.445"	.750"	4.35	2.95	2.60	2.35
47 D 6767	NB-13*	2.140"	1.500"	5.55	3.78	3.33	3.00
47 D 6769	NB-20*	3.020"	2.520"	8.25	5.60	4.95	4.45

THREAD MOUNT TYPES

47 D 6757	2*	.650"	.....	1.80	1.20	1.05	.85
47 D 6758	4*	1.161"	.512"	2.25	1.50	1.25	1.05
47 D 6759	6*	1.673"	1.024"	3.00	2.00	1.70	1.40
47 D 6760	8*	2.185"	1.535"	3.75	2.50	2.10	1.75
47 D 6761	10*	2.697"	2.047"	4.35	2.90	2.45	2.05
47 D 6762	12*	3.209"	2.560"	4.95	3.30	2.80	2.30

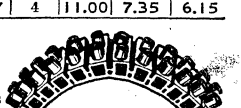
MEH TYPES



Constructed of low-loss ceramic with silver-plate eyelets. High dielectric strength and insulation resistance. For vertical or flat assembly. Snap-in mounting. Hardware supplied. *Number of terminals. From Japan.

Stock No.	Mfr's Type	Overall Size	Wt., Oz.	PER. PKG. OF 5 1-4	5-19	20-99
47 D 6788	MEH-NB-9*	3.000x.500"	4	4.00	2.65	2.25
47 D 6789	MEH-NB-18*	3.000x1.000"	4	7.25	4.85	4.05
47 D 6790	MEH-NB-19*	3.000x.748"	4	7.25	4.85	4.05
47 D 6791	MEH-NB-40*	3.000x1.248"	4	11.00	7.35	6.15

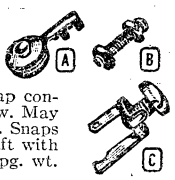
NATIONAL TEL-TRONICS SOLDERLESS BLOCKS



Series 905. Bends in any direction, cuts to smaller sizes. Polyester. 30 amps max. 380 V. 60°C max. Each 1/2x5/8x3 3/4" with 11/32" between term. centers. #10 wire, max. 4 oz.

47 D 1871. 1-9.....Each 1.95 10-24.....Each 1.76
25-49.....Each 1.58 50-99.....Each 1.30

NU-WAY SNAPS AND STUDS



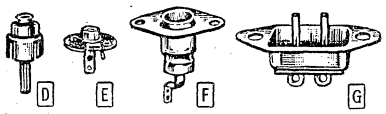
These snaps and studs can be used to make or break fast temporary connections when you are in a hurry. Equally suitable for permanent wire connections. Snap connectors (A) fit threaded studs (B), listed below. May be cascaded together for multiple connections. Snaps have solder lug. Stud has threaded screw shaft with nut for either panel or chassis mounting. Shpg. wt. per 100, 12 oz.

Stock No.	Fig.	Description	Size	PER PKG. OF 100 1-9	PER PKG. OF 100 10-Up
47 D 4450	A	Snaps	7/16"Dx7/8" L	8.30	7.15
47 D 4452	B	Threaded Stud	1/2"Dx6 3/32"L	5.80	4.90

C Terminal Lugs. Screw-mount to chassis, terminal boards, etc. 2 solder lugs; one wire-wrap, other grooved. Wt./pkg. of 10, 2 oz.

47 D 1767. 1-9 Pkgs.....Each .51 10-49 Pkgs.....Each .46
50-99 Pkgs.....Each .43 100-499 Pkgs.....Each .39

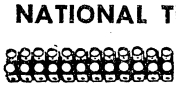
CINCH-JONES PLUGS AND JACKS



Top-quality plugs and jacks for use with hi-fi systems, auto radios, TV sets, transceivers. Type 13A phono pin plug fits 81A jack. 81A on 1/16" bakelite mounting disc. Mounting centers: 81A, 1 1/16"; 81F, 1 5/16"; 2RP1, 1 1/4". Plug Type 2RP and 2RP1 are sub-panel-mounting plugs. Each is 1 5/8x5/8x5/16". Type 2RP1 has one-piece contact. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-249
47 D 1064	13A	D	Phono Pin Plug	.09	.08	.07	.06
47 D 1072	81A	E	Single Phono Pin Jack	.14	.11	.10	.09
47 D 1091	81F	F	Ant. Conn. (Flange)	.24	.19	.17	.14
47 D 1098	2RP	G	Recessed Plug	.18	.14	.12	.10
47 D 1099	2RP1	....	Recessed Plug	.13	.10	.09	.08

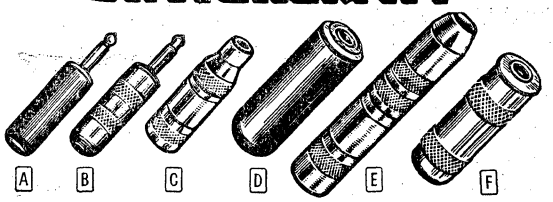
NATIONAL TEL-TRONICS SOLDERLESS BLOCKS



Series 900. Black polyvinylchloride. Red pushbuttons lock wire. 27 amps max., 440 V. 70°C max. Beryllium copper contacts. Series 915 and 920 flexible blocks are for use with 1/4" quick-disconnect terminals. Transparent polyvinylchloride can be cut. 20 amps max., 250 V. 80°C max. #12 wire, max. *No. of term. 4 oz.

Stock No.	Mfr's Type	Description	Length	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99
47 D 1857	900-12*	Pushbutton	2 7/16x3/4"	1.23	1.11	.99	.89
47 D 1858	900-24*	Pushbutton	4 7/8x3/4"	2.31	2.08	1.87	1.68
47 D 1859	915-12*	Flexible	2 13/16x1 1/8"	.52	.46	.42	.38
47 D 1868	915-24*	Flexible	5 5/8x1 1/8"	1.03	.92	.83	.75
47 D 1869	920-12*	Flexible	2 13/16x1 21/32"	.52	.46	.42	.38
47 D 1870	920-24*	Flexible	5 5/8x1 21/32"	1.03	.92	.83	.75

SWITCHCRAFT® Plugs and Extension Jacks



"TINI-PLUGS" SUBMINIATURE PHONE PLUGS

A B For use with "Tini-Jax" listed on following page. 1⅝" over-all length. 2-conductor. Handles are plastic or nickeled brass. §Screw terminals; all others solder terminals. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Handle	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1518	740§	A	Black	.54	.50	.45	.36	.342	.324
47 D 1519	745§	A	Red	.54	.50	.45	.36	.342	.324
47 D 1520	750	A	Black	.51	.47	.43	.34	.323	.306
47 D 1521	755	A	Red	.51	.47	.43	.34	.323	.306
47 D 1522	770§	B	Shielded	.72	.66	.60	.48	.456	.432
47 D 1523	780	B	Shielded	.69	.63	.58	.46	.437	.414

C Type 125 "Tini-Extension Jax," 2-conductor; with solder-lug terminals. Mate with "Tini-Plugs." Av. shpg. wt., 2 oz.
47 D 1472. 1-24....Ea. .81 25-49....Ea. .74 50-99...Ea. .67
100-249....Ea. .54 250-499....Ea. .513 500-999.....Ea. .486

"EXTENSION JAX" CABLE EXTENSION JACKS

D E F Open circuit. Fit std. ¼" plugs. 1 1/16" O.D. 2 5/32" long; 121 and 131, ½" O.D., 2½" long. Black handles, plastic; shielded are nickeled brass. §Screw terminals, others solder. 3 oz.

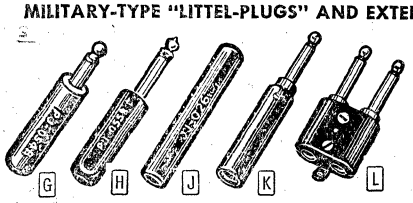
2-CONDUCTOR TYPES

47 D 1571	80§	D	Black	.81	.74	.68	.54	.513	.486
47 D 1718	88	D	Black	.72	.66	.60	.48	.456	.432
47 D 1572	120§	F	Shielded	1.08	.99	.90	.72	.684	.648
47 D 1473	121	E	Shielded	1.14	1.05	.95	.76	.722	.684

3-CONDUCTOR TYPES

47 D 1474	131	E	Shielded	1.41	1.29	1.18	.94	.893	.846
47 D 2971	830§	D	Black	1.08	.99	.90	.72	.684	.648
47 D 1717	1230§	F	Shielded	1.38	1.27	1.15	.92	.874	.828

MILITARY-TYPE "LITTEL-PLUGS" AND EXTENSION JACK



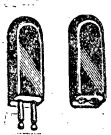
A series of connectors made to meet requirements of military specifications. Terminals pre-tinned brass. All have plural internal interlock; parts will not shift once in position. Black plastic handles, except Type 482 which has red handle. All plugs have screw terminals; meet MIL-P-642A specs, Type 820 ext. jack meets MIL-J-642A—fits Type 430 plug. 4 oz.

2-CONDUCTOR TYPES

Stock No.	Mfr's Type	Fig.	JAN Type	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1731	412	L	PJ-289	2.94	2.70	2.45	1.96	1.86	1.76
47 D 4890	430	G	PJ-054 B	.90	.83	.75	.60	.57	.54
47 D 4892	440	G	PJ-055 B	.90	.83	.75	.60	.57	.54
47 D 4896	820	J	JJ-026	1.20	1.10	1.00	.80	.76	.72

3-CONDUCTOR TYPES

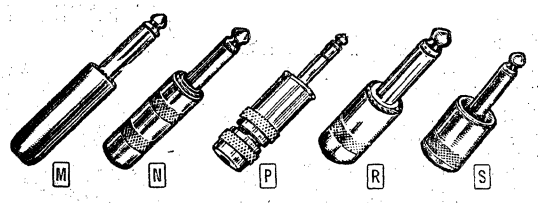
47 D 4898	480	H	PJ-068	2.16	1.98	1.80	1.44	1.37	1.30
47 D 1730	482	K	PJ-051	2.40	2.20	2.00	1.60	1.52	1.44
47 D 1508	483	K	PJ-051B	2.40	2.20	2.00	1.60	1.52	1.44



TYPE 410 PLUG AND TYPE 810 JACK

Miniature, 2-cond. extension jack and mating plug. Plug is Signal Corps Type PJ-291; jack, JJ-048. 2-piece, molded construction with EM-1 insulation per MIL-P-3412. Plug has solder-cup terminals; jack, solder lugs. After wiring, shells must be cemented. Overall size (engaged), 2 5/8x1 7/32x7/32". 3 oz.

Stock No.	Mfr's Type	Desc.	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4886	410	Plug	.60	.55	.50	.40	.38	.36
47 D 4888	810	Jack	.78	.72	.65	.52	.494	.468



"LITTEL-PLUG" PHONE PLUGS

Fit std. ¼" phone jacks, except S250 and S280 have .206"-dia. sleeve to mate S-11 "Littel-Jax;" R280 has short sleeve for Revere recorders. §Screw terminals, others solder terminals. Plugs with solder terminals have cable clamp. Metal (shielded) handles are nickel plated brass. Handles, 1 1/16" long; ½" diameter. Av., 4 oz.

2-CONDUCTOR TYPES

Stock No.	Mfr's Type	Fig.	Handle Color	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1553	240§	M	Black	.54	.50	.45	.36	.342	.324
47 D 1554	245§	M	Red	.54	.50	.45	.36	.342	.324
47 D 1611	250	M	Black	.51	.47	.43	.34	.323	.306
47 D 1614	S250	M	Black	.54	.50	.45	.36	.342	.324
47 D 1612	255	M	Red	.51	.47	.43	.34	.323	.306
47 D 1573	270§	N	Metal	.75	.69	.63	.50	.475	.450
47 D 1613	280	N	Metal	.72	.66	.60	.48	.456	.432
47 D 1556	R280	N	Metal	.93	.85	.78	.62	.589	.558
47 D 1719	S280	N	Metal	.72	.66	.60	.48	.456	.432

3-CONDUCTOR TYPES

47 D 1555	260§	M	Black	.84	.77	.70	.56	.532	.504
47 D 1616	267	M	Black	.75	.69	.63	.50	.475	.450
47 D 2967	290§	N	Metal	.99	.91	.83	.66	.627	.594
47 D 1617	297	N	Metal	.93	.85	.78	.62	.589	.558

STANDARD PHONE PLUGS

¼" plugs. Metal (shielded), red or black bakelite handles; 2 1/16" long, ¾" dia., except *1" long. 170 and 190A have 2 1/16x1 1/16" 2-piece handle with cable clamp for ¼" cable. Av. shpg. wt., 5 oz.

2-CONDUCTOR TYPES WITH SCREW TERMINALS

47 D 1557	40	M	Black	.57	.52	.48	.38	.361	.342
47 D 1447	45	M	Red	.57	.52	.48	.38	.361	.342
47 D 1559	70	N	Metal	.90	.83	.75	.60	.570	.540
47 D 1561	160*	S	Metal	.72	.66	.60	.48	.456	.432
47 D 1562	170	P	Metal	1.17	1.07	.98	.78	.741	.702

3-CONDUCTOR TYPES WITH SOLDER TERMINALS

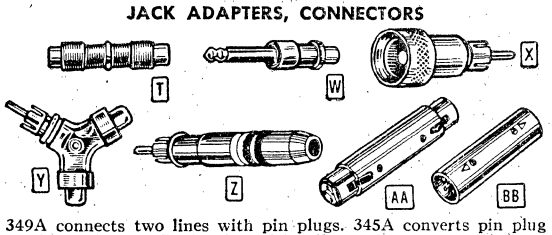
47 D 1558	60	M	Black	.75	.69	.63	.50	.475	.450
47 D 1560	90*	S	Metal	.96	.88	.80	.64	.608	.576
47 D 1507	190	N	Metal	1.11	1.02	.93	.74	.703	.666
47 D 1563	190A	P	Metal	1.38	1.27	1.15	.92	.874	.828

"LUG-PLUG" PHONE PLUGS

Low-cost, two-conductor phone plugs. All fit standard ¼" jacks. Have solder terminals. Exterior parts bright nickel plated. Type 350 has black plastic handle 1⅝" long, ½" diameter. Type 380 has shielded, bare metal handle. 1" long. Av. shpg. wt., 4 oz.

47 D 1564	350	M	Plastic	.45	.41	.38	.30	.285	.270
47 D 1566	380	R	Metal	.57	.52	.48	.38	.361	.342

JACK ADAPTERS, CONNECTORS



349A connects two lines with pin plugs. 345A converts pin plug to phone plug. 338B pin plug with mike connector. 389 3-contact mike receptacle input to same output. 390 3-pin mike plug to equipment with this output. Av. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH
47 D 1774	349A	T	Double-ended Phono Pin Jack	.72
47 D 0382	345A	W	Phono Pin Jack; Phone Plug	.87
47 D 1795	338B	X	Mic; Phono Pin Plug	.87
47 D 1764	330F	Y	2 Phono Pin Jacks; Phono Pin Plug	1.23
47 D 1772	336A	Z	Phone Jack; Phono Pin Plug	1.20
47 D 4263	389	AA	Double-ended 3-contact recept.	2.85
47 D 4264	390	BB	Double-ended 3-pin plug	2.40

SEE PAGE 324 FOR SWITCHCRAFT AUDIO CONNECTOR CABLES

Phone Jacks and Phone Plugs

SWITCHCRAFT® INC.

"SF-JAX" SHORT-FRAME JACK

Ruggedly designed jacks requiring a minimum of panel depth. Short frame supports springs parallel to mtg. surface. Long springs without "forms" assure minimum fatigue. Tubing runs through entire stack and frame. Overall length: Series 20, 1²⁹⁄₃₂". Frame, twin nut and stack screws made of cadmium-plated steel. Take std. ¼" plugs. Fit ⅜" dia. hole. Av. shpg. wt., 3 oz.

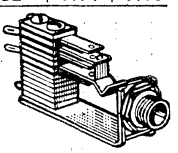
2-CONDUCTOR TYPE

Stock No.	Mfr's Type	Dia-gram	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4917	22A	II	.60	.55	.50	.40	.38	.36

3-CONDUCTOR TYPE

47 D 4907	24B	VII	.78	.72	.65	.52	.494	.468

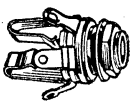
"LF-JAX" LONG-FRAME JACKS



Long frame supports springs perpendicular to mounting surface. Action of mating plug with long springs insures maximum spring life. 3 cond. 3A max. Tubing press-fit through stack for tight assembly. Lgth., 3⅜". Fit ⅜" hole. For std. ¼" plugs. Nut, washer. 3 oz.

47 D 4910	32B	III	.69	.63	.58	.46	.437	.414
47 D 4951	34B	VI	.84	.77	.70	.56	.532	.504

"LITTEL-JAX" PHONE JACKS



For standard ¼" phone plugs, except *S-11, which takes S250, S280, and 385 plugs, and †C-12B, which takes 480 military-type "Littel-Plug," and **14B, which takes standard "Littel-Plugs." Stereo "Littel-Jax" Type 14B is for switching out speakers when 3-wire stereo headphones are plugged in. Dual, normally closed contacts open both circuits when 3-cond. standard Littel-Plug is inserted. All are ¾" dia., 1⁹⁄₃₂" overall lgth., and have ⅜" dia. threaded shank, ⁹⁄₃₂" long, except §⅜" long. With nut and washer. Av. wt., 3 oz.

2-CONDUCTOR TYPES

Stock No.	Mfr's Type	Dia-gram	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4955	11	I	.30	.28	.25	.20	.19	.18
47 D 4957	C-11	I	.45	.41	.38	.30	.285	.27
47 D 4959	§L-11	I	.36	.33	.30	.24	.228	.216
47 D 4961	*S-11	I	.33	.30	.28	.22	.209	.198
47 D 4963	12A	II	.33	.30	.28	.22	.209	.198
47 D 4965	C-12A	II	.54	.50	.45	.36	.342	.324
47 D 4967	§L-12A	II	.39	.36	.33	.26	.247	.234

3-CONDUCTOR TYPES

47 D 4969	12B	III	.39	.36	.33	.26	.247	.234
47 D 4971	†C-12B	III	.69	.63	.58	.46	.437	.414
47 D 4973	13B	IV	.57	.52	.48	.38	.361	.342
47 D 4924	**14B	VII	.72	.66	.60	.48	.456	.432

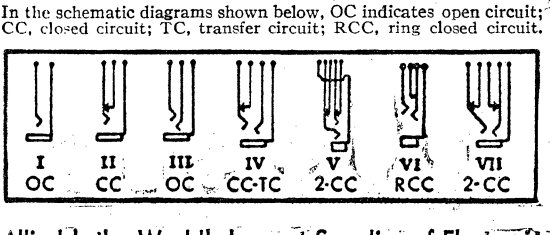
MICRO-JAX AND MICRO-PLUGS

Ultraminiature 2-conductor plugs and jack. Plugs only 1¹⁄₆₄" long. Mate TR-2A jack, 1⁷⁄₃₂" long. Take cables to ⁷⁄₆₄" dia. Screw-on shield handles and cable clamps. Jack has nylon insulation, nickel alloy springs, solder lugs. Can be used as open or closed circuit. Fits .190" hole. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 2554	850	Plug (black handle)	.48	.44	.40	.32	.304	.288
47 D 2555	855	Plug (red handle)	.48	.44	.40	.32	.304	.288
47 D 2556	880	Plug (silver handle)	.48	.44	.40	.32	.304	.288
47 D 4995	TR-2A	Jack (silver)	.36	.33	.30	.24	.228	.216

JACK SCHEMATIC DIAGRAMS

In the schematic diagrams shown below, OC indicates open circuit; CC, closed circuit; TC, transfer circuit; RCC, ring closed circuit.



"MT-JAX" AND "T-JAX" SWITCHBOARD-TYPE JACKS

Rugged, press-welded steel frame. All types have nickel-silver-alloy springs to ensure maximum spring life and corrosion resistance. Military types beginning with "MT" meet MIL-J-641(A), and have welded-crossbar palladium contacts. Nonmilitary types beginning with "T" have fine silver contacts. Standard ¼" bushing. Size: 1³⁄₁₆" wide, ⁹⁄₁₆" high, and 3⁷⁄₁₆" overall length. Shpg. wt., 3 oz.

2-CONDUCTOR TYPES

Stock No.	Mfr's Type	Dia-gram	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1604	MT-332A	II	.90	.83	.75	.60	.57	.54
47 D 4911	T-332A	II	.78	.72	.65	.52	.494	.468

3-CONDUCTOR TYPES

47 D 1606	MT-332B	III	.90	.83	.75	.60	.57	.54
47 D 4916	T-332B	III	.78	.72	.65	.52	.494	.468
47 D 1478	MT-334B	V	1.08	.99	.90	.72	.684	.648
47 D 4919	T-334B	V	.96	.88	.80	.64	.608	.576

"HI-D JAX"

High-density phone jack for commercial applications. Only ⅝" square; weighs only 7⅛ grams—especially suitable for PCs. Nickel-silver-plated springs. Mount in ⅜" hole in panels up to ⁵⁄₃₂" thick. Take standard 2 and 3-conductor ¼" plugs. With hdwe. *For stereo. 2 oz.

2-CONDUCTOR TYPES

Stock No.	Mfr's Type	Dia-gram	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4929	111	I	.30	.28	.25	.20	.19	.18
47 D 4934	112A	II	.33	.30	.28	.22	.209	.198

3-CONDUCTOR TYPES

47 D 4953	112B	III	.36	.33	.30	.24	.228	.216
47 D 4954	113B	IV	.48	.44	.40	.32	.304	.288
47 D 4998	113F	VI	.48	.44	.40	.32	.304	.288
47 D 4999	*114B	VII	.54	.50	.45	.36	.342	.324

N-Series "Hi-D" Jax. Prefix "N" on manufacturer's Type No. designates nylon bushing. Insulates sleeve terminal from mounting panel, eliminating possible source of noise and crosstalk. Specifications same as above. *For stereo applications. 2 oz.

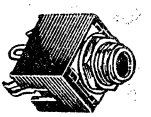
2-CONDUCTOR TYPES

47 D 4986	N-111	I	.39	.36	.33	.26	.247	.234
47 D 4990	N-112A	II	.42	.39	.35	.28	.266	.252

3-CONDUCTOR TYPES

47 D 4988	N-112B	III	.45	.41	.38	.30	.285	.27
47 D 4992	*N-114B	VII	.60	.55	.50	.40	.38	.36

"TINI-D-JAX" ENCLOSED PHONE JACK



Completely enclosed, subminiature 2-conductor phone jacks. Fully insulated molded plastic housing protects nickel-plated contact springs. Mate with "Tini-Plugs." ½" long, ⅜" wide, ⅝" depth behind panel. Bushing ¼"-32 thd. x .203" long on Type 142A. PC-142A is not threaded; terminals snap into PC boards. 2 oz.

Stock No.	Mfr's Type	Dia-gram	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4956	142A	II	.36	.33	.30	.24	.228	.216
47 D 4958	PC-142A	II	.33	.30	.28	.22	.209	.198

"TINI-JAX" MINIATURE PHONE JACKS

Extra small, 2-conductor jacks for use with "Tini-Plugs," elsewhere in this section. Miniature types with all features of "Littel-Jax" above, yet only one-third the size. 2¹⁄₃₂" long; fit ¼" dia. hole. 2 oz.

47 D 4983	41	I	.30	.28	.25	.20	.19	.18
47 D 4985	42A	II	.33	.30	.28	.22	.209	.198

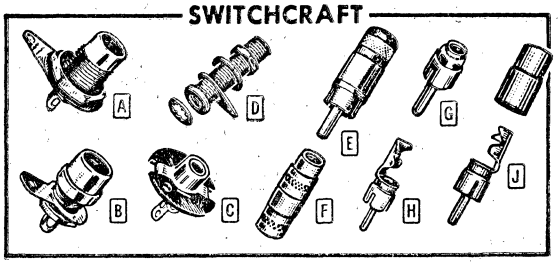
JACK COVERS

Rugged spring-loaded covers. Provide dust- and moisture-proof seals over jack openings. Use with conventional ⅜"-32 threaded bushing jacks. Special locknut seals into rubber washer inside cover. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Color	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1491	512	Nickel	.75	.69	.63	.50	.475	.45
47 D 1492	515	Black	.75	.69	.63	.50	.475	.45
47 D 1493	520	Gray	.75	.69	.63	.50	.475	.45

Adapters, Connectors, Jacks and Plugs

SWITCHCRAFT

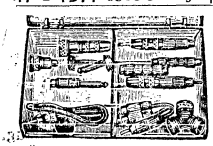


PHONO JACKS AND PLUGS

Series 3501, 3502, 3503, 371. Easy-to-install phono jacks and phono plugs. 3501FR for rear panel mounting in ⅜" hole—fits panel to 1¾4" thick. 3501FP for front panel mtg. in ¼" hole—fits panel to ⅛". 3501F and 3501M are std. 2-cond. audio connectors. 371 adapts phono jack for mtg. in panels to 1¼" thick; use with 3501-FP. 3503 extension jack is shielded, has removable 13⁄32" O.D. shell with cable clamp. 3502 has 13⁄32" O.D. shielded handle. 3501MC is unshielded, has ⅜" O.D. shell with crimping-type cable clamp.

Series 3508. Provides color coded phono plugs with cable clamp and "snap-on" plastic handles in red, black or white—simplify stereo wiring. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4900	3501FR	A	Jack	.27	.25	.23	.18	.171	.162
47 D 4902	3501FP	B	Jack	.21	.19	.17	.14	.133	.126
47 D 1574	3501F	C	Jack	.09	.08	.07	.06	.057	.054
47 D 4904	371	D	Jack Adapt.	.66	.61	.55	.44	.418	.396
47 D 1778	3503	F	Ext. Jack	.39	.36	.33	.26	.247	.234
47 D 1762	3502	E	Plug	.30	.28	.25	.20	.19	.18
47 D 1763	3501MC	H	Plug	.09	.08	.07	.06	.057	.054
47 D 1599	3501M	G	Plug	.06	.05	.05	.04	.038	.036
47 D 1575	3508-1	J	Plug, Red	.15	.14	.13	.10	.095	.09
47 D 1576	3508-2	J	Plug, Black	.15	.14	.13	.10	.095	.09
47 D 1577	3508-5	J	Plug, White	.15	.14	.13	.10	.095	.09

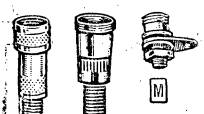


HANDY 331A ADAPTER KIT

Consists of 11 audio adapters and one interconnecting cable in a plastic box. Includes one each of the following adapter types: 25AF25—36" shielded cable with phono plug each end; 25V mike-connector Y-adapter; 330F1 flexible Y-adapter with phono connectors; 332A, 2-cond. phone jack input to female mike output; 334A, phono jack input to female mike connector output; 336A, phone jack input to phono plug output; 336B, phone jack input to phono jack output; 345, phono jack input to phone plug output; two each: Type 44 adapter, male mike input to phone plug output; Type 349 coupler, phono jacks at each end. Shpg. wt., 1 lb.

47 D 4906 ..... 10.56

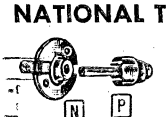
"MINI-CON" MICROPHONE-TYPE CONNECTORS



Popular miniature microphone-type connectors. About ½ size of standard mike connectors. For use with single-conductor shielded cables to 3⁄16" O.D. Nickel-plated brass bodies. Coupling ring on 5501F removable for quick change of female to male type. Cable-braid spring clamped to body by hollow set screw. 5501 MP fits 3⁄16" hole. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4920	5501F	K	Female	.45	.41	.38	.30	.29	.27
47 D 4925	5501M	L	Male	.36	.33	.30	.24	.23	.22
47 D 4927	5501MP	M	Panel, male	.33	.30	.28	.22	.21	.20

NATIONAL TEL-TRONICS PHONO PIN PLUG, JACK

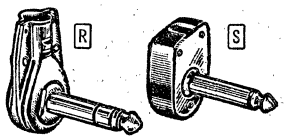


N Single-Prong Jack. For use with pin plug below. On 1⁄16" bakelite disc. 11⁄16" mounting centers. Shpg. wt., 1 oz. 10 per package.

P Shielded Phono Pin Plug. Excellent for radios, phonos, etc. Pin diameter, ⅛". Length, 9⁄16". Shpg. wt., 1 oz. 10 per package.

Stock No.	Description	Fig.	PER PKG. 1-5	6-29	30-59	60-299
47 D 6058	Pin Jack	N	.43	.38	.35	.32
47 D 6057	Pin Plug	P	.31	.28	.26	.24

FLAT PHONE PLUGS



¼" flat phone plugs for use where space is limited. Ideal for back-of-chassis use. Have removable plastic cap for easy connection of wire leads. Tip rods are 13⁄16" long. All metallic parts of nickel plated brass. Types 220 and 225 accept standard phone tips. Take cables to .250" O.D. Type S-230 has .206" dia. sleeve. Screw type terminals except *solder. Types 228 and 238 are shielded. 4 oz.

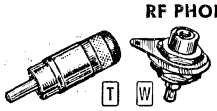
2 CONDUCTOR

Stock No.	Mfr's Type	Fig.	Handle Color	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 1621	220	S	Black	.78	.72	.65	.52	.494	.468
47 D 1567	225	S	Red	.78	.72	.65	.52	.494	.468
47 D 1502	227*	S	Black	.63	.58	.53	.42	.399	.378
47 D 2968	228*	R	Metal	.69	.63	.58	.46	.437	.414

3 CONDUCTOR

47 D 1568	230	S	Black	.96	.88	.80	.64	.608	.576
47 D 2970	S-230	S	Black	1.23	1.13	1.03	.82	.779	.738
47 D 1569	235	S	Red	.96	.88	.80	.64	.608	.576
47 D 1503	237*	S	Black	.93	.85	.78	.62	.589	.558
47 D 2969	238*	R	Metal	1.02	.94	.85	.68	.646	.612

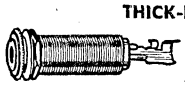
RF PHONO JACK AND PLUG



Nylon insulation. 2-conductor. Jack for front-of-panel mounting. With hardware. Plug has long screw-on handle for easy gripping and cable clamp for cord-strain relief. 2 oz.

47 D 1501	3507	T	Plug	.48	.44	.40	.32	.304	.288
47 D 1500	3505F	W	Jack	.36	.33	.30	.24	.228	.216

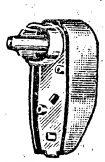
THICK-PANEL MOUNTING JACKS



Have extra long bushings for use in panels up to 1¼" thick. Ideal for wall paneling and hi-fi installations. Jacks are shielded for microphone use. Take standard ¼" phone plugs. Require 15⁄32" mounting hole. Both have solder terminals and cord-strain relief clamp. Length, 2⅝". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Cond.	Use With "Littel Plugs"	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 4908	151	2	240, 245, 250, 255, 270, 280	.93	.85	.78	.62	.589	.558
47 D 4912	152B	3	260, 267, 269, 297	1.02	.94	.85	.68	.646	.612

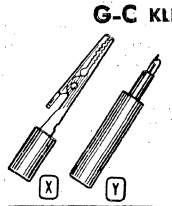
G-C SOLDERLESS PHONO PLUGS



Easy-to-install, solderless right-angle phono plug. Simple installation can be made in seconds. Only two screws to remove for complete disassembly. No connecting screws. Just place stripped wires in position, press plastic plug and wires into hole, and reassemble. Takes approximately 3⁄16" OD shielded cable. Chrome-plated brass with Tenite high-impact plastic shell. Length, 17⁄32"; tip, ⅛" diameter. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Color	EACH 1-9	10-99	100-499
47 D 6117	33-776	Gray plastic shell	.31	.28	.21
47 D 6118	33-778	Black plastic shell	.31	.28	.21
47 D 6119	33-780	Red plastic shell	.31	.28	.21

G-C KLIPZON PRODS AND ADAPTERS

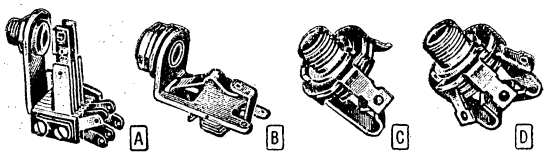


33-338/340 alligator prod adapters convert mini-prod connectors, std. tip plugs to alligator clips. 33-400/402 test prods pierce insulation; snap securely on wires. 4¾" handle; wire solders to tip. 33-138/140 mini-prods: 1⅛" handle; wire solders to body. 33-160/162 mini-prod adapters convert std. tip plugs, test prods to wire-piercing prods. *Specify red or black.* 1 oz.

Stock No.	Type* (Red)	Type* (Black)	Description	EACH 1-49	50-99	100-499
47 D 1430 C	33-338	33-340	Allig. Adapt.	.44	.40	.36
47 D 1432 C	33-400	33-402	Test Prod	.84	.77	.69
47 D 1435 C	33-138	33-140	Mini-Prod	.55	.50	.45
47 D 1436 C	33-160	33-162	M-P Adapt.	.44	.40	.36

Mallory and H. H. Smith Plugs and Jacks

MALLORY PLUGS AND JACKS



JUNIOR PHONE JACKS

[A] For standard ¼" phone plugs. Require only 1 5/16" behind panel. Cadmium-plated frames with nickel-plated brass shank, springs, and hardware. ⅜" dia. threaded shank for panels up to ¼" thick. Silver contacts. "Cond." indicates number of conductors in mating plug. †See diagrams below, right. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Cond.	†Diagram	EACH 1-9	10-49	50-99	100-249	250-499
47 D 1054	701	2	I	.50	.45	.41	.37	.33
47 D 1751	702A	2	II	.63	.57	.52	.47	.42
47 D 1058	702B	3	III	.63	.57	.52	.47	.42
47 D 1059	703B	3	IV	.66	.59	.55	.50	.44
47 D 1755	704	3	V	.76	.68	.63	.57	.51
47 D 1060	704B	3	V	.76	.68	.63	.57	.51

MIDGET PHONE JACKS

[B] All take standard ¼" phone plugs. Require only 1 9/32" mounting space behind panel. Feature rugged construction, with strong, cadmium-plated steel frames and nickel-plated brass shank, springs, and mounting hardware. ⅜" threaded-shank for use with panels up to ¼" thick. In table below, column headed "Cond." indicates number of conductors in mating plug. Diagram column refers to schematic diagrams, below right. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Cond.	Diagram	EACH 1-9	10-49	50-99	100-249	250-499
47 D 1051	A-2	2	VI	.53	.48	.44	.40	.35
47 D 1053	A-2A	2	II	.63	.57	.52	.47	.42

LA JACKS

[C] Have ⅜"-32 threaded bushings. Contacts are silver-plated brass. Mounting behind panel approx. 1". ½" diameter. Av. wt., 2 oz.

Stock No.	Mfr's Type	Cond.	Diagram	EACH 1-9	10-49	50-99	100-249	250-499
47 D 1757	LA-1	2	I	.40	.36	.33	.30	.26
47 D 1760	LA-2	2	VI	.46	.42	.39	.35	.31
47 D 1761	LA-2A	2	II	.53	.48	.44	.40	.35

MILITARY-TYPE SC JACKS

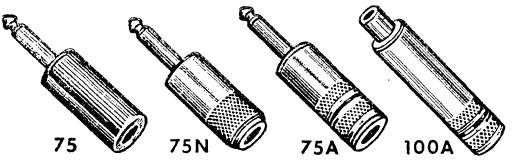
Commercial equivalents of military types complying with JAN-J-641 specification. Both require ⅞" mounting space behind panel. Type SC-1A has ⅜" dia. threaded shank, ⅜" long. Type SCA-2B has 5/16" dia. threaded shank, 5/16" long. Shpg. wt., 3 oz.

[C] **Type SC-1A.** Equiv. to military jack JJ-034. Open circuit. 2-cond., see Diagram I. Takes std. ¼" plugs including Mallory 75; Western Electric Nos. 47A and 47B; Nos. PL-47, PL-48, PL-55, PL-148, PL-155, PL-125, PJ-055, PJ-155, PJ-634, PJ-636, and PJ-047.

47 D 1642. 1-9..... Each .40 10-49.....Each .36
50-99.....Each .33 100-249....Each .30 250-499.....Each .26

[D] **Type SCA-2B.** Equivalent to military jack No. JJ-033. Open circuit, 3-conductor jack, see Diagram III. Takes all 3-conductor plugs with .206" diameter sleeves, including Western Electric 109; Military Nos. PL-68, PL-168, PJ-068, PJ-168, and PJ-309.

47 D 1643. 1-9.....Each .46 10-49.....Each .42
50-99.....Each .39 100-249...Each .35 250-499.....Each .31



STANDARD AND MINIATURE PHONE PLUGS

For headphones, microphones, and other applications. 2-conductor plugs have built-in tie-cord anchor for terminal strain relief. Shielded handles are nickel-plated brass with knurling for sure grip; others are molded phenolic. Screw-type terminals accommodate tip jacks or wire. Types 75A and 76A have cable clamp built into handle for strain relief. 75, 75N, 75A are 2-way phone plugs. 76 and 76A are 3-way microphone plugs (not illustrated, but similar to 75 and 75A, respectively). Av. shpg. wt., 3 oz.

2 CONDUCTOR

Stock No.	Mfr's Type	Term.	Handle Type	Handle Lgth.	EACH 1-9	10-49	50-99	100-249	250-499
47 D 1641	75	Screw	Phenolic	1½"	.50	.45	.41	.37	.33
47 D 1640	75N	Screw	Shielded	1 5/8"	.73	.65	.61	.55	.48
47 D 1937	75A	Screw	Shielded	1 13/16"	1.16	1.04	.96	.87	.77

3 CONDUCTOR

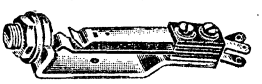
47 D 1941	76	Solder	Phenolic	1 13/16"	.99	.89	.83	.74	.66
47 D 1942	76A	Solder	Shielded	1 13/16"	1.29	1.16	1.07	.97	.86

STANDARD EXTENSION JACKS

Type 100A. Two-conductor extension jacks with shielded, nickel-plated brass handle and built-in cable clamp. Features screw type terminals for easy installation. For standard ¼" phone plugs. Length, 3 1/16". Shpg. wt., 2 oz.

47 D 1940. 1-9.....Each 1.65 10-49.....Each 1.49
50-99.....Each 1.38 100-249....Each 1.24 250-499.....Each 1.10

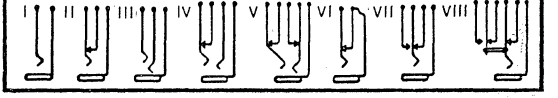
LONG-FRAME STANDARD PHONE JACKS



All take standard ¼" phone plugs. Mount in panels up to ¼" thick by means of ⅜" diameter threaded shank. Silver contacts. Nickel-plated springs and bushings, cadmium-plated frames. Size, 3 1/8 x 1 1/8 x 5/16" wide. *Indicates number of conductors in mating plug. †Indicates contact switching arrangement (table below). Wt., 3 oz.

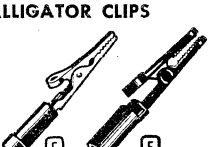
Stock No.	Mfr's Type	*Cond.	†Diagram	EACH 1-9	10-49	50-99	100-249	250-499
47 D 1745	1	2	I	.50	.45	.41	.37	.33
47 D 1747	2A	2	II	.63	.56	.52	.47	.42
47 D 1770	2B	3	III	.63	.56	.52	.47	.42
47 D 1775	3B	3	IV	.66	.59	.55	.50	.44
47 D 1776	4B	3	V	.83	.74	.69	.62	.55
47 D 1055	5	2	VIII	.99	.89	.83	.74	.66

JACK SCHEMATIC DIAGRAMS



H. H. SMITH INSULATED ALLIGATOR CLIPS

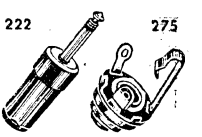
Have plastic insulated handles. Types 304 and 305 are Fig. E; others, Fig. F. Clips are cadmium-plated steel. 336 and 337 are all insulated to prevent shock or grounding. All accept std. tip plug except *tip and banana plug; †banana plug. Shpg. wt., 1 oz.



Stock No.	Mfr's Type	Color	Description	EACH 1-99	100-249	250-499	500-999
47 D 1300	304	Red	With tip jack adapter	.40	.33	.31	.30
47 D 1305	304	Black	With tip jack adapter	.40	.33	.31	.30
47 D 1168	*305	Red	With tip & banana jack	.47	.39	.37	.35
47 D 1169	*305	Black	With tip & banana jack	.47	.39	.37	.35
47 D 1373	336	Red	With tip jack adapter	.43	.36	.34	.32
47 D 1374	336	Black	With tip jack adapter	.43	.36	.34	.32
47 D 1382	†337	Red	With banana plug adapt.	.29	.24	.23	.22
47 D 1383	†337	Black	With banana plug adapt.	.29	.24	.23	.22

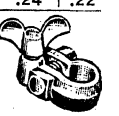
H. H. SMITH PLUGS AND JACKS

Type 222 is standard ¼", 2-conductor phone plug. Has screw terminal, plastic handle. Fits 275 jack or other std. phone jack; overall length, 2 7/8". 275 open-circuit jack has ⅜"—32 threaded shank, 9/32" long; requires 1" behind panel. With mtg. hdwe. Av. wt., 2 oz.



Stock No.	Mfr's Type	Description	EACH 1-49	50-99	100-249	250-Up
47 D 1017	222	Phone Plug (black)	.61	.51	.46	.41
47 D 1018	222	Phone Plug (red)	.61	.51	.46	.41
47 D 1019	275	Std. Phone Jack	.32	.27	.24	.22

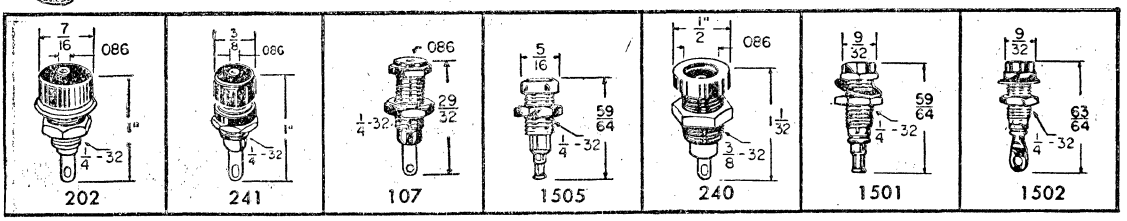
TRIPLE A BATTERY BINDING POST



Hole tapers 5/8" to ¾" diameter. Shpg. wt., 1 oz.

47 D 1785. 1-5....Each .56 6-29.....Each .51
30-59.....Each .47 60-299.....Each .425

H. H. Smith Tip and Banana Jacks and Plugs



INSULATED TIP JACKS

Tip jacks in table below have molded plastic heads with brass nickel-plated bodies. Phosphor bronze contact. Mounts in 5/16" hole. With hex mounting nut. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3885	202	Red	With phosphor-bronze spring. Supplied with extruded fiber washer for insulated mounting in panel to 3/8" thick.	1.80	1.50	1.35
47 D 3886	202	Yellow				
47 D 3887	202	Green				
47 D 3888	202	Blue				
47 D 3889	202	Black				
47 D 3890	241	Red	Supplied with molded nylon head, washer.	3.24	2.70	2.43
47 D 3891	241	Black				

NON-INSULATED TIP JACK

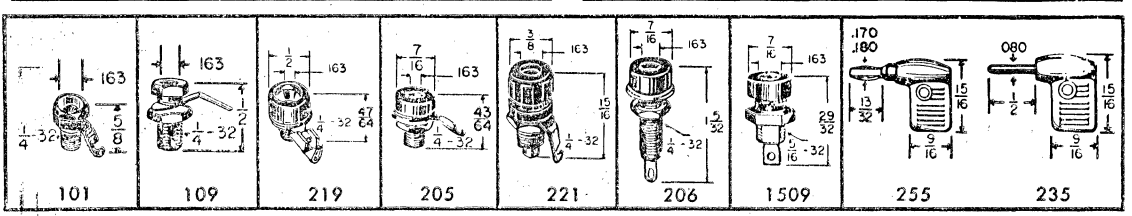
All metal. Brass nickel-plated body. Phosphor-bronze spring. With hex mounting nut. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3895	107	Nickel-plated	Mounts in 1/4" hole; fits panels to 3/8" thick.	1.80	1.50	1.35

NYLON-INSULATED TIP JACKS

Each has self-insulating nylon-insulated body. Hex nuts are brass nickel plated. All accommodate standard phone tip plugs. Average shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3896	1505	Black	Wrap-around type. Hex head. Mount in 1/4" hole in panels to 1/4" thick.	2.52	2.10	1.89
47 D 3897	1505	Yellow				
47 D 3898	1505	Green				
47 D 3899	1505	Blue				
47 D 3900	1505	Red				
47 D 3901	240	Red	Phosphor-bronze spring. Mtg. nut. Mt. in 3/8" hole. Fit to 5/16" panels. Rated 5000 V.	2.40	2.00	1.80
47 D 3905	240	Black				
47 D 3906	1501	Red	Wrap around type made to MS-16108 specifications.	3.60	3.00	2.70
47 D 3907	1501	Black				
47 D 3908	1501	Yellow				
47 D 3909	1501	Green				
47 D 3910	1501	Blue				
47 D 3911	1501	White				
47 D 3912	1502	Red	Spade type made to MS-16108 specifications.	5.04	4.20	3.78
47 D 3913	1502	Black				



NON-INSULATED BANANA JACK

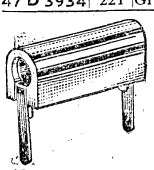
Bare brass, nickel-plated body. Supplied with hex nut. Fits 1/4" hole, 3/8" panel. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3919	101	Metal	Tinned lug; takes banana plug.	1.56	1.30	1.17
47 D 3920	109	Metal	With solder lug.	1.56	1.30	1.17

INSULATED BANANA JACKS

Heavy-duty, molded body. Supplied with fiber washer. 2 oz.

47 D 3921	219	Red	Plastic head; nickel-plated brass body; solder lug and mtg. nut. For 5/16" hole, panel to 3/8"	2.16	1.80	1.62
47 D 3924	219	Blue				
47 D 3925	219	Black				
47 D 3926	205	Red	Plastic head; nickel-plated brass body. For 5/16" hole, panels up to 3/8" thick.	1.80	1.50	1.35
47 D 3927	205	Yellow				
47 D 3928	205	Green				
47 D 3929	205	Blue				
47 D 3930	205	Black				
47 D 3931	221	Red	Nylon head; fit 5/16" mtg. hole; for panels up to 1/4" thick.	3.00	2.50	2.25
47 D 3932	221	Black				
47 D 3933	221	Yellow				
47 D 3934	221	Green				



TYPE 430 RIGHT-ANGLE TEST JACK

For reliable test point connections on printed circuit boards in a minimum of space. Accepts standard .080" dia. probe tips at either end. Snaps into .052" dia. holes on .400" centers, solders in place. For use with PC boards up to 3/16" thick. Tested to MIL-P-20693A for nylon; MIL-STD-202B for mechanical tests. Rated at 5 amperes and 1.5 kV, 60 Hz AC continuous. Size, 29/64x3/16x5/32". Sold in packages of 10. Specify color: White, Red, Black, Green, Blue, Yellow, Gray. Shpg. wt. per pkg., 3 oz.

47 D 1989 C. 1-9....Per Pkg. 1.00 10-24.....Per Pkg. .90
25-49.....Per Pkg. .83 50-99.....Per Pkg. .75

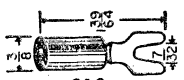
INSULATED BANANA JACKS (Cont'd)

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3936	206	Red	Plastic head; nickel-plated brass body; takes banana plug or tip plug; phos.-bronze spring. For 1/4" hole, up to 5/8" panel.	2.40	2.00	1.80
47 D 3937	206	Yellow				
47 D 3938	206	Green				
47 D 3939	206	Blue				
47 D 3940	206	Black				
47 D 3941	1509	Red	Molded nylon jack. Locks into panel by means of double "D" body. For 5/16" hole, panel to 5/16".	1.44	1.20	1.08
47 D 3942	1509	Black				
47 D 3943	1509	Yellow				
47 D 3944	1509	Green				
47 D 3945	1509	Blue				
47 D 3946	1509	White				

MOLDED RIGHT-ANGLE METER PLUGS

Right-angle plugs with plastic handles. Half shells assemble with one screw and nut. Lead wire solders to body. *Nickel-plated. 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3947	255	Red	4-leaved phosphor-bronze springs.*	4.80	4.00	3.60
47 D 3948	255	Black				
47 D 3949	235	Red	Maximum wire insulation, 9/64".	3.60	3.00	2.70
47 D 3950	235	Black				

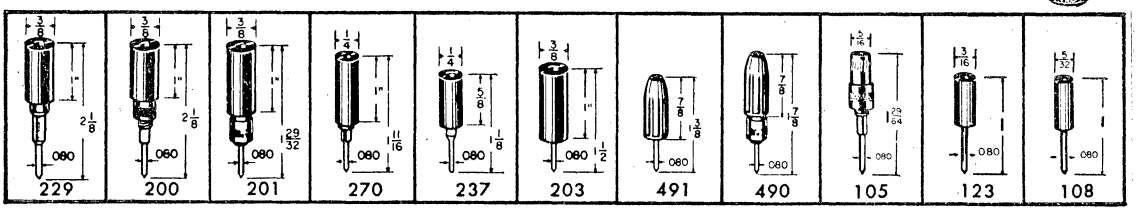


INSULATED SPADE LUG ADAPTER

Banana plug to spade lug adapter. Molded plastic handle. Wires may be soldered to plug or terminated in banana plug. Shpg. wt., 2 oz.

47 D 3917	218	Red	Fork fits binding posts and terminal screws to No. 10.	1.33	1.11	1.00
47 D 3918	218	Black		1.33	1.11	1.00

H. H. Smith Tip, Banana Plugs and Test Jacks



INSULATED TIP PLUGS

Feature nickel-plated brass construction for heavier current applications. Handles are molded thermosetting plastic except Type 237 which is molded butyrate; Types 490 and 491 which are molded nylon; and Type 270 which is fibre. All rated 12 amps AC. 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3951 47 D 3952	229 229	Red Black	Std. tip; large dia. for soldering heavy-duty wire into nickel-plated brass body.	2.04	1.70	1.53
47 D 3956 47 D 3960	200 200	Red Black	Solderless; wire tightens securely under knurled collar.	2.04	1.70	1.53
47 D 3961 47 D 3962	201 201	Red Black	"Jr." solderless phone tip; wire fastens under knurled collar.	2.04	1.70	1.53
47 D 3966 47 D 3967	270 270	Red Black	Submin.; std. tip, extra small dia.	2.40	2.00	1.80
47 D 3968 47 D 3969	237 237	Red Black	Hollow phone tip, solder-type.	1.44	1.20	1.08
47 D 3970 47 D 3974	203 203	Red Black	Short tip plug for applications where minimum metal can be exposed.	1.58	1.32	1.18

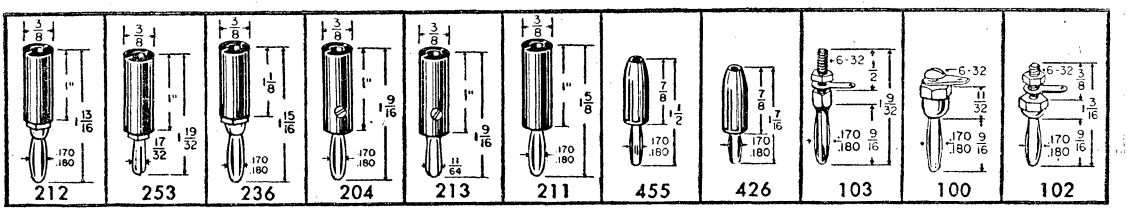
INSULATED TIP PLUGS (Cont'd)

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3977 47 D 3978 47 D 3979 47 D 3980	491 491 491 491	Red Black Yellow Green	Short, tip plug (⅞" handle). Inserts flush, no metal exposed, Molded nylon handle.	1.80	1.50	1.35
47 D 3839 47 D 3840	490 490	Red Black	Solderless tip plug with molded nylon handle. Threaded type.	2.04	1.70	1.53

NON-INSULATED TIP PLUGS

Nickel-plated brass phone tip plugs. Fit standard phone tip jacks. Type 123 has .149" inside diameter for larger wire. All are rated 12 amps AC, for 10°C temperature rise, continuous duty. 2 oz.

47 D 3983	105	Nickel-plated	Solderless, all metal. Wire fastens under knurled collar.	1.80	1.50	1.35
47 D 3985	123	Nickel-plated	Heavy-duty solder-type.	.42	.35	.32
47 D 3986	108	Nickel-plated	Std. solid phone tip. Solder type.	.30	.25	.23



INSULATED BANANA PLUGS

Insulated banana plugs with unbreakable plastic handles. All are carefully designed, accurately molded, machined of the best materials, and rigidly inspected. Have sufficient spring tension to assure good holding power and minimum contact resistance. 2 oz.

Stock No.	Mfr's Type	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3988 47 D 3989 47 D 3990 47 D 3991 47 D 3992	212 212 212 212 212	Red Yellow Green Blue Black	4-leaved phosphor-br. sprg. hex brass body. Sep. internal brass stud for solderless or solder connection.	2.76	2.30	2.07
47 D 3993 47 D 3997	253 253	Red Black	Split type with internal brass stud for solderless or soldered connection.	2.64	2.20	1.98
47 D 3998 47 D 3999	236 236	Red Black	4-leaved ni.-plated phosphor-br. spring. Threaded spacer for solderless connection.	4.80	4.00	3.60
47 D 3805 47 D 3806 47 D 3807 47 D 3808 47 D 3809	204 204 204 204 204	Red Yellow Green Blue Black	4-leaved phosphor-br. nickel-plated sprg. Lead wire conn. with set screw thru handle.	2.40	2.00	1.80
47 D 3810 47 D 3814	213 213	Red Black	Cross-slotted body. Lead wire connection with set screw.	2.16	1.80	1.62
47 D 3815 47 D 3816 47 D 3817 47 D 3818 47 D 3819 47 D 3820	211 211 211 211 211 211	Red Black Yellow Green Blue White	4-leaved phosphor-bronze nickel-plated spring. Wire solders to plug or stud; or stud locks wire for solderless connection.	2.40	2.00	1.80

INSULATED BANANA PLUGS (Cont'd)

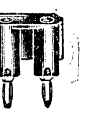
Stock No.	Mfr's	Color	Description	PER PKG. OF 10 1-9	10-29	30-49
47 D 3821 47 D 3822	455 455	Red Black	4-leaf, phos. bronze. Nylon. Solderless.	2.52	2.10	1.89
47 D 3823 47 D 3824	426 426	Red Black	4-leaf, phos. bronze spring. Nylon. Midget.	2.40	2.00	1.80

NON-INSULATED BANANA PLUGS

Feature four-leaved, phosphor-bronze nickel plated springs. Each is supplied with terminal lug and hex nut. Shpg. wt., 2 oz.

47 D 3825	103	Nickel-plated	Threaded-shank type.	2.40	2.00	1.80
47 D 3826	100	Nickel-plated	Panel-mtg. type; 6-32 tapped body. Intern'l threads for panel use.	2.40	2.00	1.80
47 D 3827	102	Nickel-plated	Threaded-shank type; spring tip.	2.40	2.00	1.80

STANDARD AND MINIATURE DOUBLE PLUGS



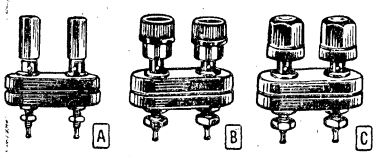
Double plugs molded as a single unit for banana jacks. Can be stacked for multiple connections. Body is of molded polystyrene per Fed. Spec. L-P416, Type 1. Nickel-plated brass plug. Wire up to #12 is held with internal set screw. 15-amp rating. Polarity indicated on top and side. Av. wt., 3 oz.

Type 210. Standard plug, 1 5/16 x 1¾". ¾" ctrs.
47 D 1792. 1-24.....Each .72 25-49.....Each .65
50-99.....Each .58 100-499.....Each .51

Type 1749. Miniature plug. As above, but has ½" centers. 15-amp rating. Overall size, 1 7/32 x 27/32 x ½".
47 D 1787. 1-24.....Each .72 25-49.....Each .65
50-99.....Each .58 100-499.....Each .51

Binding Posts, Connectors and Plugs

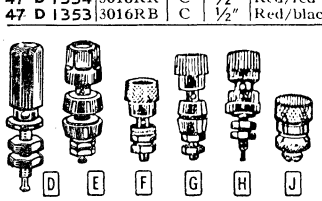
H. H. SMITH STANDARD & MINIATURE BINDING POSTS



Dual Binding Post Assemblies. Quality-constructed dual binding-post assemblies ruggedly made for long trouble-free service. Accept standard dual banana-plug, wire, etc. Have solder studs. Mount in two ½" holes in 1/16" to ¼" panels. ¾x1½" base. **Type 209** has metal posts, rounded black base. **Types 224 and 269** are 5-way; include 4 hex nuts and 2 flat washers. **Type 224** has black, insulated, fluted heads. **Type 269BB** has black, hex-grip, insulated heads. **Type 269RB** is same as **Type 269BB**, but has one red and one black head.

Miniature Dual Binding Post Assemblies. Mount in two ¼" holes (on ½" centers) in up to ¼" panels. Accept dual connectors, miniature banana plugs, 0.080 phone tips, #6 spade lugs. Solder turret. Two hex nuts, flat washers. Gold-plated brass. Black heads. **Type 3016RR** is same as above, but has two red heads. **Type 3016RB** as above, but one red and one black head. Wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Mtg. Ctr.	Color	EACH 1-24	25-49	50-99	100-249
47 D 1326	209	A	¾"	Metal/black	.83	.75	.68	.64
47 D 1328	224BB	B	¾"	Black/black	.77	.70	.63	.60
47 D 1329	269BB	C	¾"	Black/black	.83	.75	.68	.64
47 D 1324	269RB	C	¾"	Red/black	.83	.75	.68	.64
47 D 1332	3016BB	C	½"	Black/black	.83	.75	.68	.64
47 D 1334	3016RR	C	½"	Red/red	.83	.75	.68	.64
47 D 1353	3016RB	C	½"	Red/black	.83	.75	.68	.64

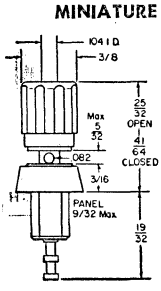


Assorted Multipurpose Nylon and Metal Binding Posts. For a wide variety of uses. All are rated 2000 volts at 30 amperes. **Types 257, 220, and 260** have banana-plug jack in head—also accept phone-tip plug, spade lug, alligator clip, and wire strand. **Type 208** accepts banana plug. Metal parts are brass, insulated front panel, except **Types 220 and 337**, which are grounding type. **Types 257, 377, and 378** take direct solder connection to stud. **Type 208** has wrap-around solder stud and 6-32 thread. **Types 257 and 260** are both equipped with a locking edge. **Type 3015** miniature fluted binding post; captive nylon ⅜" head. Av. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Mtg. Hole	Lgth. (Closed)	Color	EACH 1-99	100-299	300-499	500-Up
47 D 1327	208	D	11/64"	15/16"	Metal	.40	.33	.30	.28
47 D 1368	257	E	½"	1 43/64"	Red	.44	.40	.36	.32
47 D 1367	257	E	½"	1 43/64"	Black	.44	.40	.36	.32
47 D 1330	220	F	11/64"	1¼"	Red	.26	.22	.20	.18
47 D 1335	220	F	11/64"	1¼"	Black	.26	.22	.20	.18
47 D 1388	260	G	5/16"	1 11/16"	Red	.49	.45	.41	.36
47 D 1389	260	G	5/16"	1 11/16"	Black	.49	.45	.41	.36
47 D 1394	377	H	11/64"	1⅜"	Red	.42	.35	.32	.28
47 D 1395	377	H	11/64"	1⅜"	Black	.42	.35	.32	.28
47 D 1397	378	H	23/64"	1⅜"	Red	.42	.35	.32	.28
47 D 1398	378	H	23/64"	1⅜"	Black	.42	.35	.32	.28
47 D 1369	3015	E	¼"	1 5/16"	Red	.55	.50	.45	.40
47 D 1412	3015	E	¼"	1 5/16"	Black	.55	.50	.45	.40

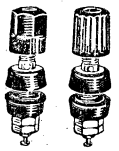
J **Type 110 Post.** Metal binding posts for heavy-duty use and low-resistance connections. Binding posts are rated at 15 amps, 60 Hz AC, for 10°C temperature rise under continuous duty. Nickel-plated brass 2 1/32" long, 3/16" mtg. hole. Supplied complete with screw and lock washer. Shpg. wt., 2 oz.
47 D 1371. 1-99.....Each .29
100-299.....Each .24 300-499.....Each .22

MINIATURE PRESS-FIT TEFLON BINDING POSTS



Type 3017. Mounts in ¼" "D" punched hole without hardware. "Memory" characteristic of Teflon locks unit in hole after insertion, and "D" Flat prevents rotation. For miniaturized equipment. Accepts 0.080" phone tip, #6 spade lug, miniature banana plug, alligator clip, or wire. Wrap-around solder turret. Captive head, molded nylon per MIL-P-20693A. Gold-plated brass insert and body. Virgin Teflon washer body, per MIL-P-19468. 5 amperes AC for 10°C rise, continuous duty. 1 kV, 60 Hz AC, continuous working voltage. 2.5 pF capacitance. **Red, black, yellow, green, blue, or white—specify.** Wt., 2 oz.
47 D 3152 C. 1-99.....Each .55
100-249.....Each .50 250-499.....Each .47

SUPERIOR ELECTRIC BINDING POSTS



Exceptionally versatile five-way binding posts. Take spade lugs, banana plugs, clip leads, up to No. 12 wire through center hole, or looped and clamped around shaft. Ruggedly constructed of the finest materials. Brass current-carrying parts are gold-plated. Hex-nut types have durable nylon plastic insulator and captive nut, meet MIL-P-20693 specs, except Type GP30NC which is nickel-plated grounding-type post. Fluted-nut types have low-loss thermoplastic insulator and captive nut. All are rated 30 amps at 1000 V. Mount in 1/16-¼" panels, ½" mounting hole. 2 3/64x½" dia. Shpg. wt., 2 oz.

HEX-NUT TYPES

Stock No.	Type	Color	Stock No.	Type	Color
47 D 1172	DF30YC	Yellow	47 D 1178	DF30RC	Red
47 D 1173	DF30GNC	Green	47 D 1198	DF30BLC	Blue
47 D 1174	DF30WTC	White	47 D 1000	GP30NC	Nickel
47 D 1177	DF30BC	Black			

1-99.....Each .50 100-Up.....Each .39

FLUTED-NUT TYPES

Stock No.	Type	Color	Stock No.	Type	Color
47 D 1011	DF31BC	Black	47 D 1001	DF31RC	Red
47 D 1006	DF31BLC	Blue	47 D 1005	DF31WTC	White
47 D 1020	DF31GNC	Green	47 D 1010	DF31YC	Yellow

1-99.....Each .50 100-Up.....Each .39

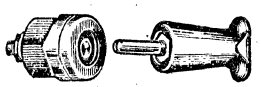
MINIATURE FLUTED-NUT TYPES

Rated 15 amps at 1000 V. Current-carrying parts are gold-plated brass. Plastic parts are of durable nylon. Meet MIL-P-20693, Type IV specs. For 1/16-¼" panels. Mount in ⅜" hole. Size, 1 21/32x7/16" dia. Choice of 6 colors. Shpg. wt., 2 oz.

Stock No.	Type	Color	Stock No.	Type	Color
47 D 1031	DF21BC	Black	47 D 1021	DF21RC	Red
47 D 1023	DF21BLC	Blue	47 D 1022	DF21WTC	White
47 D 1040	DF21GNC	Green	47 D 1030	DF21YC	Yellow

1-99.....Each .50 100-Up.....Each .39

"SUPERCON" AND "L" CONNECTORS

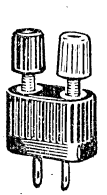


Molded nylon plugs and sockets. Metal parts are gold-plated brass. Cable-fastening screws for solderless assembly. 25, 50 and 100-amp types rated 125-250 V, AC or DC rupturing, 600 V disconnect use only. 250-amp types rated 600 V disconnect use only. **Available in red or black—specify color.** Shpg. wt., 6 oz.

"L" Type Connector. All current-conducting parts are shielded to prevent accidental contact when making connections. Socket connector is recessed deep within the receptacle body. Sleeve on pin plug shields pin when making connections. Rated 125-250 V AC or DC current-rupturing; 600V disconnect use only. Insulating parts are molded nylon, current carrying parts are gold-plated brass. **Available in red or black—specify color.** Wt., 7 oz.

Stock No.	Mfr's Type	Terminal	Amps	EACH 1-19	20-99	100-199
47 D 2951 C	RS25G	Socket Receptacle	25	2.80	2.24	1.96
47 D 2954 C	PP25G	Pin Plug for above	25	2.80	2.24	1.96
47 D 2953 C	RP25G	Pin Receptacle	25	2.80	2.24	1.96
47 D 2952 C	PS25G	Socket Plug for above	25	2.80	2.24	1.96
47 D 1302 C	RS50G	Socket Receptacle	50	3.65	2.92	2.74
47 D 1308 C	PP50G	Pin Plug for above	50	3.65	2.92	2.74
47 D 1303 C	RP50G	Pin Receptacle	50	3.65	2.92	2.74
47 D 1309 C	PS50G	Socket Plug for above	50	3.65	2.92	2.74
47 D 1304 C	RS100G	Socket Receptacle	100	4.75	3.80	3.56
47 D 1315 C	PP100G	Pin Plug for above	100	4.75	3.80	3.56
47 D 1307 C	RP100G	Pin Receptacle	100	4.75	3.80	3.56
47 D 1316 C	PS100G	Socket Plug for above	100	4.75	3.80	3.56
47 D 2955 C	RS250G	Socket Receptacle	250	8.15	6.52	6.11
47 D 2958 C	PP250G	Pin Plug for above	250	8.15	6.52	6.11
47 D 2957 C	RP250G	Pin Receptacle	250	8.15	6.52	6.11
47 D 2956 C	PS250G	Socket Plug for above	250	8.15	6.52	6.11
47 D 2950 C	LRS50G	*Socket Receptacle	50	4.50	3.60	3.38
47 D 2959 C	LPP50G	*Pin Plug for above	50	4.50	3.60	3.38

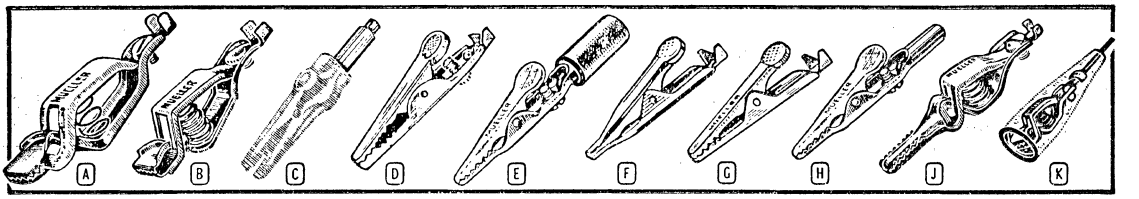
AC DUAL-ADAPTER BINDING POST



Top-quality binding post with AC plug connects up to 5 ways for extreme versatility. Ideal for developmental laboratory applications, line voltage and frequency monitoring, etc. Utilizes Type DAP15BWC parallel-blade plug that fits standard 2-wire AC receptacle. Accepts spade lugs, banana plugs, clip leads, up to No. 12 wire through .098" diameter holes, or wire wrapped around shafts. Rated 15 amps at 125 volts. Has color-coded thumbnuts, 1 white, 1 black. Shpg. wt., 3 oz.
47 D 1041. 1-9.....Each 2.00
10-99.....Each 1.50

Allied Provides Same-Day Service at OEM Prices

Mueller General-Purpose Test Clips



3-SIDED MESH-TEETH CLIPS

A §Cadmium-plated steel; *solid copper; †with insulation-piercing needle. #Wt. per 100 pieces.

Stock No.	Mfr's Type	Amps	Size	#Wt. Lbs.	EACH (In Multiples of 10) 10-90	100-490	500-990
47 D 5074	§25	40	3″	6	.17	.142	.135
47 D 5015	§27	20	2 7/16″	3¼	.11	.092	.087
47 D 5097	*27C	40	2 7/16″	3½	.19	.16	.152
47 D 5010	§48B	10	2″	2	.09	.078	.074
47 D 5078	*48C	20	2″	2¼	.14	.119	.113
47 D 5087	*†50C	20	2¼″	2½	.22	.188	.179
47 D 5088	*51C	20	2½″	2½	.15	.131	.124

"PEE-WEE" TEST CLIPS

B Mesh-teeth type for general purpose use. Type 45C of solid copper. Type 45 of cadmium-plated steel. #Wt. per 100 pcs.

Stock No.	Mfr's Type	Amps	Size	#Wt. Lbs.	PER PKG. OF 10 1-9	10-49	50-99
47 D 5001	45	5	1½″	1	.61	.52	.50
47 D 5006	45C	10	1½″	1¼	1.07	.92	.87

HEAVY-DUTY SOLID COPPER CLIPS

B High-conductivity, solid copper clips. Handle current loads of up to 200 amps. Lbs. per 100 pcs.: *6¾, †18, §41.

Stock No.	Mfr's Type	Amps	Marking	Size	EACH 1-9	10-99	100-499	500-999
47 D 5073	*25C	75	unmarked	3″	.49	.34	.29	.276
47 D 5031	†21C	100	plus sign	4½″	1.20	.84	.72	.69
47 D 5032	†21C	100	unmarked	4½″	1.20	.84	.72	.69
47 D 5033	§11C	200	plus sign	6″	2.34	1.64	1.40	1.33
47 D 5034	§11C	200	unmarked	6″	2.34	1.64	1.40	1.33

LEAD-PLATED BATTERY CLIPS

B For moderately heavy current loads, including battery charging, electroplating, and light welding. Lead-plated steel for complete protection and long life. Lbs. per 100 pcs.: *6¼, †15, §36.

47 D 5021	*24A	25	plus sign	2 7/8″	.26	.18	.152	.145
47 D 5022	*24A	25	unmarked	2 7/8″	.26	.18	.152	.145
47 D 5023	†21A	50	plus sign	4″	.46	.32	.276	.26
47 D 5024	†21A	50	unmarked	4″	.46	.32	.276	.26
47 D 5027	§11A	100	unmarked	6″	1.27	.89	.76	.72

INSULATED ALLIGATOR CLIPS

C §Cadmium-plated steel; *solid copper. Insulated with vinyl to protect against shocks and shorts. Av. per 100 pcs., 1¾ lbs.

Stock No.	Mfr's Type	Amps	Marking	Size	EACH (In Multiples of 10) 10-90	100-490	500-990
47 D 5145	§63	5	Red insul.	2 1/8″	.13	.11	.105
47 D 5146	§63	5	Black insul.	2 1/8″	.13	.11	.105
47 D 5147	*63C	10	Red insul.	2 1/8″	.15	.13	.124
47 D 5148	*63C	10	Black insul.	2 1/8″	.15	.13	.124

70 SERIES ALLIGATOR CLIPS

D Streamlined, simplified design. No. 70, cadmium-plated steel, solder connection; No. 70S, cadmium-plated steel, screw connections. No. 70CS, solid copper, screw connection. 1 lb. per 100.

Stock No.	Mfr's Type	Amps	Barrel Color	Size	PER PKG. OF 10 1-9	10-49	50-99
47 D 5173	70	5	.....	1 11/16″	.45	.38	.36
47 D 5174	70S	5	.....	1 11/16″	.54	.46	.44
47 D 5175	70CS	10	.....	1 11/16″	.85	.73	.69

INSULATED-BARREL ALLIGATOR CLIPS

E Made of cadmium-plated steel, except Types 60CHS are solid copper. Jaws open 5/16″. 1½ lbs. per 100 pcs.

47 D 5081	60HS	.....	Red	2 11/32″	.89	.76	.72
47 D 5082	60HS	.....	Black	2 11/32″	.89	.76	.72
47 D 5083	60CHS	.....	Red	2 11/32″	1.18	1.01	.96
47 D 5084	60CHS	.....	Black	2 11/32″	1.18	1.01	.96

"MICRO-GATOR" CLIPS

F Similar to "Mini-gators" but with tiny tip for clipping to small terminals, and as heat sink. §Cadmium-plated steel; * copper.

47 D 5178	§34	.....	.....	1 3/32″	.41	.36	.34
47 D 5179	*34C	.....	.....	1 3/32″	.53	.46	.43

"MINI-GATOR" CLIPS

G Ideal for testing all types of miniature and subminiature equipment. 3/16″ jaw opening. 1 1/64″ O.D. tip when used with insulator. Type 30, cadmium-plated steel; Type 30C, solid copper, for #20 or smaller wire. Shpg. wt., ¼ lb. per 100.

Stock No.	Mfr's Type	Amps	Size	PER PKG. OF 10 1-9	10-49	50-99
47 D 5140	30	5	1 1/16″	.50	.43	.41
47 D 5141	30C	10	1 1/16″	.61	.53	.50

60 SERIES ALLIGATOR CLIPS

H Steel, except 60CS, solid copper. *Insulation-piercing needle. Fit banana plugs. Jaws open 5/16″. 2″ long. 1 lb. per 100.

Stock No.	Mfr's Type	Connection	PER PKG. OF 10 1-9	10-49	50-99
47 D 5011	60	Solder	.54	.47	.44
47 D 5012	60S	Screw	.63	.54	.51
47 D 5013	60CS	Screw	.96	.82	.78
47 D 5014	*60NS	Screw	1.32	1.12	1.06

CROCODILE CLIPS

J Cadmium-plated steel, except Type 85C is solid copper. Type 85T has phone tip on one jaw. Wt., 1½ lbs. per 100.

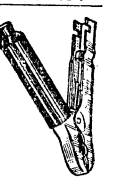
Stock No.	Mfr's Type	Size	Description	EACH (In Multiples of 10) 10-90	100-490	500-990
47 D 5060	85	2⅛″	Screw Connection	.08	.065	.062
47 D 5062	85C	2⅛″	Screw Connection	.15	.127	.121
47 D 5098	85T	2 5/8″	Tip-Clip	.19	.16	.152

SLIP-ON INSULATORS FOR CLIPS

K Tough, flexible vinyl insulators for above clips. Offer high dielectric strength; resistant to oils and grease. Cover entire clip except for end of nose. Provide safety when clipping to high voltage sources, prevent shorts. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Color	Use With Series	EACH 1-9	10-99	100-499	500-999
47 D 5036	13	Red	11	.81	.57	.49	.46
47 D 5037	13	Black	11	.81	.57	.49	.46
47 D 5038	23	Red	21	.41	.29	.246	.234
47 D 5039	23	Black	21	.41	.29	.246	.234
47 D 5041	26	Red	24, 25	.23	.16	.138	.131
47 D 5042	26	Black	24, 25	.23	.16	.138	.131
47 D 5043	29	Red	27	.17	.12	.104	.098
47 D 5044	29	Black	27	.17	.12	.104	.098
47 D 5046	32	Red	30	.05	.03	.029	.027
47 D 5047	32	Black	30	.05	.03	.029	.027
47 D 5051	36	Red	34	.05	.03	.029	.027
47 D 5052	36	Black	34	.05	.03	.029	.027
47 D 5053	47	Red	45	.07	.05	.042	.04
47 D 5054	47	Black	45	.07	.05	.042	.04
47 D 5056	49	Red	48, 50	.10	.07	.059	.056
47 D 5057	49	Black	48, 50	.10	.07	.059	.056
47 D 5058	62	Red	60, 70	.06	.04	.033	.031
47 D 5059	62	Black	60, 70	.06	.04	.033	.031
47 D 5061	72	Red	70	.06	.04	.033	.031
47 D 5063	72	Black	70	.06	.04	.033	.031
47 D 5064	87	Red	85	.07	.05	.042	.04
47 D 5066	87	Black	85	.07	.05	.042	.04

"HIPPO" AND "PIGMY HIPPO-CLIPS"

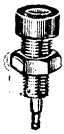


Strong full-channel-constructed plier clips with two vinyl insulating sleeves. Handles are full size to the end for greater strength and current capacity. Standard "Hippos" are 6″ long, have 1 3/16″ jaw opening. "Pigmy-Hippos" are 3″ long, have 1⅛″ jaw opening. Built-in solder strap and cable clinching ears. Bright copper-plated steel. Type 41A is standard size; Type 46A, "Pigmy." Wt. per 100: *41 lbs.; †5¾ lbs.

Stock No.	Mfr's Type	Amps	Sleeve Color	Marking	EACH
47 D 5077	41A*	100	Black	minus sign	.51
47 D 5076	41A*	100	Red	plus sign	.51
47 D 5072	46A†	50	Black	unmarked	.17
47 D 5071	46A†	50	Red	unmarked	.17

E. F. Johnson Plugs, Jacks, Binding Posts

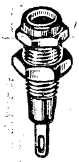
TYPE NUMBER DATA: Digits in Manufacturer's Type Number that indicate color (White—01, Red—02, Black—03, Green—04, Yellow—07, and Blue—10 have been listed as "X."



LOW-PRICED TIP JACK

Tough, low-loss molded body. Capacity to 1/8" metal panel is only 2.0 pF; voltage breakdown test is 9,000 volts DC. Has formed cad.-plated phosphor bronze contact. Current rating: 10 amps. Supplied with 1/4"-32 nut for mounting in 17/64" dia. hole or double-flat keyed hole. No auxiliary mounting hardware required. Overall size, 1 1/32x3/8" diameter. 2 oz. Specify color: white, red, black, green, blue, yellow.

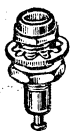
Stock No.	Mfr's Type	EACH				
		1-49	50-99	100-499	500-999	1000-2499
47 D 6325 C	105-XX	.13	.12	.108	.098	.078



STANDARD METAL-CLAD TIP JACK

Shock-proof polyamide and metal construction resists chipping or cracking. Highly resistant to extremes of heat, cold and moisture. Nickel-plated machined brass jacket protects nylon body—assures positive fastening to mounting surface. Has formed silver-plated phosphor bronze contact. Rated: 10 amps. Voltage breakdown is 7,000 VDC; capacity to 1/8" panel is 3.8 pF. With 1/4"-32 nut. Fit 17/64" hole. 1 1/16x9/32" dia. 2 oz. Specify color: white, red, black, green, blue, yellow.

47 D 6330 C	105-25X-1	.18	.16	.149	.135	.108



MIL TYPE METAL-CLAD TIP JACK

MS-16108, rev. F type jack. Body is protected by nickel-plated, machined brass jacket—resists chipping or cracking under hardest usage. Has gold-plated, beryllium copper contact, and brass terminal end. Current rating: 5 amps; voltage breakdown: 8000 VDC. Capacity to 1/8" metal panel is 3.8 pF. With nickel-plated phosphor bronze lock washer and 1/4"-32 nut for 17/64" hole. Size, 31/32x9/32" dia. 2 oz. Specify color: white, red, black, yellow.

47 D 6331 C	105-XX-200	.30	.27	.248	.226	.18

DELUXE TIP JACK

Capacity to 1/8 metal panel 2.0 pF. .081" tip. Silver-plated beryllium copper contacts. Body threaded 1/4"-32 for single nut mtg. With 1/4"-32 nut for mtg. in 17/64" dia. hole. Rated 10 amps; DC breakdown, 11,000 V. Length 29/32". Dia. 3/8". Shpg. wt., 2 oz. Specify color: white, red, black, green, blue, yellow.

47 D 6345 C	105-6XX	.15	.14	.12	.11	.09

STANDARD AND SUBMINIATURE TIP PLUGS

Completely insulated. Recessed head. Metal parts are nickel-plated brass. Standard: for solderless connection of up to No. 16 stranded wire; 10-amp rating. Pin size, 9/16"x .081" dia. Body, 7/8"x3/8" dia. Subminiature: solder connection; 10-amp rating. Pin size, .080x21/64" dia. Body, 5/8x3/16" dia. 2 oz. Specify white, red, black, green, blue, yellow.

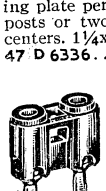
47 D 6358 C	105-3XX	.15	.14	.12	.11	.09
47 D 6359 C	105-7XX	.18	.16	.15	.14	.11

MINIATURE, STANDARD, JUMBO, SIX-WAY POSTS

Series 111-2, Min. 15 A. Breakdown, 5000 VDC. 1/4"-32 nut mtg. in 17/64" dia. round, "D," or double-flat hole. 15/16" long, 3/8" dia. Series 111-1, Std. 15 A. Breakdown, 8000 VDC. 5/16"-32 nut mtg. in 21/64" dia. round, "D," or double-flat hole. 1 15/16" long, 7/16" dia. Series 111-3, Jumbo. 40 A. Breakdown, 7000 VDC. 1/2"-20 nut mtg. in 1/2" dia. round, "D," or double-flat hole. 2" long, 5/8" dia. 1/2 oz. Specify: white, red, black, green, blue, yellow.

47 D 6340 C	111-2XX	.25	.23	.21	.19	.15
47 D 6341 C	111-1XX	.30	.27	.25	.226	.18
47 D 6342 C	111-3XX	.40	.36	.33	.30	.24

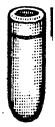
Type 111-20 Mounting Plate. Pre-punched, etched aluminum mounting plate permits simple, accurate mounting of two nylon binding posts or two nylon banana jacks in 21/64" diameter holes on 3/4" centers. 1 1/4x1 1/2". Shpg. wt., 2 oz.
47 D 6336.....03



SOLDERLESS DUAL BANANA PLUG

Shock resistant insulating body—retains strength. Provide strain relief to wire leads. Plug springs are nickel-silver. Body is nickel-plated, machined brass. Brass studs extend full length of plug pins for extra strength. Pins have accurate 3/4" spacing. Rated: 15 amps; plug to plug capacity: 1.3 pF; voltage breakdown: 10,000 VDC. Overall length, 1 19/32". 2 oz. Specify color: white, red, black, green, blue, yellow.

47 D 6347 C	108-2XX	.70	.63	.58	.528	.42



SLEEVE AND JACK ASSEMBLY

Includes tip jack, less mounting nut, in an inside threaded, insulating sleeve. Ideal for patch cords and panel mountings where an insulated rear connection of a tip jack is desired. Silver-plated, beryllium-copper contact; hot tinned dipped terminal end. Breakdown, 8,000 V. 1 1/16"x3/8" dia. 3 oz. Specify white, red, black, green, yellow.

Stock No.	Mfr's Type	EACH				
		1-49	50-99	100-499	500-999	1000-2499
47 D 6363 C	105-7XX	.20	.18	.165	.151	.12

BANANA JACKS AND PLUGS

Low-loss body. Capacity to 1/16" metal panel, 2.4 pF. Breakdown test 10,000 VDC. Jack has cadmium-plated insert. Supplied with 5/16"-32 nut for mounting jack in 21/64" diameter hole. Plugs have nickel-plated brass body. Solderless connection takes up to No. 16 stranded wire. Length: jack, 1 5/16"; plug, 1 3/8". Shpg. wt., 2 oz. Specify color: white, red, black, green, blue, or yellow.

Stock No.	Mfr's Type	Fig.	EACH				
			1-49	50-99	100-499	500-999	1000-2499
47 D 6346 C	108-9XX	A	.10	.09	.08	.075	.06
47 D 6352 C	108-3XX	B	.19	.17	.16	.14	.114

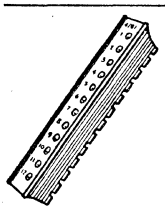
NON-INSULATED PLUGS AND JACKS

740 nickel-plated brass jack, with solder terminal and nut. 760 for jumbo plugs, with solder terminal and nut. 740 requires 17/64" dia. mtg. hole; 760, 25/64". 750, 750-2, 753, 770 and 771 are banana plugs. Have brass studs. 770 and 771 are jumbo types; 770 plugs have long screw for mounting on ceramic or steatite plug-in coil forms. Nickel plate body and hardware. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fits	Lgth.	EACH			
				1-49	50-99	100-499	500-999
47 D 6385	108-740	750, 750-2, 753	5/8"	.15	.14	.12	.11
47 D 6386	108-750	740	1 1/8"	.18	.16	.149	.136
47 D 6387	108-750-2	740	1 1/2"	.20	.18	.165	.15
47 D 6388	108-753	740	1 5/16"	.18	.16	.149	.136
47 D 6389	108-760	770, 771	1"	.45	.41	.37	.34
47 D 6390	108-770	760	1 25/32"	.35	.32	.29	.264
47 D 6391	108-771	760	1 1/8"	.60	.54	.496	.452

SUBMINIATURE VERTICAL JACKS

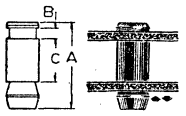
Type 105-85X. Rated at 5 amps. Operating voltage, 1500 volts. Contact resistance less than 2 milliohms. Body material, low-loss polyamide, meets MIL-M-20693A specs. Beryllium copper contacts for firm contact. Silver plated. 7/16" long, 3/16" dia. Mounts single .052" hole. 2 oz. Specify: white, red, black, green, yellow, blue.
47 D 6360 C. 1-49....Each .11 50-99.....Each .10
100-499.....Each .09 500-999.....Each .08



TEST POINT STRIP HANDLE

Type 266-402. Permits fast trouble shooting of PC boards. Low-loss polyamide body for insulation resistance greater than 200 megohms after MIL-T-5422B humidity test. 5 amp capacity. Operating voltage, 1500 volts. Contact resistance less than 2 milliohms. Beryllium copper plated. Wt., 1 oz. Specify: white, red, black, green, yellow, blue.
47 D 6362 C. 1-49..Each 1.20 50-99..Each 1.09
100-499.....Each .98 500-999..Each .90

POLYAMIDE SPACER BUSHINGS



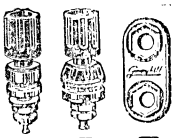
Low-loss polyamide spacer bushings allow you to mount PC boards to panel or chassis without the use of nuts or bolts. Can be used for easy service. Mechanically secure and nonconductive combination. Machined from nylon snap in any predrilled .152 ±.002 diameter hole in a 1/16" thick chassis or panel. Dimensions: A, overall length; B, .065-.070 for all types; C, stand-off height. Average shpg. wt., 4 oz.

Stock No.	Mfr's Type	Dimensions		Per Pkg. of 50		
		A	C	Each	2-9	10-Up
47 D 6410	115-260-1	.396	.125	5.40	4.95	4.50
47 D 6411	115-260-3	.521	.250	5.40	4.95	4.50
47 D 6412	115-260-5	.646	.375	5.40	4.95	4.50
47 D 6413	115-260-7	.771	.500	7.00	6.40	5.70
47 D 6414	115-260-9	.896	.625	7.00	6.40	5.70
47 D 6415	115-260-11	1.021	.750	7.00	6.40	5.70

Binding Posts, Test Clips, Jacks, Terminals

GRAYHILL BINDING POSTS, CLIPS AND TERMINALS

BINDING POSTS AND DUAL MOUNTING BASES



A **Type 29-1 Binding Post.** Screw type binding post for 3/8" dia. mtg. hole—allows closer spacing of posts. Takes banana plugs, wires, spade lugs, prod tips, etc. Mounts on panel up to 3/16" thick—insulation resistance 120,000 megohms; voltage breakdown 3000 volts AC. 1" in front of panel, .69" behind. 1/2" diameter. Shpg. wt., 4 oz.

B **Type 29-3 Binding Post.** Screw type binding post for 1/2" dia. mounting hole. For use in existing equipment or where wider spacing is desirable. Takes banana plugs, wires, spade lugs, prod tips, etc. Mounts on panel up to 3/16" thick—insulation resistance 200,000 megohms; voltage breakdown 3800 volts AC. Post extends 1" in front of panel, .69" behind. .62" diameter. Shpg. wt., 4 oz.

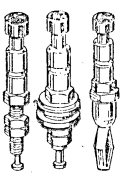
B **Type 29-33 Binding Post.** Spring loaded binding post—head gives 24 oz. of contact force. For 1/2" mounting hole in panels to 3/16" thick. Insulation resistance 200,000 megohms; voltage breakdown between studs and mounting panel, 3800 volts AC. Extends .96" in front of panel, .69" behind. .62" diameter. Insulating washers, 5/8" dia. Shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-99	100-999	1000-1999
47 D 5250	29-1	A	Red—Screw type	.50	.38	.35
47 D 5251	29-1	A	Black—Screw type	.50	.38	.35
47 D 5252	29-3	B	Red—Screw type	.50	.38	.35
47 D 5253	29-3	B	Black—Screw type	.50	.38	.35
47 D 5254	29-33	B	Red—Spring loaded	.50	.38	.35
47 D 5255	29-33	B	Black—Spring loaded	.50	.38	.35

C **Type 29B11 Dual Mounting Bases.** For use with Type 29-1 binding posts in table above. Makes assembled unit with two binding posts on 3/4" centers. Base is molded phenolic to Type CFG specifications. 10 to a package. Shpg. wt., 8 oz.

47 D 5267. Type 29B11-2. Red Base. 1-49 Pkgs.....Per Pkg. 1.50
50-99 Pkgs.....Per Pkg. 1.31 100-199 Pkgs.....Per Pkg. 1.05
47 D 5268. Type 29B11-1. Black Base. 1-49 Pkgs.....Per Pkg. 1.50
50-99 Pkgs.....Per Pkg. 1.31 100-199 Pkgs.....Per Pkg. 1.05

"PUSH-POST" PLUNGER TYPE BINDING POSTS



Plunger type binding posts for positive, quick connections. Just depress button and place lead in .06" slot—spring pressure assures firm contact. With red or black buttons. Wt. per pkg., 7 oz.

D **Type 29-100.** For 11/64" mounting hole less insulating washers—use as ground on panels up to 3/16" thick. Extends only 7/8" above panel; 1 1/2" overall length, 1/4" dia. Wt. per pkg., 7 oz.

E **Type 29-104.** Same as Type 29-100 above but with insulating washers to prevent grounding to panel. For 3/8" mounting holes.

F **Type 29-101.** "Push-Post" with standard banana plug converts any banana jack to a plunger type binding post. Nickel-plated brass. Thermoplastic button. 1/2" diameter, 1.80" long. Shpg. wt. per pkg., 7 oz.

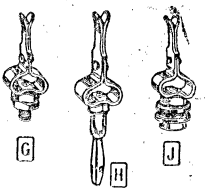
Stock No.	Mfr's Type	Fig.	Color	PER PKG. OF 10 1-9	10-99	100-199
47 D 5269	29-100R	D	Red	4.50	3.38	3.15
47 D 5270	29-100B	D	Black	4.50	3.38	3.15
47 D 5273	29-104R	E	Red	6.00	4.50	4.20
47 D 5274	29-104B	E	Black	6.00	4.50	4.20
47 D 5271	29-101R	F	Red	6.00	4.50	4.20
47 D 5272	29-101B	F	Black	6.00	4.50	4.20

RAYTHEON TEST JACKS

Top-quality test jacks for standard .080" diameter test prods. Meet MIL-MS-16108 rev. F specifications. Use threaded nickel-plated brass sleeve for mounting; beryllium-copper spring pin contacts. Mount securely with nut and washer. All are nylon insulated. Shpg. wt. pkg. of 25, 1 lb.

Stock No.	Mfr's Type	Color Type	Mtg. Hole	PER PKG. OF 25 1-3	4-19	20-39
47 D 6502	TJ-103R	Red	1/4"	7.25	6.25	5.75
47 D 6503	TJ-105BL	Black	1/4"	7.25	6.25	5.75
47 D 6504	TJ-108W	White	1/4"	7.25	6.25	5.75

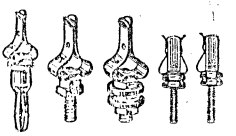
STANDARD TEST CLIPS



Test clips for panel mounting on test equipment. Permits rapid connection of wires or pigtail components. Type 2-0: for panels to 1/4" thick. Has 8-32 stud. Type 2-1: converts banana jack to test clip. Type 2-4: same as Type 2-0, but with insulated washers. Shpg. wt., per pkg., 6 oz.

Stock No.	Mfr's Type	Fig.	Description	Total Lgth.	PKG. OF 10
47 D 5275	2-0	G	Threaded Stud Test Clip	1.56"	2.50
47 D 5276	2-1	H	Banana Plug Test Clip	2.06"	4.00
47 D 5292	2-4	J	Threaded Stud w/Ins. Washer	1.56"	4.00

MINIATURE TEST CLIPS



Miniature version of above—extend only 3/4" above mounting panel. Hex nut under clip permits tension adjustment. Nickel-plated brass or steel. Type 2-21: min. clip on std. banana plug. Type 2-20: for up to 1/4" panels. Has 6-32 stud. Type 2-24: as 2-20, but with ins. washers. Per pkg., 5 oz.

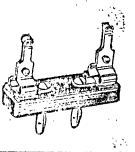
47 D 5293	2-21	K	Banana Plug Test Clip	1.50"	4.50
47 D 5295	2-20	L	Threaded Stud Test Clip	1.13"	2.50
47 D 5296	2-24	M	Threaded Stud w/Ins. Washer	1.50"	4.00

N P ULTRAMINIATURE TEST CLIPS

Tiny test clips require panel area of only 3/16"x1/8" for single clip; 1/4"x 1/8" for double clip. 3/8" long 2-56 mtg. stud. Av. wt., 3 oz.

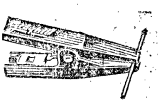
47 D 5297	2-42	N	Double Clip	.79"	3.00
47 D 5298	2-41	P	Single Clip	.79"	2.50

TEST CLIP ADAPTER



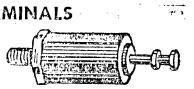
Type 2-2. For testing resistors, capacitors and other pigtail components. Plugs into std. banana jacks mounted on 3/4" centers; spring clips accept wire leads. Metal parts are nickel plated. Hex nut permits tension adjustment of individual clips which extend 1 1/8" above board. Board is molded phenolic to MIL-M-14. Shpg. wt., 2 oz.
47 D 5266.....Each 1.75

INSULATED TEST CLIPS



Type 16. Molded parts are phenolic to MIL-M-14. .008" silver overlay at point of contact. Contact res., .0015 ohm. Silver-plated brass terminals. 500-V insulation test. 2" long. 1 oz.
47 D 5264. Red...1.40 47 D 5265. Black.....1.40

INSULATED STANDOFF TERMINALS



Terminals are molded from natural, mica-filled phenolic. Feature exceptionally low loss at higher frequencies, extremely low moisture absorption, and very high dielectric strength. Terminals are silver-plated brass. Type 18-1 has a 4-40 threaded hole in the base for mounting. Type 18-2 has a 7/32" mounting stud with a 4-40 thread. .59" long x .31" diameter. Wt., 3 oz.

Stock No.	Mfr's Type	Mounting	EACH 1-499	500-999
47 D 5290	18-1	Female	.45	.36
47 D 5291	18-2	Male	.50	.40

ACI UNIVERSAL "ADLOC" BINDING POST

Push down on top, insert wire (up to 12 gauge), release and positive contact is made instantly. Also for spade lugs, plugs, clamps and prods. Has a brass nickel-plated post, nylon plastic insulator. Rated 20 amps at 1000 V, rms. For .314" hole in panels 1/32" to 1/4". 23/32x5/8". Suffix "B", black; "R", red. In Pkgs. of 5. Shpg. wt., 3 oz.

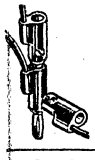
Stock No.	Mfr's Type	PER PACKAGE OF 5 1-2	3-20	21-40	41-100
47 D 0608	AL2000B	2.75	2.55	2.45	2.30
47 D 0609	AL2000R	2.75	2.55	2.45	2.30

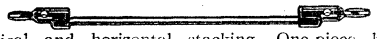
Allied is your most dependable source for everything in industrial electronics. You can take advantage of complete stocks, fast service and factory OEM prices. One order fills the bill for all your electronic needs.

Patch Cords, Patch Boards, Test-Lead Holders, Plugs

POMONA PATCH CORDS, PLUGS AND ADAPTERS

MODEL "B" BANANA PLUG PATCH CORDS





Vertical and horizontal stacking. One-piece heat-treated beryllium copper spring. Rated 15 amps, cont.; 30 int. 18-gauge wire. 10,000 WVDC. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Color	Lgth. In.	EACH 1-24	25-49	50-99	100-249
47 D 2275	B-4	Black	4	1.50	1.35	1.28	1.05
47 D 2280	B-4	Red	4	1.50	1.35	1.28	1.05
47 D 2281	B-8	Black	8	1.50	1.35	1.28	1.05
47 D 2282	B-8	Red	8	1.50	1.35	1.28	1.05
47 D 2284	B-12	Black	12	1.50	1.35	1.28	1.05
47 D 2287	B-12	Red	12	1.50	1.35	1.28	1.05
47 D 2298	B-18	Black	18	1.50	1.35	1.28	1.05
47 D 2299	B-18	Red	18	1.50	1.35	1.28	1.05
47 D 2350	B-24	Black	24	1.50	1.35	1.28	1.05
47 D 2351	B-24	Red	24	1.50	1.35	1.28	1.05
47 D 2353	B-36	Black	36	1.50	1.35	1.28	1.05
47 D 2354	B-36	Red	36	1.50	1.35	1.28	1.05
47 D 2352	B-48	Black	48	1.55	1.40	1.33	1.10
47 D 2355	B-48	Red	48	1.55	1.40	1.33	1.10
47 D 2356	B-60	Black	60	1.60	1.45	1.38	1.15
47 D 2358	B-60	Red	60	1.60	1.45	1.38	1.15

MODEL 1440 HORIZONTAL STACKING PATCH CORD

One banana plug each end. Fit any standard banana jacks. 18-gauge stranded wire. One-piece nickel-plated beryllium copper spring. Av. wt., 4 oz.

47 D 2532	1440-12	Black	12	1.00	.91	.86	.72
47 D 2533	1440-12	Red	12	1.00	.91	.86	.72
47 D 2548	1440-24	Black	24	1.00	.91	.86	.72
47 D 2549	1440-24	Red	24	1.00	.91	.86	.72
47 D 2550	1440-36	Black	36	1.00	.91	.86	.72
47 D 2551	1440-36	Red	36	1.00	.91	.86	.72

LOW-THERMAL EMF JUMPER

Spade Lugs on Both Ends

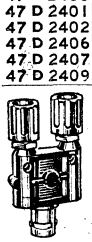
One-piece tellurium copper lug, gold-plated. 12 AWG stranded bare copper wire, PVC insulated. Thermal EMF less than .01 mV/°C. Rated at 20 A cont. and 30 A int. Av. wt., 6 oz.

Stock No.	Mfr's Type	Color	Lgth. In.	EACH 1-24	25-49	50-99	100-249
47 D 2359	1693-12	Black	12	2.75	2.48	2.34	1.93
47 D 2360	1693-12	Red	12	2.75	2.48	2.34	1.93
47 D 2362	1693-18	Black	18	2.75	2.48	2.34	1.93
47 D 2363	1693-18	Red	18	2.75	2.48	2.34	1.93
47 D 2364	1693-24	Black	24	2.75	2.48	2.34	1.93
47 D 2369	1693-24	Red	24	2.75	2.48	2.34	1.93
47 D 2370	1693-36	Black	36	2.75	2.48	2.34	1.93
47 D 2371	1693-36	Red	36	2.75	2.48	2.34	1.93
47 D 2372	1693-48	Black	48	2.75	2.48	2.34	1.93
47 D 2379	1693-48	Red	48	2.75	2.48	2.34	1.93

PIN-TIP VERTICAL STACKING PATCH CORDS

Durable, extra-flexible-lead patch cords for ease of handling and long life. Gold-flashed brass pin-tip, 0.080" diameter, ½" long. Tip jacks accept 0.080" diameter pin. Extra-flexible polyvinyl-insulated wire. Operating temperature, 0° C to +105° C. Rated 5 amps continuous, 10 amps intermittent. 5000 WVDC. 5 oz.

Stock No.	Mfr's Type	Color	Lgth. In.	EACH 1-24	25-49	50-99	100-249
47 D 2392	P-4	Black	4	1.75	1.58	1.50	1.23
47 D 2393	P-4	Red	4	1.75	1.58	1.50	1.23
47 D 2394	P-8	Black	8	1.75	1.58	1.50	1.23
47 D 2395	P-8	Red	8	1.75	1.58	1.50	1.23
47 D 2396	P-12	Black	12	1.75	1.58	1.50	1.23
47 D 2397	P-12	Red	12	1.75	1.58	1.50	1.23
47 D 2400	P-18	Black	18	1.75	1.58	1.50	1.23
47 D 2401	P-18	Red	18	1.75	1.58	1.50	1.23
47 D 2402	P-24	Black	24	1.75	1.58	1.50	1.23
47 D 2406	P-24	Red	24	1.75	1.58	1.50	1.23
47 D 2407	P-36	Black	36	1.75	1.58	1.50	1.23
47 D 2409	P-36	Red	36	1.75	1.58	1.50	1.23



BINDING POST ADAPTER

Has Standard BNC Receptacle

Permits single or double banana plugs to be used with equipment having BNC plug. Has insulated binding posts, on ¾" centers with .166" dia. banana jacks. Stack-up connections provided with .166" dia. cross-holes. Operating temp., —25° C. to +85° C. 500 V peak. Shpg. wt., 3 oz.

47 D 2391	1452	.....	.....	4.85	4.37	4.13	3.40

PATCH CORDS WITH DOUBLE PLUG ON EACH END

36" cords with an MDP plug on each end. Type 2BA-36 is 2-conductor 18-gauge twisted wire. Type 2BB-36 is shielded microphone cable. 2BC-36 is RG58C/U shielded coaxial cable. Wt., 5 oz.

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-49	50-99
47 D 2204	2BA-36	Gray	4.95	4.46	4.21	3.47
47 D 2205	2BB-36	Gray	4.95	4.46	4.21	3.47
47 D 2269	2BC-36	Black	4.95	4.46	4.21	3.47

Double-Plug Type. Above, but 2 alligator clips on one end. 2BB-AL-36: mike cable. 2BC-AL-36: coax cable. Shpg. wt., 4 oz.

47 D 2239	2BB-AL-36	Gray	5.95	5.36	5.06	4.17
47 D 2274	2BC-AL-36	Black	5.95	5.36	5.06	4.17

PATCH CORD WITH BNC ON EACH END

Type BNC-C-36. For video and RF use. Has UG88E/U male BNC connector at each end of 36" RG58-C/U shielded coax cable. Cable has polyethylene insulation, vinyl jacket. Single-contact type low-voltage BNC connector. Shpg. wt., 6 oz.

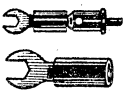
47 D 2517. 1-9.....Each 5.95 10-24.....Each 5.36
25-49.....Each 5.06 50-99.....Each 4.17

SAFETY-TYPE SOLDERLESS BANANA PLUG

Collar eliminates shock hazard, acts as strain relief. Internal set screw holds wire. Vertical stacking. Nickel-plated beryllium copper spring. Upper banana jack; .166" dia. Plug for .166" dia. jacks. Specify Color: Black, Red, Orange, Yellow, Green, Blue, Gray, or White. 2 oz.

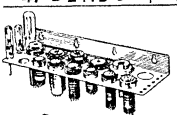
Stock No.	Mfr's Type	EACH 1-24	25-49	50-99	100-249
47 D 2385 C	1825	.50	.45	.43	.35

MODEL 1614 INSULATED SPADE LUG ADAPTER



Nickel-plated brass adapter with thermoplastic insulation molded to banana jack and spade lug body. Operating temp., —25° C. to +85° C. 15 amps cont., 30 amps int. 5000 VDC. Specify Red or Black. Shpg. wt., 2 oz.

47 D 2413 C	1614	.35	.32	.30	.25



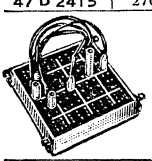
SOCKET-ADAPTER AND TOOL HOLDER

Model 2898. Holds seven ⅞" and six 1 9/32" socket adapters plus 12 service tools. Steel, baked green enamel. 3½x11".
47 D 2228. Shpg. wt., 14 oz.....Ea. 2.50

TEST-LEAD HOLDERS

File your test leads within easy reach. Cold-rolled steel, baked enamel finish. Mount easily. For cable sizes indicated below. 11x3½" wide. Shpg. wt., 14 oz.

Stock No.	Mfr's Type	Cable Dia.	Color	EACH 1-24	25-49	50-99
47 D 2414	1508	.210"	Orange	2.95	2.65	2.51
47 D 2415	2708	.450"	Blue	2.95	2.65	2.51



VECTOR PATCH BOARDS

Used for test panels, automation equipment, paging, etc. Independent gold-flashed wrap-around contacts spaced on .265" centers; rated at 5 amps and 1000 VAC. Less than .002 ohm contact resistance. Satin black phenolic except *ivory epoxy paper. Brackets for flush or recessed mounting. 8 oz.

Stock No.	Mfr's Type	Contacts and Size	EACH 1-49	50-199
47 D 4561	PB110-2	10/.60x2.98"	3.25	2.93
47 D 4562	PB210-2	20/.86x2.98"	4.25	3.83
47 D 6025	PB510-2	50/1.66x2.98"	6.45	5.81
47 D 6027	*PB1010	100/3.25x3.25"	10.75	9.68
47 D 6028	PB1010-2	100/2.98x2.98"	10.85	9.77
47 D 4563	PB1020-2	200/2.98x5.63"	21.60	19.44
47 D 6030	PB1520-2	300/4.31x5.63"	32.35	29.12

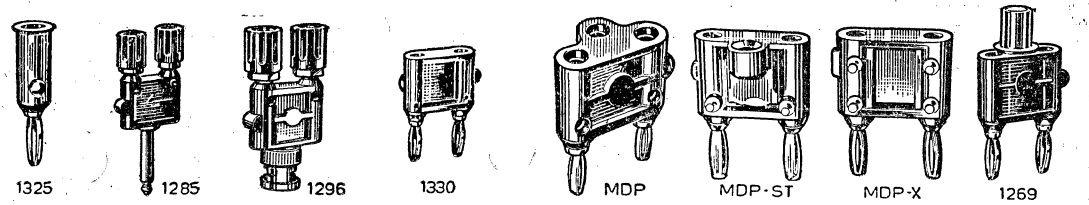
Patchcord. For above. .090" diameter nickel-plated prongs. Colors by length: 6", black; 9", yellow; 15", blue. Shpg. wt., 8 oz.

Length	Single Conductor Each End: Stock No.	Mfr's Type	Per Bundle of 25	Piggy Back Each End: Stock No.	Mfr's Type	EACH
6"	47 D 6029	K2.06	3.04	47 D 6043	K9.06	.93
9"	47 D 6031	K2.09	3.08	47 D 6044	K9.09	.93
15"	47 D 6032	K2.15	3.53	47 D 6045	K9.15	.93

You Can Always Count on Allied for Fast, Dependable Service

Banana Plugs, Jack Panels and Patch Cords

POMONA



MODEL 1325 SINGLE BANANA PLUGS

Solderless stack-up type with one-piece nickel-plated beryllium copper. Spring tip. Internal set screws eliminate soldering. Plugs fit standard .166" banana jacks. Rated 15 amps, continuous. 5000 WVDC. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Color	EACH 1-24	25-49	50-99	100-249
47 D 2244	1325	Black	.50	.45	.43	.35
47 D 2247	1325	Red	.50	.45	.43	.35
47 D 2249	1325	Orange	.50	.45	.43	.35
47 D 2250	1325	Yellow	.50	.45	.43	.35
47 D 2251	1325	Green	.50	.45	.43	.35
47 D 2253	1325	Blue	.50	.45	.43	.35
47 D 2260	1325	White	.50	.45	.43	.35

Model 1285 Phone Plug Adapter. Adapts phone jack to ¾"-spaced binding posts. Thermoplastic body. Shpg. wt., 3 oz.

47 D 2267	1285	Black	4.85	4.37	4.13	3.40

Model 1296 BNC Binding-Post Adapter. Adapts BNC receptacle to ¾"-speed binding posts. Molded thermoplastic body. Wt., 3 oz.

47 D 2268	1296	Black	4.85	4.37	4.13	3.40

Model 1330 Double Banana Plug. Recess for mtg. small components. Set screws. ¾" spacing. Stacking jacks at top. Wt., 5 oz.

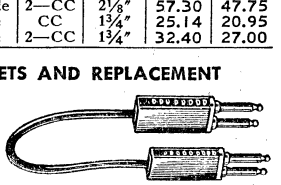
47 D 2236	1330	Black	.75	.68	.64	.53
47 D 2237	1330	Red	.75	.68	.64	.53

ADC BROADCAST TYPE JACK PANELS

Panels of solid phenolic, reinforced with steel. Jacks use any standard plug with 5/8" spacing. All panels fit standard 19" relay racks, all are 3 9/16" deep. Types PJ-340 and PJ-390 have double designation strips for identifying jack functions, brackets for flush rack mounting, and jacks on 5/8" centers. Types PJ-341, PJ-391, PJ-343, and PJ-393 have single designation strips and horizontally and vertically paired jacks on 5/8" centers. In table below CC is closed circuit, 2-CC is 2 closed circuits. Shpg. wt.; Double Row: 5¼ lbs.; Single Row: 3½ lbs.

Stock No.	Mfr's Type	No. Jacks	Rows	Jack Type	Panel Height	EACH 1-9	10-24
47 D 1455 X	PJ-340	52	Double	CC	13¾"	49.50	41.25
47 D 1656 X	PJ-390	52	Double	2—CC	13¾"	64.80	54.00
47 D 1450 X	PJ-341	48	Double	CC	21⅜"	42.75	35.63
47 D 1658 X	PJ-391	48	Double	2—CC	21⅜"	57.30	47.75
47 D 1451 X	PJ-343	24	Single	CC	13¾"	25.14	20.95
47 D 1659 X	PJ-393	24	Single	2—CC	13¾"	32.40	27.00

ADC PATCH CORD SETS AND REPLACEMENT



Shielded patch cords with plugs at both ends. Types with PJ-1 plug are double plug with common sleeve connection. Types with PJ051R plug are single 3-conductor plug. Cords are of flexible tinsel wire conductors. Polarized for correct insertion. Double plugs on 5/8" centers. Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Plug Type	Description	Ft.	EACH 1-24	25-49
47 D 1661	PJ12	PJ-1	Double plug	2	6.75	5.63
47 D 1662	PJ13	PJ-1	Double plug	3	6.90	5.75
47 D 1664	PJ15	PJ-1	Double plug	5	7.28	6.07
47 D 1660	PJ82	PJ051R	Single plug, 3-cond.	2	5.82	4.85
47 D 1663	PJ84	PJ051R	Single plug, 3-cond.	4	6.48	5.40
47 D 1665	PJ86	PJ051R	Single plug, 3-cond.	6	7.26	6.05

Replacement Patch Cords. Same fine quality cords as used on the double-plug patch cord sets listed above. Tinsel wire conductors insulated with heavy protective braid. Av. shpg. wt., 4 oz.

Stock No.	Type	Description	1-24, EA.	25-49, EA.
47 D 1667	PJ22	2-ft. cord only	2.22	1.85
47 D 1668	PJ23	3-ft. cord only	2.37	1.97
47 D 1669	PJ24	4-ft. cord only	2.76	2.30

MDP MOLDED DOUBLE "STACK UP" PLUGS

Double plugs to permit multiple stacking. Fit standard banana jacks. ¾" spacing. Made of tough thermo-plastic molded directly on the metal body of plug. Set screws secure cable leads. Ground connections marked. One-piece nickel-plated beryllium copper springs. Current rating: 15 amps continuous, 30 amps initial. 5000 WVDC. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Color	EACH 1-24	25-49	50-99	100-249
47 D 2214	MDP	Black	.75	.68	.64	.53
47 D 2218	MDP	Red	.75	.68	.64	.53
47 D 2220	MDP	Orange	.75	.68	.64	.53
47 D 2221	MDP	Yellow	.75	.68	.64	.53
47 D 2222	MDP	Green	.75	.68	.64	.53
47 D 2225	MDP	Blue	.75	.68	.64	.53
47 D 2231	MDP	Gray	.75	.68	.64	.53
47 D 2232	MDP	White	.75	.68	.64	.53

Type MDP-ST. Has solder turret terminals.

47 D 2235	MDP-ST	Black	.85	.77	.72	.60

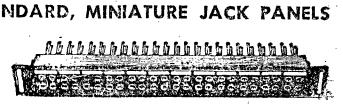
Type MDP-X. Four-terminal isolation plug.

47 D 2241	MDP-X	Red	3.25	2.93	2.76	2.28

Types 1269 and 1270. BNC receptacle and plug adapters, permit BNC connectors to be used with eqpt. having banana jacks. 1269 adapts jack to plug, 1270 adapts jack to receptacle. Wt., 4 oz.

47 D 2242	1269	Black	2.85	2.57	2.42	2.00
47 D 2243	1270	Black	3.85	3.47	3.27	2.70

SWITCHCRAFT STANDARD, MINIATURE JACK PANELS



Standard Jacks. Excellent for switching and distribution of audio signals in broadcasting stations, theaters, PA installations, etc. Double-row steel-reinforced black phenolic panels. Mounting brackets slotted to fit all standard 19" relay racks. Plastic covered designation strips. *With military-type MT-332A jacks. †Telephone-type T-332A jacks. §Less jacks; wt., 1¾ lbs. Av. shpg. wt., 5½ lbs. **Miniature Jacks.** Ideal for military, television and broadcasting equipment, telephone apparatus and switchboards. Double-row aluminum panels have plastic covered designation strips. ‡With TT-34B jacks. #With TT-89 "TT twin-jax." Standard, 5½ lbs.; miniature, 3½ lbs.

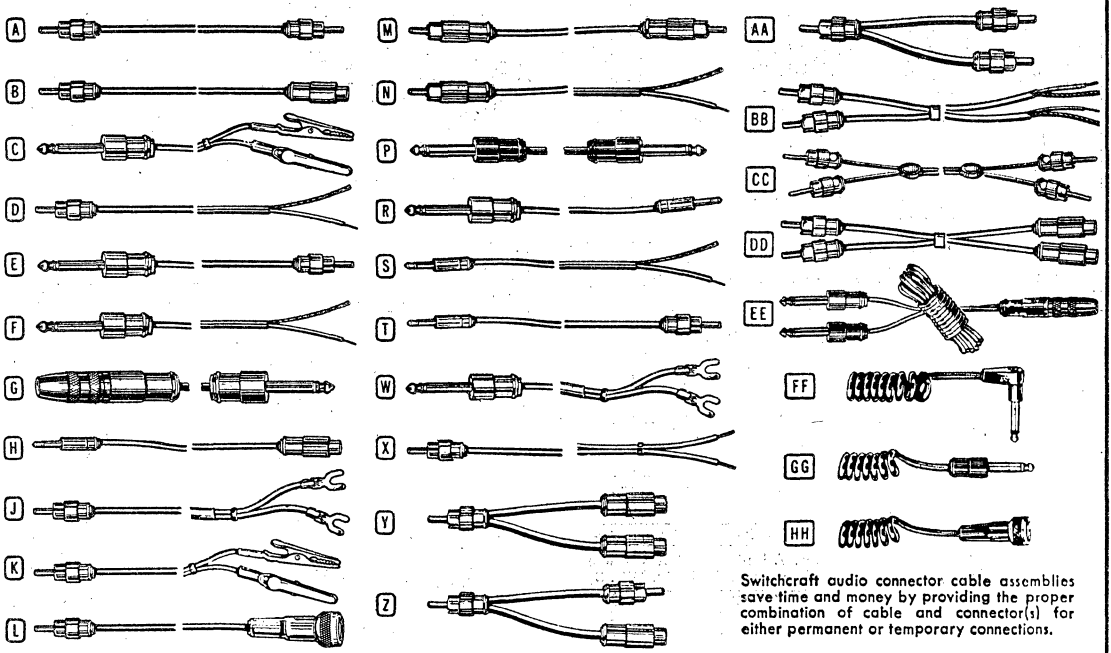
Stock No.	Mfr's Type	Jacks	Size HxWxD	EACH 1-24	25-49	50-99	100-249
47 D 1333 X	2400	48§	2⅛x19x1¾"	9.45	8.66	7.88	6.30
47 D 1454 X	2432A	24 pr.†	2⅛x19x1¾"	44.10	40.43	36.75	29.40
47 D 1457 X	2532A	24 pr.*	2⅛x19x1¾"	52.35	47.99	43.63	39.90
47 D 2934 X	1634B	48 pr.‡	1 7/64x19x1¾"	110.40	101.20	92.00	73.00
47 D 2935 X	1789	48 pr.#	1 7/64x19x1¾"	156.00	143.00	130.00	104.00

SWITCHCRAFT PATCH CORD SETS

For broadcasting, recording and industrial switchboard applications. Have bronze tinsel conductors covered with thermo-plastic insulation. Braided shield and black nylon braid are woven over insulated conductors. Series 17Q utilizes Switchcraft Type 89Q (2 conductors plus shield) cord with Switchcraft No. 413 "Twin-Plug" at each end. 413 "Twin-Plug" is 3-circuit type with self-aligning feature that allows for errors in jack location. Series 18Q utilizes 89Q cord with 482 plug at each end. 482 is 3-conductor type; features one-piece tip rod and one-piece sleeve and body.

Stock No.	Mfr's Type	Plug	Length	Wt., Oz.	EACH 1-24	25-49	50-99	100-499
47 D 1630	17QD17	413	2 feet	7½	7.59	6.96	6.33	5.06
47 D 1636	17QH17	413	4 feet	8½	8.04	7.37	6.70	5.36
47 D 1652	18QD18	482	2 feet	3	8.25	7.56	6.88	5.50
47 D 1654	18QH18	482	4 feet	4	8.91	8.17	7.43	5.94

SWITCHCRAFT INC. — Audio Connector Cables



Switchcraft audio connector cable assemblies save time and money by providing the proper combination of cable and connector(s) for either permanent or temporary connections.

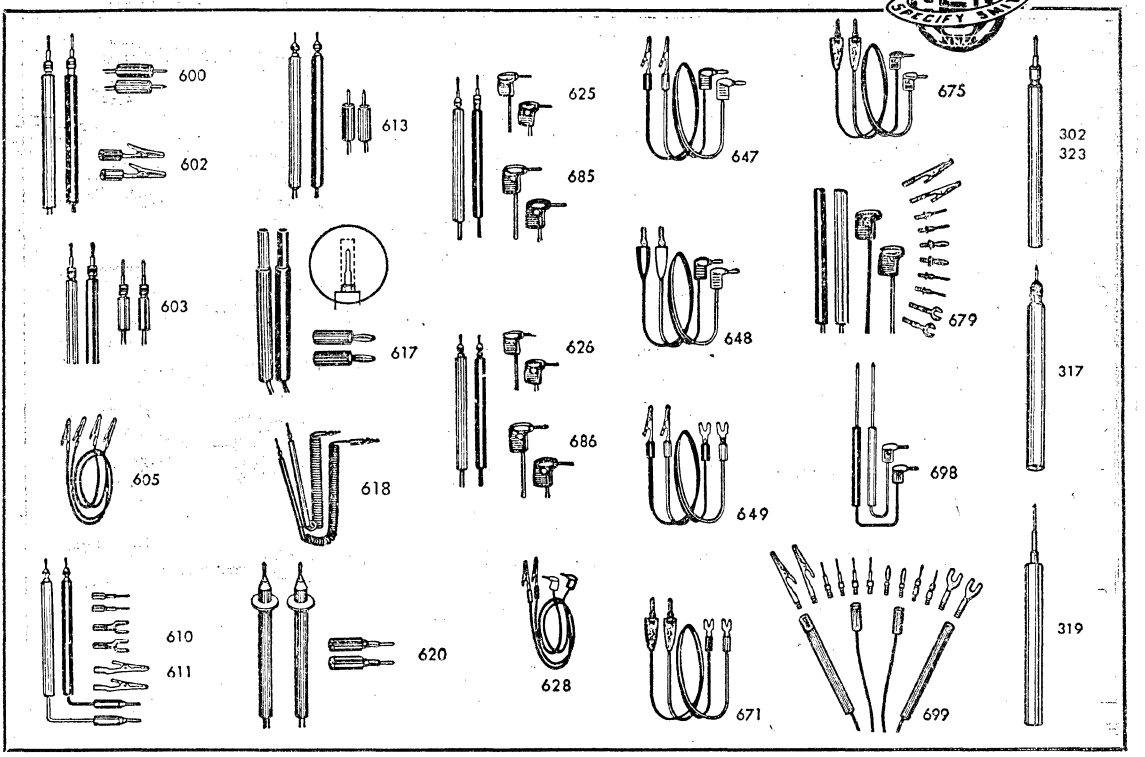
Highest quality shielded and unshielded cables. Connections soldered for dependability. Connectors of unbreakable Tenite are molded directly to cable—protects against moisture; minimizes noise; virtually eliminates short-circuits and provides positive electrical connection. Built-in cable clamps support cable, eliminate strain on plug terminals. *Unshielded cable. †Coiled cord jacket is high-quality neoprene. ‡Stripped and tinned, ready for easy soldering into circuit—no insulation removal required. §3-conductor cable and/or connectors. **Terminations are as illustrated. Av. shpg. wt., 8 oz.

A—pin plugs; B—pin plug/jack; C—phone plug/clips; D—pin plug/tinned; E—phone plug/pin plug; F—phone plug/tinned; G—phone plug/jack; H—tiny plug/pin jack; J—pin plug/lugs; K—pin plug/clips; L—mike con./pin plug; M—long handle pin plugs; N—long handle pin plug/tinned; P—phone plugs; R—tiny plug/phone plug; S—tiny plug/tinned; T—tiny plug/pin plug; W—phone plug/lugs; X—pin plug/tinned; Y—pin plug/jacks; Z—pin jack/plugs; AA—pin plugs; BB—pin plugs/tinned; CC—pin plugs; DD—pin plugs/jacks; EE—phone plugs/3 con. jack; FF—right angle phone plug; GG—phone plug; HH—mike connector.

Stock No.	Mfr's Type	Fig.	Lgth.	EACH 1-9	10-24	25-49	50-99	100-249
47 D 1509	25AC25	A	1.5′	.92	.69	.63	.58	.46
47 D 1510	25AF25	A	3′	1.04	.78	.72	.65	.52
47 D 1512	25AK25	A	6′	1.32	.99	.91	.83	.66
47 D 1538	25AN25	A	10′	1.84	1.38	1.27	1.15	.92
47 D 1541	25AF82	B	3′	1.20	.90	.83	.75	.60
47 D 1542	25AK82	B	6′	1.60	1.20	1.10	1.00	.80
47 D 1543	25AN82	B	10′	1.32	.99	.91	.83	.66
47 D 1544	05CN86*	C	10′	2.20	1.65	1.51	1.38	1.10
47 D 1547	05CT86*	C	20′	2.80	2.10	1.93	1.75	1.40
47 D 1548	25AF84‡	D	3′	.80	.60	.55	.50	.40
47 D 1549	25AK84‡	D	6′	1.00	.75	.69	.63	.50
47 D 1550	25AN84‡	D	10′	1.48	1.11	1.02	.93	.74
47 D 1551	05AK25	E	6′	1.80	1.35	1.24	1.13	.90
47 D 1552	05AN25	E	10′	2.52	1.89	1.73	1.58	1.26
47 D 1570	05AR25	E	15′	2.80	2.10	1.93	1.75	1.40
47 D 1600	05AK84‡	F	6′	1.60	1.20	1.10	1.00	.80
47 D 1601	05AN84‡	F	10′	2.08	1.56	1.43	1.30	1.04
47 D 1602	05AR84‡	F	15′	2.52	1.89	1.73	1.58	1.26
47 D 1605	05AK80	G	6′	2.40	1.80	1.65	1.50	1.20
47 D 1615	05AN80	G	10′	3.28	2.46	2.26	2.05	1.74
47 D 1620	05AR80	G	15′	3.76	2.82	2.59	2.35	1.88
47 D 1596	10BK81§	G	6′	4.56	3.42	3.14	2.85	2.28
47 D 1597	10BN81§	G	10′	5.68	4.26	3.91	3.55	2.48
47 D 1598	10BU81§	G	25′	8.36	6.27	5.75	5.23	4.18
47 D 1622	40DF82	H	3′	1.56	1.17	1.07	.98	.78
47 D 1623	40DK82	H	6′	2.32	1.74	1.60	1.45	1.16
47 D 1624	40DN82	H	10′	2.68	2.01	1.84	1.68	1.34
47 D 1626	25CN85*	J	10′	1.32	.99	.91	.83	.66
47 D 1726	25CT85*	J	20′	2.00	1.50	1.38	1.25	1.00
47 D 1627	25CN86*	K	10′	2.08	1.56	1.43	1.30	1.04
47 D 1628	25CT86*	K	20′	2.40	1.80	1.65	1.50	1.20
47 D 1629	25AK87	L	6′	2.28	1.71	1.57	1.43	1.14
47 D 1631	26AR26	M	15′	2.40	1.80	1.65	1.50	1.20
47 D 1632	26AR84‡	N	15′	2.16	1.62	1.48	1.35	1.08
47 D 1638	05AK05	P	6′	2.40	1.80	1.65	1.50	1.20
47 D 1633	05AN05	P	10′	3.28	2.46	2.26	2.05	1.64
47 D 1727	05AU05	P	25′	4.36	3.27	3.00	2.73	2.18

Stock No.	Mfr's Type	Fig.	Lgth.	EACH 1-9	10-24	25-49	50-99	100-249
47 D 1593	10BK10§	P	6′	4.56	3.42	3.14	2.85	2.28
47 D 1594	10BN10§	P	10′	5.68	4.26	3.91	3.55	2.84
47 D 1595	10BU10§	P	25′	8.36	6.27	5.75	5.23	4.18
47 D 1634	40DF05	R	3′	2.16	1.62	1.49	1.35	1.08
47 D 1637	40DK05	R	6′	2.52	1.89	1.73	1.58	1.26
47 D 1639	40DN05	R	10′	2.80	2.10	1.93	1.75	1.40
47 D 1645	40DF84‡	S	3′	1.60	1.20	1.10	1.00	.80
47 D 1646	40DK84‡	S	6′	1.80	1.35	1.24	1.13	.90
47 D 1647	40DN84‡	S	10′	2.32	1.74	1.60	1.45	1.16
47 D 1648	40DF25	T	3′	1.92	1.44	1.32	1.20	.96
47 D 1655	40DK25	T	6′	2.32	1.74	1.60	1.45	1.16
47 D 1675	40DN25	T	10′	2.64	1.98	1.82	1.65	1.32
47 D 1683	05CT85*	W	20′	2.16	1.62	1.49	1.35	1.08
47 D 1685	25CN84*	X	10′	1.24	.93	.85	.78	.62
47 D 1728	25CT84‡	X	20′	2.12	1.59	1.46	1.33	1.06
47 D 1686	33OF1	Y	4″	1.88	1.41	1.29	1.18	.94
47 D 1699	33OF2	Z	4″	1.88	1.41	1.29	1.18	.94
47 D 1722	33OF3	AA	4″	1.88	1.41	1.29	1.18	.94
47 D 1497	25FF84‡	BB	3′	2.68	2.01	1.84	1.68	1.34
47 D 1498	25FK84‡	BB	6′	3.04	2.28	2.09	1.90	1.52
47 D 1499	25FN84‡	BB	10′	3.52	2.64	2.42	2.20	1.76
47 D 1494	25FF25	CC	3′	3.04	2.28	2.09	1.90	1.52
47 D 1495	25FK25	CC	6′	3.52	2.64	2.42	2.20	1.76
47 D 1496	25FN25	CC	10′	4.24	3.18	2.92	2.65	2.12
47 D 1723	25FF82	DD	3′	2.76	2.07	1.90	1.73	1.38
47 D 1724	25FK82	DD	6′	3.20	2.40	2.20	2.00	1.60
47 D 1725	25FN82	DD	10′	3.84	2.88	2.64	2.40	1.92
47 D 1531	05FH81§	EE	4′	4.12	3.09	2.83	2.58	2.06
47 D 1505	15LH84†	FF	4′	2.40	1.80	1.65	1.50	1.20
47 D 1504	05LH84†	GG	4′	2.40	1.80	1.65	1.50	1.20
47 D 1506	87LH84†	HH	4′	2.48	1.86	1.71	1.55	1.24
47 D 1532	05LP05†	GG/GG**	12′	4.96	3.72	3.41	3.10	2.48
47 D 1533	05LP15†	GG/FF**	12′	4.96	3.72	3.41	3.10	2.48
47 D 1535	05LT05†	GG/GG**	20′	6.92	5.19	4.76	4.33	3.46
47 D 1536	05LT15†	GG/FF**	20′	6.92	5.19	4.76	4.33	3.46
47 D 1537	05LT87†	GG/HH**	20′	7.04	5.28	4.84	4.40	3.52

H. H. Smith Test Leads



No. 20 stranded, rubber-covered wire 50″ long (unless otherwise stated). 5000 V test. Handles, plugs: molded butyrate per MIL-L-P349A, Type 3, Class MS; fiber per MIL-F-1148A, Grade CH; molded thermosetting plastic per MIL-P-14CFG. Av., 5 oz.

Solderless Tip Test Leads. Prods are 4″ long with ⅜″ O.D. Have molded butyrate handle and nickel-plated brass tip. Per Pair.

Stock No.	Mfr's Type	Meter End	EACH 1-11	EACH 12-49
47 D 4359	600	phone tips	1.05	.95
47 D 4361	602	alligator clips	1.10	.99

Type 603 All Solderless Test Leads. 4″ prod has ⅜″ O.D., butyrate handle. Thermosetting plug. Nickel/brass tip. Per Pair.
47 D 4375. 1-11 . . Ea. 1.35 12-49. . Ea. 1.22

Alligator Clip Test Leads. Cadmium-plated steel clips. *Have vinyl plastic boots. Types 716, 717, 718 have midget clips. Per Pair.

Stock No.	Mfr's Type	Wire Length	EACH 1-11	EACH 12-49
47 D 4382	605	24″	.75	.68
47 D 4383	629*	12″	.92	.83
47 D 4384	657*	24″	.96	.86
47 D 4385	716*	12″	.92	.83
47 D 4386	717*	18″	.94	.85
47 D 4387	718*	24″	.96	.86

Test Lead Kits. 4″ molded tenite handles have ⅜″ O.D. Prods have banana plugs at one end, choice of solderless phone tip or needle tip at other. Each kit contains these fittings for snapping onto banana plugs: 2 phone tips, 2 alligator clips, 2 spade lugs.

Stock No.	Mfr's Type	Prods	EACH 1-11	EACH 12-49
47 D 4395	610	phone tip	1.90	1.71
47 D 4396	611	needle tip	1.90	1.71

Type 613 Phone Tips. Prods are 4″ long with ⅜″ O.D. Have molded butyrate handle, nickel-plated brass body and nickel-plated steel needle. Per Pair.
47 D 4362. 1-11 . . Ea. 1.05 12-49. . Ea. .95

Type 617 Banana Plugs. Plugs insert flush to insulated molded butyrate handle; 3x7/16″ diameter prods have retractable cover. There are no exposed metal parts. Nickel-plated brass tip. Per Pair.
47 D 4380. 1-11 . . Ea. 2.00 12-49. . Ea. 1.80

Type 618 Retractile Solderless Test Leads. 12″ stretch coil extends to 6′. Solderless, nickel-plated brass phone tips both ends. Molded butyrate handles. Molded thermosetting plugs. 4000 V; nom. O.D. .165″. Per Pair.
47 D 4398. 1-11 . . Ea. 3.00 12-49. . Ea. 2.70

Type 620 Insulated Phone Tips. 5″ long prod has ½″ O.D., fiber handle, nickel/brass tip and finger guard. Fiber plug. Per Pair.
47 D 4368. 1-11 . . Ea. 2.20 12-49. . Ea. 1.98

Meter Test Leads With Solderless Prods. 4″ prod has butyrate handle with ⅜″ O.D. Nickel-plated brass tip and body. Molded thermosetting plastic elbow. Banana meter tip has 4-leaved phosphor-bronze nickel-plated spring. Per Pair.

Stock No.	Mfr's Type	Meter End	EACH 1-11	EACH 12-49
47 D 4371	625	phone tip	1.50	1.43
47 D 4372	685	banana tip	1.70	1.53

Meter Test Leads With Needle Prods. Same as meter test leads above, but with nickel-plated steel needle prods. Per Pair.

47 D 4373	626	phone tip	1.50	1.35
47 D 4374	686	banana tip	1.70	1.53

Alligator Clip Test Leads. Cadmium-plated steel alligator clips have molded butyrate handles. Molded thermosetting plastic elbows* and meter plugs. Per Pair.

47 D 4389	628*	tip plugs	1.20	1.08
47 D 4390	647*	banana plugs	1.30	1.17
47 D 4391	649	spade lugs	1.20	1.08

Crocodile Clip Test Leads With Boots. Clips are cadmium/steel. *Butyrate handles. Vinyl boots. †Thermosetting elbows. Per Pair.

Stock No.	Mfr's Type	Meter End	EACH 1-11	EACH 12-49
47 D 4394	648†	banana plugs	1.30	1.17
47 D 4392	671*	spade lugs	1.20	1.08
47 D 4393	675†	tip plugs	1.20	1.08

Universal Test Lead Kits. Completely interchangeable—50 leads in one! All parts adapt into handles supplied. Leads, 54¾″. Type 699 std. kit comes with 12 testing tips and connectors; Type 679 miniature kit, with 10 miniature accessories.
47 D 4377. 679.1-11 Ea. 3.00 12-49 Ea. 2.70
47 D 4376. 699.1-11 Ea. 3.00 12-49 Ea. 2.70

Type 698 "Slim Jim" Test Leads. 4″ butyrate prod is ⅜″ O.D.; has 3½″ cadmium-plated steel tip, vinyl tubing. Thermosetting elbows have phone tips. Per Pair.
47 D 4378. 1-11 . . Ea. 1.35 12-49. . Ea. 1.22

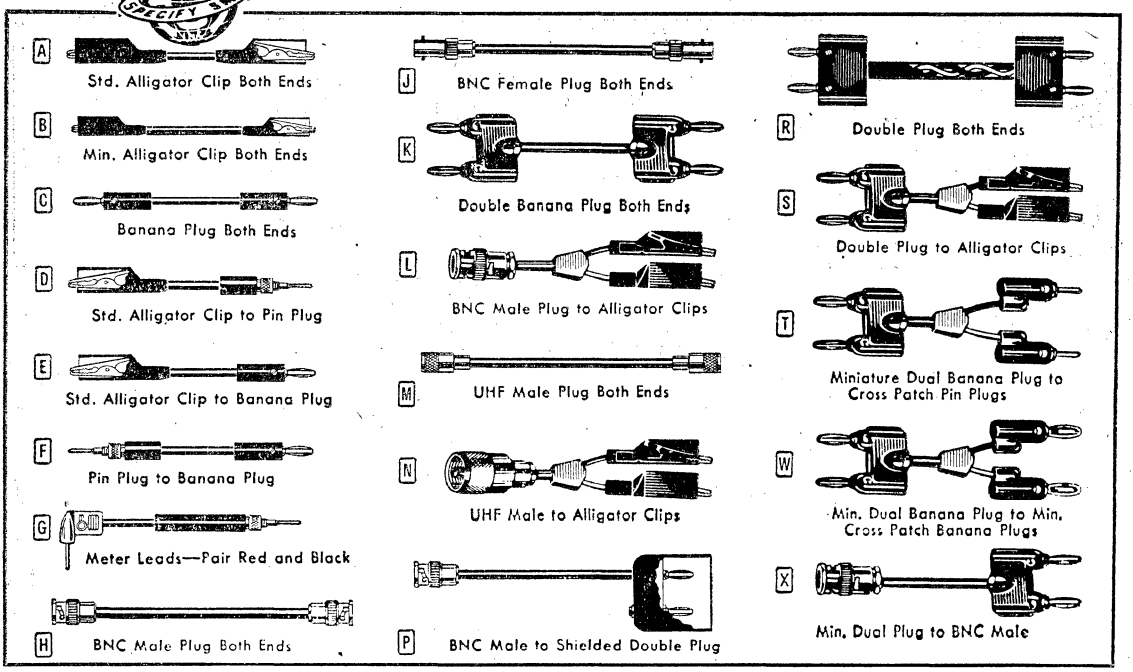
302 Solderless Prod. Threaded, 4″ plastic handle, ⅜″ dia. Nickel-plated phone tip.
47 D 2110. Red. 47 D 2111. Black. 6 oz.
1-24 . . . . . Each .30 25-49 . . . Each .29
50-99 . . . . . Each .27 100-249 . . . . . Each .26

323 Solderless Prod. Bone fiber handle, molded to nickel-plated brass tip. .245 inside dia.—for heavy-duty wire. 5 7/32″ long.
47 D 2258. Red. 47 D 2259. Black. 8 oz.
1-24 . . . . . Each .30 25-49 . . . Each .29
50-99 . . . . . Each .27 100-249 . . . . . Each .26

317 Phono Needle Prod. Brass, nickel-plated body with replaceable steel phono-type needle. Plastic handle. 4 13/16″ long. 4 oz.
47 D 2373. Red. 47 D 2374. Black.
1-24 . . . . . Each .30 25-49 . . . Each .29
50-99 . . . . . Each .27 100-249 . . . . . Each .26

319 Heavy-Duty Prod. Threaded. Brass, nickel-plated tip. Plastic handle. 5 3/16″ long.
47 D 2375. Red. 47 D 2376 Black. 8 oz.
1-24 . . . . . Each .30 25-49 . . . Each .29
50-99 . . . . . Each .27 100-249 . . . . . Each .26

H.H. Smith Jumpers and Patch Cords



Wide selection of single test leads. Unshielded leads use #18 AWG 20,000-V insulated wire. Handles tenite and/or molded bakelite. Cadmium-plated steel clips; nickel-plated brass tips; vinyl plastic boots. *Type 0625—meter leads—one red and one black. No. 20, 5000-V insulation. Shielded leads use RG58C/U coax cable, except †RG11A/U; ‡low-capacity cable; §twisted pair. Av. shpg. wt., 5 oz.

UNSHIELDED JUMPERS

Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 1851	1596-12-102	1	Red	A	.47	.45	.42	.38
47 D 1850	1596-12-103	1	Black	A	.47	.45	.42	.38
47 D 1856	1596-36-102	3	Red	A	.51	.48	.46	.41
47 D 1855	1596-36-103	3	Black	A	.51	.48	.46	.41
47 D 1861	1596-60-102	5	Red	A	.55	.52	.50	.44
47 D 1860	1596-60-103	5	Black	A	.55	.52	.50	.44
47 D 1863	1597-12-102	1	Red	B	.47	.45	.42	.38
47 D 1862	1597-12-103	1	Black	B	.47	.45	.42	.38
47 D 1865	1597-36-102	3	Red	B	.51	.48	.46	.41
47 D 1864	1597-36-103	3	Black	B	.51	.48	.46	.41
47 D 1867	1597-60-102	5	Red	B	.55	.52	.50	.44
47 D 1866	1597-60-103	5	Black	B	.55	.52	.50	.44
47 D 1901	1863-12-102	1	Red	C	.72	.68	.65	.58
47 D 1874	1863-12-103	1	Black	C	.72	.68	.65	.58

Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 1904	1863-36-102	3	Red	C	.76	.72	.68	.61
47 D 1903	1863-36-103	3	Black	C	.76	.72	.68	.61
47 D 1909	1863-60-102	5	Red	C	.80	.76	.72	.64
47 D 1908	1863-60-103	5	Black	C	.80	.76	.72	.64
47 D 1923	1865-36-102	3	Red	D	.56	.53	.50	.45
47 D 1922	1865-36-103	3	Black	D	.56	.53	.50	.45
47 D 1925	1865-60-102	5	Red	D	.60	.57	.54	.48
47 D 1930	1866-36-102	3	Red	E	.61	.58	.55	.49
47 D 1929	1866-36-103	3	Black	E	.61	.58	.55	.49
47 D 1935	1866-60-102	5	Red	E	.65	.62	.59	.52
47 D 1931	1866-60-103	5	Black	E	.65	.62	.59	.52
47 D 1961	1868-36-103	3	Black	F	.71	.67	.64	.57
47 D 4371	0625*	4	.....	G	1.50	1.43	1.35	1.20

COAXIAL-CABLE SHIELDED PATCH CORDS

Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 1969	1589-12	1	Black	H	5.35	5.08	4.82	4.28
47 D 1973	1589-36	3	Black	H	5.55	5.27	5.00	4.44
47 D 1974	1589-60	5	Black	H	5.75	5.46	5.18	4.60
47 D 1979	1869-36	3	Black	J	6.30	5.99	5.67	5.04
47 D 1980	1869-60	5	Black	J	6.50	6.18	5.85	5.20
47 D 1981	1580-12	1	Black	K	4.35	4.13	3.92	3.48
47 D 1982	1580-36	3	Black	K	4.55	4.32	4.10	3.64
47 D 1985	1580-60	5	Black	K	4.75	4.51	4.28	3.80
47 D 1986	1537-12‡	1	Gray	L	5.35	5.08	4.82	4.28
47 D 1987	1537-36‡	3	Gray	L	5.55	5.27	5.00	4.44

Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 1990	1537-60‡	5	Gray	L	5.75	5.46	5.18	4.60
47 D 1781	1872-36†	3	Black	N	5.55	5.27	5.00	4.44
47 D 1782	1872-60†	5	Black	N	5.75	5.46	5.18	4.60
47 D 1784	1873-36‡	3	Black	P	6.30	5.99	5.67	5.04
47 D 1786	1873-60‡	5	Black	P	6.50	6.18	5.85	5.20
47 D 1993	1871-36†	3	Black	M	5.55	5.27	5.00	4.44
47 D 1998	1871-60†	5	Black	M	5.75	5.46	5.18	4.60
47 D 1790	1530-36§	3	Gray	R	4.55	4.32	4.10	3.64
47 D 1793	1531-36§	3	Gray	S	5.55	5.27	5.00	4.44
47 D 1794	1531-60	5	Gray	S	5.75	5.46	5.18	4.60

MINIATURE SHIELDED PATCH CORDS

Butyrate handles per Fed. Spec. L-P349A, Type 3, class MS. RG-174/U coax. cable. Miniature dual banana plugs mate with miniature dual binding posts or banana jacks having ½" ctrs.

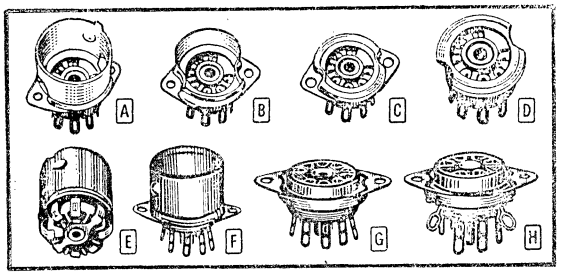
Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 3153	1535-12*	1	Red/Blk‡	T	5.35	5.08	4.82	4.28
47 D 3154	1535-36*	3	Red/Blk‡	T	5.55	5.27	5.00	4.44
47 D 3155	1535-60*	5	Red/Blk‡	T	5.75	5.46	5.18	4.60
47 D 3156	1599-12†	1	Gray	K	4.35	4.13	3.92	3.48
47 D 3157	1599-36†	3	Gray	K	4.55	4.32	4.10	3.64
47 D 3158	1599-60†	5	Gray	K	4.75	4.51	4.28	3.80
47 D 3159	1738-12	1	Blk/Red‡	W	5.35	5.08	4.82	4.28
47 D 3160	1738-36	3	Blk/Red‡	W	5.55	5.27	5.00	4.44

*Cross-patch pin plugs have .080" tip and jack in rear, banana jack in rear, banana jack in side. ‡Color coded red/black. §Standard dual banana plug one end, miniature other end. †Min. both ends.

Stock No.	Mfr's Type	Ft.	Color	Fig.	EACH 1-24	25-49	50-99	100-249
47 D 3161	1738-60	5	Blk/Red‡	W	5.75	5.46	5.18	4.60
47 D 3162	1729-12§	1	Black	K	4.35	4.13	3.92	3.48
47 D 3163	1729-36§	3	Black	K	4.55	4.32	4.10	3.64
47 D 3164	1729-60§	5	Black	K	4.75	4.51	4.28	3.80
47 D 3165	1748-12	1	Gray	X	5.35	5.08	4.82	4.28
47 D 3166	1748-36	3	Gray	X	5.55	5.27	5.00	4.44
47 D 3167	1748-60	5	Gray	X	5.75	5.46	5.18	4.60

Elco Tube, Transistor and IC Sockets

"E-Z MATE", PC, TUBE SOCKETS



MIL "E-Z MATE" SOCKETS

MIL-S-12883A. Special tube sockets have positioning key for unerring accuracy. No time wasted, no pin damage. Great for designers. All have center shield. Hardware, brass, tin lead plated. Contact material, phosphor bronze, silver plated, tin dipped. All have .128" mounting holes. Ceramic or mica types; ceramic types do not have E-Z Mate feature. Av. wt., 2 oz. **Contact Allied for prices on quantities of 5000 or more.**

A 9-PIN BASE SHIELD TYPE

Stock No.	Military Number	Mfr's Type	Insulating Material	EACH 1-499	500-1499	1500-4999
47 D 5556	TS103C01	05-0915-04	Ceramic	.39	.30	.26
47 D 5557	TS103P01	05-0915-02	Mica	.27	.21	.18

B 7-PIN BASE SHIELD TYPE

47 D 5546	TS102C01	05-0715-03	Ceramic	.36	.28	.24
47 D 5547	TS102P01	05-0715-01	Mica	.24	.19	.16

C 7-PIN SADDLE—TOP MOUNTING

Stock No.	Military Number	Mfr's Type	Insulating Material	EACH 1-499	500-1499	1500-4999
47 D 5548	TS102C02	05-0711-04	Ceramic	.33	.26	.22
47 D 5549	TS102P02	05-0711-03	Mica	.21	.17	.14

D 9-PIN SADDLE—BOTTOM MOUNT WITH GROUND LUGS

47 D 5561	TS103P03	05-0903-07	Mica	.23	.18	.16

E-Z MATE 7 AND 9-PIN COMMERCIAL SOCKETS

All sockets, (except figure E), have E-Z Mate positioning-key. Virtually eliminates all pin damage. Permits the proper positioning of tubes, with unerring accuracy. *Has silver-plated pins; ‡phosphor bronze; §beryllium copper. All others are made with brass pins. Rated at 1 amp. and 500 volts rms. Maximum contact resistance is a low .003 ohm. Insulation resistance is rated at 1000 megohms minimum. Av. shpg. wt., 2 oz.

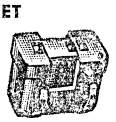
Stock No.	Mfr's Type 05-	Fig.	Description and Mounting	EACH 1-499	500-1499	1500-4999
47 D 5506	0765-01*‡	E	7-pin for 1/16" PC	.89	.70	.59
47 D 5507	0965-01*§	E	9-pin for 1/16" PC	1.02	.80	.68
47 D 5519	0705-02	F	7-pin shielded top	.19	.15	.13
47 D 5501	0901-03‡	G	9-pin RMA saddle, top	.12	.10	.09
47 D 5515	0703-04	H	7-pin RMA saddle, bot.	.11	.09	.08

UHF PC STANDOFF TUBE SOCKETS

Printed circuit standoff sockets for 7 and 9-pin miniature tubes for UHF applications—low-loss mica filled insulator. Contacts are made of silver-plated, tin-dipped phosphor bronze. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Pins	PER PKG. OF 5 1-99	100-299	300-999	1000-Up
47 D 5521	05-0730-01	7	1.45	1.13	.97	.81
47 D 5526	05-0930-01	9	1.44	1.12	.96	.80

PRINTED-CIRCUIT TRANSISTOR SOCKET

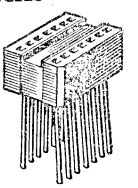


Especially designed for printed circuit boards—insulator material of low-loss mica filled phenolic. All contacts are of silver-plated beryllium copper and gold-flashed. 3-pin sockets are for point contact and junction-type transistors. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Pins	PER PKG. OF 5 1-99	100-299	300-999	1000-Up
47 D 5562	05-0786	3	.82	.64	.55	.46

IC AND TRANSISTOR SOCKETS

DUAL IN-LINE PACKAGE RECEPTACLES



For 14-lead dual in-line packages having .100x .300" grid spacing. Accepts round or flat leads, any length. Low-profile, diallyl phthalate, glass-filled insulator per MIL-M-14F, type SDGF. Gold-over-nickel plated, spring-temper phosphor bronze contacts. .025" tails (.642" long) for wire-wrap terminations (Type 297). Closed entry contact holes. Mount on .500x.800" centers. Use with either 1/16" or 3/32" PC board. Suffix 001, black; suffix 002, white. Av. shpg. wt., per pkg., 6 oz.

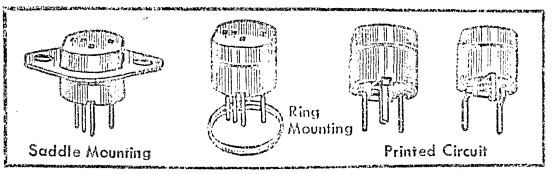
Stock No.	Mfr's Type	PER PKG. OF 5 1-19	20-99	100-199	200-999
47 D 5701	00-8358-014-297-001	3.45	3.10	2.75	2.35
47 D 5482	00-8358-014-297-002	3.45	3.10	2.75	2.35

SERIES 8359 WIRE-WRAP DUAL IN-LINE IC RECEPTACLES

For all standard dual in-line IC's with 14 or 16 pins. Only .260" high. Replaceable contacts. Packaging density: inline mounting on .800" centers (14-pin) or .900" centers (16-pin); side-by-side mounting on .500" centers. Rated 2 A. Diallyl phthalate. Black, with white or black lid. Per pkg., 6 oz.

Stock No.	Mfr's Type 00-8359-	Pins	Lid Color	PER PKG. OF 5 1-19	20-199	200-1999	2000-4999
47 D 5435	014-297-001	14	White	3.90	3.55	3.05	2.65
47 D 5436	014-297-002	14	Black	3.90	3.55	3.05	2.65
47 D 5437	016-297-001	16	White	4.30	3.90	3.40	2.90
47 D 5438	016-297-002	16	Black	4.30	3.90	3.40	2.90

TYPE 3300 SUBMINIATURE TRANSISTOR SOCKETS FOR .016" DIAMETER PINS



Screw-on saddle mtg., printed circuit or mtg. ring types. For 3-pin transistors with inline pins, or 3 and 4-pin transistors with pins on .200" diam. circle of any configuration. Conform to MIL-P-14. Beryllium copper contacts. *Requires ring below. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Description	PER PKG. OF 5 1-99	100-299	300-999	1000-Up
47 D 1042	05-3301	J	Saddle Mtg.	1.22	.95	.82	.69
47 D 1043	05-3303	J	Printed-Circuit	1.00	.78	.67	.56
47 D 1044	05-3304	J	*Ring Mounting	.99	.77	.67	.55
47 D 1045	05-3305	J	Printed-Circuit	1.00	.78	.67	.56
47 D 1046	05-3307	K	*Ring Mounting	1.19	.93	.80	.67
47 D 1047	05-3308	K	Printed-Circuit	1.17	.92	.79	.65
47 D 1048	05-3313	L	*Ring Mounting	1.39	1.08	.94	.78
47 D 1049	65-0004-7202	....	Ring Only	.19	.15	.14	.12

RETAINER-RING TRANSISTOR SOCKETS

High quality. Designed to hold transistors firmly in place on chassis or mounting board. Assure positive lead contacts. 3-pin types are for point contact or junction type transistors; 4-pin types are for linotetrar type transistors. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Pins	PER PKG. OF 5 1-99	100-299	300-999	1000-Up
47 D 1071	05-0799	3	.77	.61	.52	.44
47 D 1089	05-0803	4	.96	.69	.65	.54

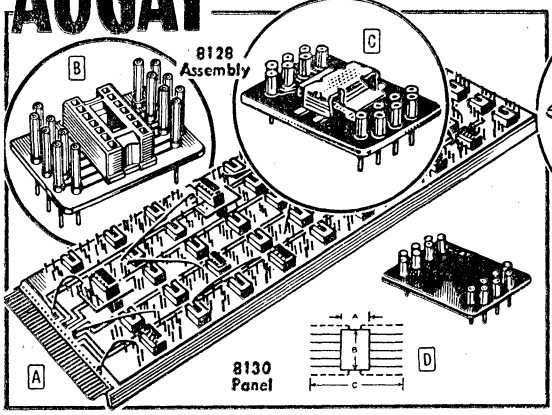
Retainer Ring Only. Per Pkg. of 5. Wt., 3 oz.
47 D 1096. 1-99.....Per Pkg. .10
100-299.....Per Pkg. .08 300-499.....Per Pkg. .07

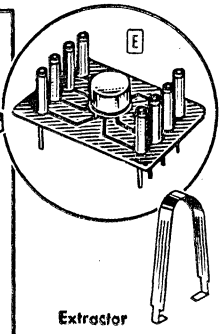
JAN CRYSTAL SOCKETS

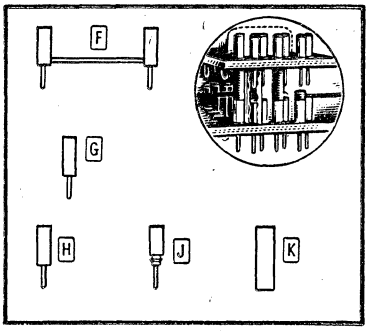
Crystals sockets made to JAN standards. Type 05-0210-01 meets MIL No. TS0205C01 spec. .050" pin dia. 2 oz.

Stock No.	Mfr's Type	Terminal Plating	PER PKG. OF 5 1-99	100-299	300-999	1000-Up
47 D 5542	05-0210-01	Cadmium	.82	.65	.55	.46
47 D 5543	05-0210-04	Silver	.91	.71	.61	.51

AUGAT Integrated Circuit Sockets, Breadboards







A C D BREADBOARD SOCKETS FOR FLAT-PACK CIRCUITS

8076. Single units for individual use or stacking on 8089 or 8100. Type 8076-10G1 for mounting other components or as base socket. 1.020x1.420". *Flat-pack size; length including leads is. 500" min., .750" max. 8089. For 50 flat-pack integrated circuits for life-tests and breadboarding. Snap-action covers for flat-packs (with up to 14 leads, spaced .050"). Vertical male/female connectors. Jumpers available for interconnections. Common power and ground busbars. Accept 36-pin connector. 9/16x17 3/8x61/8". Shpg. wt., 1¼ lbs.

Stock No.	Mfr's Type	Fig.	Description	*Inches A	*Inches B	EACH 1-99	EACH 100-499	EACH 500-999
47 D 6134	8076-1G3	C	Breadboard Ass'y	1/8-¼	¼	4.10	3.38	2.77
47 D 6135	8076-1G7	C	Breadboard Ass'y	1/8-¼	3/8	4.10	3.38	2.77
47 D 6136	8076-10G1	D	Mounting Socket	...	..	2.24	1.96	1.71
47 D 6281	8089-36-G7-R	A	50-Pattern Panel	1/8-¼	¼	1-4.Ea. 219.50		

47 D 6122. Trial Kit. 2—8076-1G3; 1—8076-10G1; 14—8076-4G2; 7—8076-12G6-3; 7—8076-17G1-3; 4—8076-26P1; 1—8076-18P1. Shpg. wt., 6 oz. ..... Each 17.40

A E BREADBOARD SOCKETS FOR TO-5 CASE CIRCUITS

8095. Single unit, stackable on 8100 (or 8089). 1.020x1.420". *TO-5 case specs. 8100. Same as 8089 except for pattern and case. Vertical connectors. Interconnecting jumpers available; interconnectable on either side. Accept 36-pin PC connector. 9/16x17 3/8x61/8". 3 oz.

Stock No.	Mfr's Type	Fig.	*Contacts	*Pin Circle Dia.	EACH 1-99	EACH 100-499	EACH 500-999
47 D 6137	8095-1G2	E	6	.250"	3.60	2.97	2.43
47 D 6138	8095-1G3	E	8	.250"	4.46	3.68	3.00
47 D 6139	8095-1G4	E	10	.300"	5.36	4.42	3.62
47 D 6140	8095-1G5	E	12	.360"	6.24	5.15	4.21
47 D 6282	8100-36G3R	A	8	.250"	1-4.....Each 219.50		
47 D 6283	8100-36G7R	A	10	.300"	1-4.....Each 235.50		

A B BREADBOARD PANELS AND ASSEMBLIES

8128 DUAL IN-LINE BREADBOARD ASSEMBLIES. Single pattern assemblies for use as individual unit or with Series 8130 Breadboard assemblies (also Series 8089 and 8100) to permit stacking. Takes dual in-line integrated circuits with 14 leads in two rows of seven (8128-DG1 takes 16-lead). Accepts all lead diameters. Contact spacing, .300" between rows, .100" between leads. Size, 1½x1x½". Wt., 2 oz. Usable with all panels and accessories on this page.

8130 DUAL IN-LINE BREADBOARD AND TEST PANELS. Take 25 or 50 dual in-line integrated circuits having 14 leads of any diameter, set in two rows of seven; except 8130-36DG1R-25, for 16-lead IC's. Contact spacing, .300" between rows, .100" between leads. Temperature range, —65° to +150° C. Size, 18x7x2". Packages can be inserted easily without soldering/welding leads. Bus bars provide common power and ground take-offs at each station. Takes standard PC 3 36-pin connector. Type 8128 assembly is used for stacking. Wt., 1¼ lbs. Takes all breadboard accessories on this page.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-99	EACH 100-499	EACH 500-999
47 D 6175	8128-CG1	B	14-Lead Ass'y	4.56	4.21	3.84
47 D 6187	8128-DG1	B	16-Lead Ass'y	5.56	4.51	4.09
47 D 6185	8130-36CG1R	A	50-Pattern Panel	1-4..Each 275.50		
47 D 6284	8130-36CG1R-25	A	25-Pattern Panel	1-4..Each 143.00		
47 D 6186	8130-36DG1R-25	A	25-Pattern Panel	1-4..Each 150.00		

DUAL IN-LINE EXTRACTOR TOOL T114-1.
47 D 6171. Wt., 3 oz. ..... .50

F JUMPERS FOR 8089, 8076, 8100, 8095

For horizontal or vertical-horizontal interconnections—can be stacked for "Y" connections and bus combinations. 1 oz.

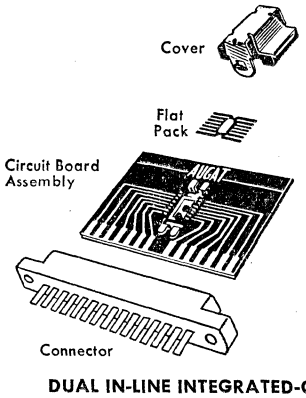
Stock No.	Mfr's Type	Lgth.	Color	PKG. OF 10 1-9	PKG. OF 10 10-49
47 D 6100	8076-12G 1-4	4"	Black	4.25	3.70
47 D 6101	8076-12G 2-4	4"	Red	4.25	3.70
47 D 6102	8076-12G 3-4	4"	Blue	4.25	3.70
47 D 6103	8076-12G 4-4	4"	Green	4.25	3.70
47 D 6104	8076-12G 5-4	4"	Orange	4.25	3.70
47 D 6105	8076-12G 6-4	4"	Yellow	4.25	3.70
47 D 6106	8076-12G 7-4	4"	Brown	4.25	3.70
47 D 6107	8076-12G 1-6	6"	Black	4.40	3.85
47 D 6108	8076-12G 2-6	6"	Red	4.40	3.85
47 D 6109	8076-12G 3-6	6"	Blue	4.40	3.85
47 D 6110	8076-12G 4-6	6"	Green	4.40	3.85
47 D 6112	8076-12G 5-6	6"	Orange	4.40	3.85
47 D 6113	8076-12G 6-6	6"	Yellow	4.40	3.85
47 D 6114	8076-12G 7-6	6"	Brown	4.40	3.85

47 D 6133. 8076-12AS1 Assortment of 140 PC Jumpers. Includes ten 2" wire, five 4" wire, five 6" wire in each color. 6 oz. 60.00

CONTACT HARDWARE FOR 8089, 8076, 8100, 8095 (2 oz.)

Stock No.	Mfr's Type	Fig.	Description	PKG. OF 50
47 D 6123	8076-4G3	G	Jumper terminal	10.05
47 D 6124	8076-4G2	K	Contact adapter .257" high	9.20
47 D 6126	LSG-2AG2-1	J	Contact ass'y .419" high	7.75
47 D 6127	LSG-2AG3-1	J	Contact ass'y .607" high	8.25
47 D 6128	8076-26P1	H	.44" insulated spacer	2.50

47 D 6116. 8076-18P1 Board Separator Key. Wt., 1 oz. ..... .05



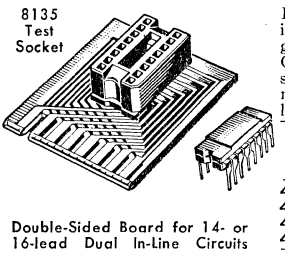
8075 TEST SOCKETS FOR FLAT PACKS

PC test socket for flat packs up to 3/8x3/8" and 14 leads on .050" spacing. Cover grips leads to PC contacts. 8075-1G2 with 15-pin PC connector, 8075-1G1 less connector.

8075-1G2. With connector. Shpg. wt., 4 oz.
47 D 6141. 1-99...Ea. 4.36
100-499.....Ea. 3.70
500-999.....Ea. 3.13

8075-1G1. Less connector. Shpg., wt., 2 oz.
47 D 6146. 1-99...Ea. 2.20
100-499.....Ea. 1.81
500-999.....Ea. 1.48

DUAL IN-LINE INTEGRATED-CIRCUIT TEST SOCKETS



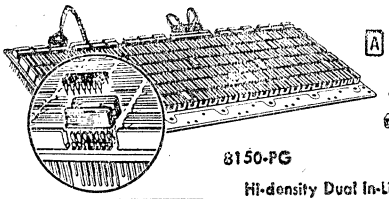
Double-Sided Board for 14- or 16-lead Dual In-Line Circuits

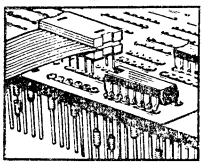
Boards take 8-pin dual row, polarized connectors. PC Board: 1/16" glass epoxy. NEMA Grade 11. Copper circuitry. For all lead sizes. Size, 1 3/8x1 5/8". Suffix G1, no connector. *14-lead, †16-lead. G2, 4 oz.; G1, 2 oz.

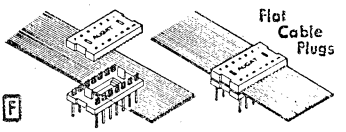
Stock No.	Mfr's Type 8135-	EACH 1-99	EACH 100-499	EACH 500-999
47 D 6180	DG1*	3.20	2.64	2.16
47 D 6181	DG2*	6.44	5.11	4.28
47 D 6183	EG1†	3.41	2.84	2.36
47 D 6184	EG2†	6.65	5.31	4.48

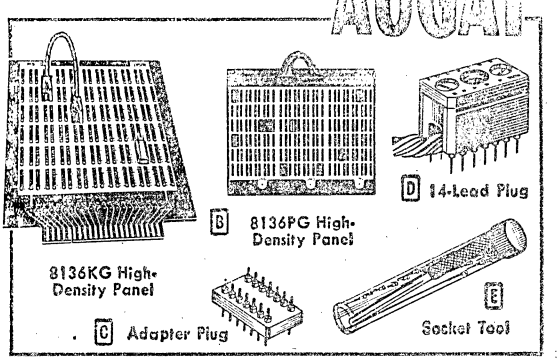
Integrated Circuit Sockets, Breadboards

AUGAT









HI-DENSITY DUAL IN-LINE BOARDS, ACCESSORIES

B SERIES 8136-KG. For 14-lead flat-pack dual in-line IC's. Patterns on double-sided board with power and ground planes connected to two contacts in each pattern. Large contoured, closed entry contacts for easy insertion. Contacts are positive-retention type, gold over nickel-plated beryllium copper. ⅛" thick tin-plated glass epoxy PC board with copper circuitry both sides. Temperature range, —55° to +150° C. Gold-plated connector take-off fingers. Type 8136-KG1, 6.000" wide; 8136-KG130, 3.300" wide. SERIES 8136-PG. Same features as above; but does not have connector fingers. 6.875" wide. Av. shpg. wt., 1½ lbs.

A SERIES 8136-RG. Above, but —65° to +150° C; 60 patterns. 60-finger connector take-off each side. 7.363x7.010". 1¼ lbs.

A SERIES 8150-PG. Similar to above, but 30 patterns, without connector fingers. Accepts interface plugs for input/output. 6.875x 2.675". Wire-Wrap terminals. *No pwr. gnd. pins. 1½ lbs.

Stock No.	Type 8136-	No. Pat.	Lgth., In.	Terminals	EACH 1-4	EACH 5-9
47 D 6218	KG1	60	6.938	Wire-Wrap	130.50	116.50
47 D 6222	KG1-30	30	4.238	Wire-Wrap	76.00	68.00
47 D 6092	PG1-30	30	2.675	Wire-Wrap	58.50	52.00
47 D 6111	PG1-60	60	5.375	Wire-Wrap	113.50	101.50
47 D 6212	PG1-90	90	8.075	Wire-Wrap	169.00	151.00
47 D 6214	PG1-120	120	10.775	Wire-Wrap	224.00	199.50
47 D 6244	PG1-150	150	13.475	Wire-Wrap	280.00	249.50
47 D 6246	PG1-180	180	16.175	Wire-Wrap	334.00	299.00

Stock No.	Mfr's Type	No. Pat	Pins/ Pattern	EACH 1-4	EACH 5-9
47 D 2075	8136-RG2	60	14	139.00	124.50
47 D 2076	8136-RG4	60	16	150.50	134.50
47 D 2078	8150-PG1-30	30	14	51.50	46.00
47 D 2079	8150-PG3-30	30	14*	53.50	48.00
47 D 2080	8150-PG5-30	30	16	57.00	51.00

14005-1P1 CONNECTOR FOR TYPE 8136-RG. Shpg. wt., 4 oz.
47 D 2077. 1-4.....Each 13.20 5-9.....Each 11.80

14005-2P1 CONNECTOR FOR TYPE 8136KG. Shpg. wt., 2 oz.
47 D 6226. 1-99 .Each 4.99 100-499.Each 4.37 500-999.Each 3.80

C 14-LEAD ADAPTER PLUGS. For interposing components and constructions with PC boards and sub-strates. Wt., 2 oz.

Stock No.	Type 8136-	Size	Row Space	PER PKG. OF 5 1-19	20-99	100-199
47 D 6227	29G1	.750x.600x.450"	.300"	7.70	6.05	5.35
47 D 6228	30G3	.750x.600x.950"	.800"	7.85	6.15	5.45

D 8136-34G1M. 14-LEAD INTERFACING PLUG. Combines patterns on single board. Unassembled, pins self-lock. Accepts *26 AWG (max.) wire. Top, side or end entry of wire. .750x.600x.450". 1 oz.
47 D 6178. 1-99..Each 1.26 100-499..Each 1.10 500-999..Each .96

E 47 D 6230. 8136-23G1 Socket Terminal Replacement Kit. Socket, terminal, removal tool. Wt., 4 oz. 1-99.....Each 6.00

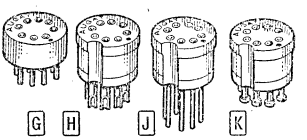
F FLAT 14-PIN CABLE PLUG

Type 2P14-1. Standard IC pattern plug for use with 28 gauge stranded 14 conductor flat cable (Type 14010-IP8 cable listed below). Unique assembly design permits installation of plug either at the ends of the cable or any desired bussing location. For Augat 8136 Series packaging panels, plugs directly into IC panel without soldering. Used for interfacing, input/output connections, testing, and cable termination into PC board. Shpg. wt., 1 oz.
47 D 0553 1-99.....Each 1.23
100-499.....Each 1.08 500-999.....Each .935

Type 14010-IP8. 28-Gauge Stranded 14 Cond. Flat Cable. 100-ft. roll.
47 D 0554 1-4.....Each 19.10 5-9.....Each 17.25
10-49.....Each 13.40 50-99.....Each 11.40

SERIES 8058 INTEGRATED CIRCUIT SOCKETS

For use with TO-5 type integrated circuits. Closed entry machined beryllium contacts. Teflon insulated. Figs. H, J, K push-fit in .366-.369" dia. hole. Fig. G. is PC mtg. Chamfered holes for easy lead insertion. *Pin circle. Wt., 2 oz.



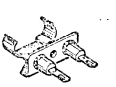
Stock No.	Mfr's Type	Fig.	Con Term.	*Dia.	Con-tacts	PER PKG. OF 5 1-19	20-99	100-199
47 D 6070	8058-1G48	G	PC	.200"	6	5.20	4.55	3.95
47 D 6062	8058-1G44	K	Turret	.200"	6	5.20	4.55	3.95
47 D 6072	8058-1G43	H	Solder	.200"	6	5.20	4.55	3.95
47 D 6073	8058-1G42	J	PC	.200"	6	5.20	4.55	3.95
47 D 6074	8058-1G49	G	PC	.200"	8	6.70	5.90	5.10
47 D 6075	8058-1G37	K	Turret	.200"	8	6.70	5.90	5.10
47 D 6076	8058-1G19	H	Solder	.200"	8	6.70	5.90	5.10
47 D 6077	8058-1G32	J	PC	.200"	8	6.70	5.90	5.10
47 D 6078	8058-1G50	G	PC	.230"	8	6.70	5.90	5.10
47 D 6079	8058-1G47	K	Turret	.230"	8	6.70	5.90	5.10
47 D 6080	8058-1G46	H	Solder	.230"	8	6.70	5.90	5.10
47 D 6081	8058-1G45	J	PC	.230"	8	6.70	5.90	5.10
47 D 6082	8058-1G34	G	PC	.230"	10	8.25	7.20	6.30
47 D 6085	8058-24G1	....	PC	.230"	10	8.40	7.35	6.40
47 D 6083	8058-1G22	H	Solder	.230"	10	8.25	7.20	6.30
47 D 6084	8058-1G31	J	PC	.230"	10	8.25	7.20	6.30
47 D 6086	8058-1G51	G	PC	.280"	12	9.70	8.45	7.40
47 D 6087	8058-1G28	H	Solder	.280"	12	9.70	8.45	7.40

SERIES 8058 MINIATURE TRANSISTOR SOCKETS

Mechanically and electrically dependable 3- and 4-contact TO-5 transistor sockets. Teflon insulated. Long-life beryllium copper contacts per QQ-C-530. Brass terminal sleeve per QQ-B-626. Contacts and terminal sleeve are gold plated .000040" thick per MIL-G-45204 over nickel plate .00005/.0001" thick. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Diameter	Contacts	PER PKG. OF 5 1-9	20-99	100-199
47 D 6056	8058-1G23	.406"	3	3.05	2.65	2.30
47 D 6059	8058-1G24	.406"	4	3.75	3.30	2.85
47 D 6060	8058-1G29	.406"	3	3.05	2.65	2.30
47 D 6061	8058-1G30	.406"	4	3.75	3.30	2.85
47 D 6064	8058-45G1	.406"	3	3.05	2.65	2.30

CRYSTAL SOCKETS

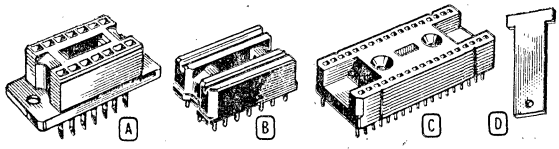


Resists vibration; permits easy crystal insertion and removal. Take HC-6/U, HC-13/U crystals, except *takes HC-18/U crystals. †Anti-rotation tab. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Description	Insul.	EACH 1-99	100-499	500-999	1000-4999
47 D 6149	8000-AG2	Horiz. or	Teflon®	.70	.65	.60	.47
47 D 6150	8000-AG6	vert. mtg.	Nylon	.40	.36	.32	.29
47 D 6151	8000-AG3†	Horiz.	Teflon	.70	.65	.60	.47
47 D 6152	8000-AG7†	PC mtg.	Nylon	.40	.36	.32	.29
47 D 6154	8000-DG1†	PC mtg. rd.	Teflon	1.00	.95	.88	.82
47 D 6155	8000-DG2	con. tails	Nylon	1.00	.95	.88	.82
47 D 6156	8004-IG1*†	Horiz.	Teflon	.65	.60	.55	.42
47 D 6157	8004-IG5*†	mtg.	Nylon	.37	.33	.29	.26
47 D 6158	8004-IG3*†	PC	Teflon	.65	.60	.55	.42
47 D 6159	8004-IG7*†	mtg.	Nylon	.37	.33	.29	.26

Augat and Amphenol Sockets

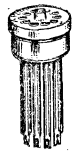
AUGAT DUAL IN-LINE SOCKETS



Contact spacing, .300" between rows, except 24 and 36-pin types, .600". .100" between leads. Contoured entry holes guide leads firmly into socket. Molded diallyl phthalate body, berryllium copper, gold-plated contacts, except *low-profile type with phenolic body, tin-plated contacts. PC board or chassis mounting with saddle. Universal terminals. Order ejector key, extractor tool for 24 or 36-pin type from table below. R suffix, inner rail for easier insertion. Take all lead dia., flat or round. 2 oz.

Stock No.	Mfr's Type	Fig.	Mounting	Contacts	PER PKG. OF 5 1-19	20-99	100-199	200-999
47 D 6166	314-AG1A	A	PC	14	4.20	3.65	3.15	2.80
47 D 6167	316-AG1A	A	PC	16	4.65	4.05	3.55	3.15
47 D 6225	314-AG5D-2R	B*	PC	14	2.23	2.00	1.75	1.55
47 D 6306	314-AG5D-R	B*	PC	14	3.50	3.05	2.65	2.35
47 D 6168	314-AG3A	A	Chassis	14	4.70	4.15	3.60	3.20
47 D 6169	316-AG3A	A	Chassis	16	5.30	4.65	4.05	3.55
47 D 6170	K314-1	D	Eject. key	14	.73	.63	.55	.48
47 D 6172	K316-1	D	Eject. key	16	.73	.63	.55	.48
47 D 6171	T114-1	D	Extractor		.50			

47 D 6304. 324-AG2D. 24-pin Type. (Fig. C). 1-19.....Each 2.05
20-99....Each 1.79 100-199....Each 1.56 200-999....Each 1.36
47 D 6305. 336-AG2D. 36-pin Type. (Fig. C). 1-19.....Each 2.28
20-99....Each 1.99 100-199....Each 1.74 200-999....Each 1.51



AUGAT SERIES 8092 TEST SOCKETS FOR TRANSISTORS AND INTEGRATED CIRCUITS

Test sockets with chamfered lead holes for easy insertion, raised boss to prevent sharp lead-bending and for easy component removal. "Push-fit" mounting. Low contact resistance after 50,000 insertions. For minimum ½-in. leads. Teflon® insulator, gold-plated contacts. Rated 2 amps. *Pin circle. †RO-52 outline. 2 oz.

Stock No.	Mfr's Type	Contacts	*Dia.	Mtg. Hole	PER PKG. OF 5 1-19	20-99	100-199
47 D 6091	8092-1G1	3	.200"	.437"	6.00	5.25	4.60
47 D 6090	8092-1G2	4	.200"	.437"	7.20	6.30	5.50
47 D 6093	8092-1G3	6	.312"	.687"	10.90	9.50	8.30
47 D 6094	8092-1G4	†6	.400"	.687"	10.90	9.50	8.30
47 D 6095	8092-1G5	8	.400"	.687"	14.00	12.25	10.70
47 D 6096	8092-1G6	10	.402"	.687"	16.65	14.55	12.70
47 D 6097	8092-1G7	12	.501"	.750"	20.10	17.55	15.30

AUGAT 8060 TO-18 TRANSISTOR SOCKETS

Miniature Teflon® sockets for TO-18 cases. Contacts beryllium copper, closed entry type, gold over nickel—plated. .256" max. dia. Pin circle, .140" max. dia. Av. shpg. wt., 1 oz.

Stock No.	Type 8060-	No. Cont.	Contact Type	PER PKG. OF 5 1-19	20-99	100-199	200-999
47 D 6160	IG3	3	Printed circuit	3.20	2.80	2.45	2.10
47 D 6161	IG4	4	Printed circuit	3.90	3.45	3.00	2.60
47 D 6162	IG7	3	Printed circuit	3.20	2.80	2.45	2.10
47 D 6163	IG8	4	Printed circuit	3.90	3.45	3.00	2.60
47 D 6164	IG9	3	Turret	3.05	2.65	2.30	2.00
47 D 6165	IG10	4	Turret	3.75	3.30	2.85	2.50

AMPHENOL STANDARD AND RELAY SOCKETS

RELAY SOCKETS

Type 146-817. 11-contact melamine socket for fast and easy mounting of most 11-pin relays. Has replaceable contacts on ¾" terminals, screw-type terminals. Contacts rated 10 amps at 600 V rms. Has two .156" mounting holes on 3⅞" centers. 4 tie points for easy connections. Shpg. wt., 1 lb.

47 D 2593. 1-24.....Each 3.47 25-99.....Each 2.91
100-249.....Each 2.44 250-499.....Each 2.09

BARRIER-TYPE OCTAL RELAY SOCKETS

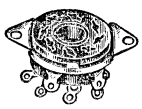
Maximum EIA working voltage of sockets is 2000 DC. All have bronze cloverleaf contacts. Each contact rated 8 amps. Inter-electrode capacitance is 2.6 pF. 8 screw terminals. Top mounting, except *bottom mounting. †Includes 4 molded-in threaded inserts for use as tie points. Size, ¾₆₄x1 1⁵⁄₁₆x2⅝". Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	EACH 1-24	25-99	100-249	250-499	500-999
47 D 0180	146-103	1.50	1.25	1.05	.90	.799
47 D 0181	146-104†	1.91	1.59	1.34	1.15	1.02
47 D 0080	146-203*	1.50	1.25	1.05	.90	.799
47 D 0087	146-204*†	1.91	1.59	1.34	1.15	1.02

OCTAL SOCKETS

Type 77-MIP8FK Floating Octal. Live-rubber grommets in enlarged mounting holes of sturdy steel plate. Mounts in 1 3⅜" hole with two ¼" holes on 1½" centers. With grommets, mounting screws, nuts, washers. Shpg. wt., 5 oz.

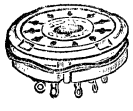
47 D 0043. 1-49.....Each .410
50-249.....Each .341 250-499.....Each .286
500-999.....Each .245 1000-2499.....Each .218



Type 168-015 Saddle Octal. Constructed with sturdy steel plate and molded bakelite body. For 1" diameter hole; 9⁄64" mounting holes on 1 5⁄16" centers. Has 4 solder lugs, spaced 90° apart. Mount from below chassis. Shpg. wt., 5 oz.

47 D 0118. 1-49.....Each .20
50-249.....Each .167 250-499.....Each .140
500-999.....Each .120 1000-2499...Each .107

MAGNAL SOCKET



Type 49-SS11L. Has 1 1⁄16" pin circle to accept 11-prong CR tubes. Low-loss steatite. 1 5⁄8" mtg. hole. With retaining ring. Shpg. wt., 7 oz.

47 D 0090. 1-49.....Each 1.59
50-249.....Each 1.33 250-499.....Each 1.12
500-999.....Each .956 1000-2499...Each .849

STANDARD SOCKETS

E Type MIP. Bakelite body with molded-in steel plate. *Require 1⅛" hole; mounting centers, 1 5⁄16"; others have 1½" mtg. ctrs. §Requires 1 3⁄32" hole. ‡Mica-filled bakelite. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Prongs	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0024	77MIP4§	4	.19	.155	.13	.111	.099
47 D 0025	77MIP5§	5	.21	.172	.145	.124	.110
47 D 0026	77MIP6§	6	.23	.190	.159	.136	.121
47 D 0027	77MIP7S§	7 Small	.25	.209	.175	.150	.133
47 D 0028	77MIP8§	Octal	.21	.179	.150	.129	.114
47 D 0126	88-8*	Octal	.23	.188	.158	.135	.120
47 D 0030	88-8X*	Loctal	.33	.273	.229	.196	.174
47 D 0034	77MIP8T§‡	Octal	.25	.212	.178	.153	.135
47 D 0032	77MIP9§	9	.25	.207	.174	.149	.132
47 D 0033	77MIP11§	11	.29	.238	.200	.171	.152
47 D 0168	77MIP11T‡	11	.31	.261	.219	.188	.167
47 D 0069	77MIP12§	12	.30	.249	.209	.179	.159
47 D 0070	77MIP20§	20	.67	.559	.469	.401	.356

F Type S. High-dielectric molded bakelite body. Units are same as Type RS, but without mounting plate; mount with retainer ring, supplied. All require 1 1⁄64" keyed hole. Av. shpg. wt., 5 oz.

47 D 0054	78S4	4	.18	.153	.128	.110	.098
47 D 0055	78S5	5	.20	.171	.143	.123	.109
47 D 0056	78S6	6	.22	.186	.156	.134	.119
47 D 0058	78S8	Octal	.21	.176	.147	.126	.112
47 D 0060	78S8L	Loctal	.32	.271	.228	.195	.173
47 D 0062	78S9	9	.24	.197	.165	.141	.125
47 D 0072	78S11	11	.28	.231	.194	.166	.148

G Type RS. Have removable mounting plate. All of the units listed below mount in 1 1⁄64" hole. Slotted mounting holes to fit centers from 1½ to 1⅞". Av. shpg. wt., 4 oz.

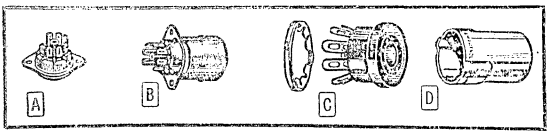
47 D 0004	78RS4	4	.26	.218	.183	.156	.139
47 D 0005	78RS5	5	.28	.233	.196	.168	.149
47 D 0006	78RS6	6	.30	.251	.210	.180	.160
47 D 0008	78RS8	Octal	.29	.238	.20	.171	.152
47 D 0071	78RS11	11	.35	.294	.247	.211	.188

G Type RSS. Ultra-low-loss steatite body. Excellent for use in high-frequency transmitting equipment. All are universal type; have removable mounting plate with slotted holes 1½ to 1⅞". Mounting hole required, 1¼" except Type 49RSS7L, 1 21⁄64". Av. wt., 5 oz.

47 D 0074	49RSS4	4	.92	.77	.645	.553	.491
47 D 0075	49RSS5	5	.94	.78	.657	.563	.500
47 D 0079	49RSS7L	7 Large	1.69	1.42	1.19	1.02	.904
47 D 0078	49RSS8	Octal	1.12	.93	.784	.671	.596

Tube and Transistor Sockets; Connectors

AMPHENOL SOCKETS, SHIELDS AND SHELLS



BAKELITE AND MICA-FILLED MINIATURE SOCKETS

High-grade miniature type. 147 series mount in 5/8" chassis hole; 7/8" mtg. ctrs., with 1/8" screw holes. 59 series mount in 3/4" chassis hole and have 1 1/8" mtg. ctrs. with .095" rivet holes, (except 59-403, .125"). ‡Black bakelite. †Mica-filled bakelite. Av. wt., 1 oz.

A WITHOUT TUBE SHIELD BASE

Stock No.	Mfr's Type	Prongs	EACH 1-24	25-99	100-249	250-499	500-999
47 D 0191	‡147-500	7	.31	.26	.218	.186	.165
47 D 0199	†147-505	7	.31	.26	.216	.185	.164

Stock No.	Mfr's Type	Prongs	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0193	‡59-409	9	.35	.29	.245	.210	.186
47 D 0167	†59-410	9	.36	.30	.253	.216	.192

B WITH TUBE SHIELD BASE

47 D 0103	†59-403	9	.51	.43	.359	.308	.273
47 D 0176	†59-407	9	.41	35	.291	.249	.221
47 D 0196	‡59-406	9	.40	.34	.283	.243	.215

Stock No	Mfr's Type	Prongs	EACH 1-24	25-99	100-249	250-499	500-999
47 D 0194	‡147-905	7	.35	.29	.242	.208	.184
47 D 0175	†147-913	7	.34	.28	.241	.206	.183

C RETAINER RING SOCKETS

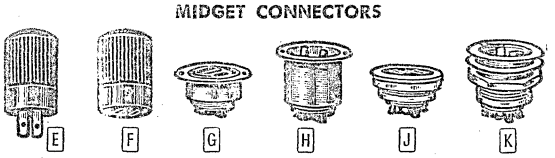
Mount in 5/8" round or "D" shaped hole with retainer ring provided. May be used with 91-MPM plugs found elsewhere in this section. All are black bakelite. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Prongs	Per Pkg. of 5 1-9	10-49	50-99	100-199	200-499
47 D 0121	78-S3S	3	.61	.50	.43	.365	.320
47 D 0123	78-S4S	4	.79	.66	.56	.475	.420
47 D 0124	78-S5S	5	1.05	.88	.74	.630	.560
47 D 0128	78-S6S	6	1.10	.92	.78.	.665	.590

D TUBE SHIELDS FOR 9-PRONG SOCKETS

Stock No.	Mfr's Type	Length	EACH 1-49	50-249	250-499	500-999	1000-2499
47 D 0189	5-408	1 5/16"	.25	.21	.177	.151	.134
47 D 0190	5-409	2 3/8"	.31	.26	.215	.184	.163

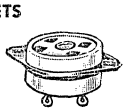
ARROW-HART & HEGEMAN MIDGET CONNECTORS



Bakelite 2-prong cord connectors and receptacles. Rated 10 amps, 250 volts. 1-inch hole required for all receptacles. 1 3/32" contact spacing. *With plate for screws. †With plate and lock ring. Wt., 4 oz.

Stock No.	Type	Fig.	Description	EACH 1-24	25-99	100-999
47 D 2191	80324	E	Male cable connector.	1.01	.96	.86
47 D 2192	80325	F	Female cable connector.	1.01	.96	.86
47 D 2193	80326*	G	Female flush receptacle.	1.20	1.14	1.02
47 D 2194	80328*	H	Male flush receptacle.	1.35	1.28	1.14
47 D 2195	80327†	J	Female flush receptacle.	1.98	1.88	1.67
47 D 2196	80329†	K	Male flush receptacle.	2.04	1.94	1.72

JAMES MILLEN TUBE SOCKETS



Specifically designed for UHF applications. Long flashover path to chassis permits use of these sockets with 866 rectifiers, many transmitting tubes, etc. Also feature a long leakage path between contacts. 1 11/16" mounting centers. Shpg. wt., 4 oz.

47 D 3200. 4-Prong Type 33004 ..... Each .85
47 D 3201. 5-Prong Type 33005 ..... Each .85

"S" TYPE MINIATURE 9-PIN TUBE SOCKET

Type 78-A9P. High dielectric phenolic. Designed to mount quickly and easily, without screws or rivets, on panel or chassis up to .050" thick in 1 11/64" keyed hole. With retaining ring. Av. wt., 5 oz.

47 D 0114. 1-49 ..... Each .35
50-249 ..... Each .289 250-499 ..... Each .242
500-999 ..... Each .208 1000-2499 ..... Each .184

DUODECAL TV SOCKET

Type 59-402. For CR tubes. 12 prongs spaced on 1.063" dia. Low-loss bakelite; removable cap. 5 oz.

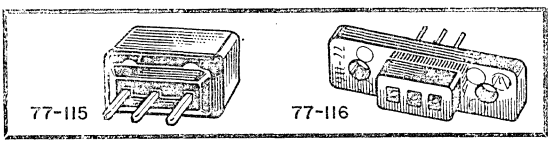
47 D 0100. 1-49 ..... Each .93
50-249 ..... Each .78 250-499 ..... Each .653
500-999 ..... Each .559 1000-2499 ..... Each .496

ACS SOCKET-SHELL

Type 23-1S. Lightweight aluminum for Types "RRS," "RS," and "S" tube sockets, except for 7-pin large tube sockets, such as Type 49RSS7L. Sockets extend 1 3/16" above or below chassis surface. Body diameter of shell, 1 11/16". Requires 1 3/4" diameter mounting hole. Less socket. Av. shpg. wt., 5 oz.

47 D 0127. 1-49 ..... Each .26
50-249 ..... Each .22 250-499 ..... Each .183
500-999 ..... Each .156 1000-2499 ..... Each .139

SOCKETS FOR SCR'S

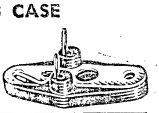


Three-contact nylon receptacle accepts I.R. IR106, Motorola MCR 406, G.E. C106. Nickle-silver contacts: nylon insulator. Voltage: 500 V rms. Current: 5 A. Contact Spacing .200" center. Mounting: *77-115 press-fits into rectangular panel or chassis cut-out, .340/.330 x .164/.161". For PC board. †77-116 designed with integrally molded mtg. flange with two .125" dia. mtg. holes on .625" ctrs. Requires cut-out .325 x .200". Wt., per pkg., 2 oz.

Stock No.	Mfr's Type	Description	PER PKG. OF 5 1-9	10-49	50-99	100-199
47 D 0093	*77-115	Press fit	1.05	.88	.74	.63
47 D 0094	†77-116	Mounting flange	1.03	.86	.73	.62

H. H. EBY SOCKETS

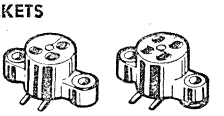
TRANSISTOR SOCKETS FOR TO-3 CASE



One-piece bakelite. Contacts cadmium-plated brass. Special-design mounting plate and terminal assures complete electrical isolation of the base connections from the chassis. 6-32 mounting holes on 1.187" centers. Wt., 1 oz.

Stock No.	Mfr's Type	Description	EACH 1-99	100-249	250-499	500-999
47 D 0262	9866-15-1	Standard	.60	.44	.25	.15
47 D 0963	9866-15-5	With raised boss	.60	.44	.25	.15

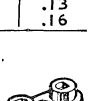
TRANSISTOR SOCKETS



One-piece integral saddle design. Mounts with rivets or #2 screws. Contacts: silver plated beryllium copper with gold flash. Mica-filled phenolic per MIL-M-14. Type 9866-13-6 for TO-5, 9, 11, 16, 29, 31, 39, 43 cases. Type 9866-13-4 for TO-12, 33, 42 cases. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	No. Pins	EACH 1-99	100-249	250-499	500-999
47 D 0961	9866-13-6	L	3	.43	.39	.25	.13
47 D 0962	9866-13-4	M	4	.47	.41	.28	.16

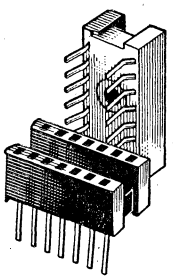
CRYSTAL SOCKET



Type 9748-16-10. Molded crystal socket for use with all standard HC-6/U crystals having .050" pins. One-piece design, general purpose phenolic insulating material. Contacts are cadmium-plated brass. Specially well suited for use where shock or vibration are problems. Rated at 500 volts. Current, 1 ampere. Operating temperature: 100°C. Dielectric withstanding voltage, 1200 volts rms. Maximum individual contact resistance, .03 ohms. Shpg. wt., 1 oz.

47 D 0970. 1-49 ..... Each .63 50-99 ..... Each .50
100-249 ..... Each .33 250-999 ..... Each .32 1000-Up Each .31

CINCH Cinch-Jones IC, Transistor and Tube Sockets



DUAL IN-LINE INTEGRATED CIRCUIT SOCKETS

D.I.P. SERIES. Bowed contacts provide .006 ohm maximum resistance. Accepts standard 14, 16 or 24 lead dual in-line integrated circuit pkg. with round or flat leads. 14-DIP, 16-DIP, 24-DIP have electrotin plated beryllium copper contacts with GP black phenolic body; types with suffix -1 have gold plated beryllium copper contacts with diallyl phthalate. Current, 1 amp; 1800 V rms between adjacent contacts. Temp. range, —65° to —150° C. 14-contact, .770x .424x3 1/32" incl. leads; 16-contact, .870x.424 x3 1/32"; 24-contact, 1.296x.746x3 1/32". 1 oz.

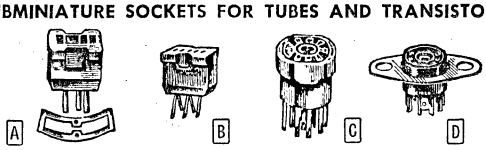
Stock No.	Mfr's Type	No. Contacts	EACH 1-24	25-49	50-99	100-249	250-499	500-999
47 D 2152	14-DIP	14	.81	.65	.54	.44	.41	.39
47 D 2154	14-DIP-1	14	1.06	.85	.71	.57	.54	.51
47 D 2155	16-DIP	16	.90	.73	.60	.48	.46	.44
47 D 2156	16-DIP-1	16	1.17	.94	.78	.62	.59	.56
47 D 2157	24-DIP	24	1.35	1.09	.91	.74	.70	.67
47 D 2158	24-DIP-1	24	1.70	1.29	1.08	.87	.83	.79

6, 8 AND 10-ICS SOCKETS FOR INTEGRATED CIRCUITS

Socket is designed specially for integrated circuits that mount in 6, 8 or 10-lead, TO-5 cases. Offers exceptionally convenient and simple means for installation and removal of integrated circuits. Also permits in-circuit testing and maintenance. Rugged, durable construction of diallyl phthalate. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	No. of Contacts	EACH 1-24	25-49	50-99
47 D 0154	6-ICS	6	.55	.44	.37
47 D 0155	8-ICS	8	.66	.53	.45
47 D 0195	10-ICS	10	.73	.58	.49

SUBMINIATURE SOCKETS FOR TUBES AND TRANSISTORS

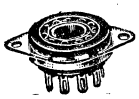


A B C D

Used extensively for hearing aids, pocket radios, and other equipment which requires subminiature tubes. Mica-filled, low-loss bakelite with silver-plated beryllium copper contacts. 2H5 can be used as a transistor socket. *8SMP socket with mounting plate attached. 2H3, 2H5, 2H7 and 8SM sockets are with mounting ring. 4-prong tubes use 2H5 socket. Av. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Pins	PER PKG. OF 5 1-4	5-9	10-19	20-49	50-99
47 D 0377	2H3	A	3	1.35	1.15	.95	.75	.70
47 D 0378	2H5	B	5	1.15	.90	.75	.65	.60
47 D 0379	2H7	B	7	1.20	1.60	1.35	1.10	1.05
47 D 0383	8SM	C	8	2.95	2.40	2.00	1.60	1.55
47 D 0417	8SMP*	D	8	3.85	2.95	2.50	2.00	1.90

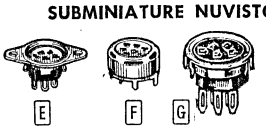
NOVAR TUBE SOCKETS



Meet or surpass EIA standards. Molded from high dielectric black bakelite or mica-filled low-loss bakelite. Have cadmium-plated brass contacts. Provide maximum fatigue strength and mating force with tube pins. Same dimensions as octal sockets—layouts and cutouts for octal sockets will accommodate novar sockets. 1 1/2" mtg. centers. 4 oz.

Stock No.	Mfr's Type	Bakelite	PER PKG. OF 5 1-4	5-9	10-19	20-49
47 D 1356	9NS-B	Black	.80	.60	.55	.50
47 D 1357	9NS-M	Mica-filled	.90	.70	.60	.55

SUBMINIATURE NUVISTOR 5-PIN TUBE SOCKETS

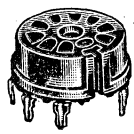


E F G

Constructed of type MFE, low-loss phenolic insulation; saddle of cold rolled steel, cadmium-plated. Contacts are copper alloy cadmium-plated for easy soldering. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Mount	1-24	25-49	50-99	100-249	250-499
47 D 1336	5NS-1	E	Screw	.28	.21	.18	.15	.14
47 D 1337	5NS-2	F	Printed circuit	.45	.36	.30	.24	.22
47 D 1396	5NS	G	Ring type	.18	.14	.12	.11	.10

STAND-OFF TYPE SOCKETS FOR PRINTED CIRCUITS



Stand-off sockets rest on shoulder of the contact tail—provide air gap for cooling and eliminating possibility of a moisture trap. Designed for 1/16" printed circuit boards having bottom circuitry. All are constructed of general-purpose black phenolic casting with hot tinned brass contacts. Type 7PC-B1 is for 7-pin miniature tubes, 9PC-B1 for 9-pin miniature tubes, and 8PC-B for octals. **Pkg. of 5.** Av. wt., 5 oz.

Stock No.	Mfr's Type	Pins	PER PKG. OF 5 1-4	5-9	10-19	20-49	50-99
47 D 1346	7PC-B1	7	.50	.45	.40	.35	.30
47 D 1352	8PC-B	8	.73	.58	.53	.48	.42
47 D 1351	9PC-B1	9	.73	.58	.53	.48	.42

PRINTED CIRCUIT SOCKETS WITH SHIELD BASES

Printed circuit sockets have attached bayonet-type shield base with ground tab. For use with 1/16" printed circuit boards. Low-loss mica-filled phenolic castings with phosphor bronze contacts. Center shield and ground tab are hot-tinned brass for easy soldering. Nickel-plated brass base. Av. shpg. wt., 2 oz.

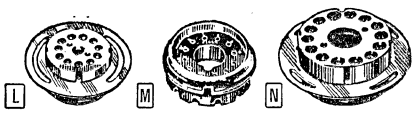
Stock No.	Mfr's Type	Pins	EACH 1-24	25-49	50-99	100-249
47 D 1342	7PC-M2	7	.99	.79	.66	.53
47 D 1343	9PC-M2	9	1.10	.88	.74	.59

H J

SPECIAL-PURPOSE SOCKETS

Meet or surpass designer specs.

K



L M N

These sockets have special pin configurations.

H CHASSIS-MOUNTING AC SOCKET

Socket has lug terminals. Rated 10 amps at 250 volts, or 15 amps at 125 volts. Mounting hole, 25/64x25/32". 1 1/2x1 1/2" overall. Wt., 1 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249	250-999
47 D 0830	2R2	AC Socket	.21	.17	.15	.13	.12

J CETRON TUBE SOCKET

Black bakelite socket accepts CE701 and CE702 Cetron tubes. Has special alloy spring-brass contacts. Shpg. wt., 1 oz.

47 D 0700	2B2	Socket	.79	.63	.53	.42	.40

K POWER TRANSISTOR SOCKET

Wax-impregnated XP bakelite socket has formed thread for 6-20 screw. .104/110" diameter hole in CR plate. Shpg. wt., 3 oz.

47 D 0713	2TS-1	Socket	.12	.10	.09	.08	.07

L MAGNAL SOCKET

Mica-filled bakelite, 11-prong socket for cathode ray and television tubes. Accepts 5BP1, 2AP1, 1P21, and 3KP1 tubes. Less mounting ring (see table, below). Av. shpg. wt., 4 oz.

47 D 0714	3M11	Socket	5.70	4.55	3.80	3.04	2.88
47 D 0715	3R11	Steel mtg. ring	.67	.53	.44	.35	.34

M DUODECAL CRT SOCKET

Mica-filled, phenolic socket has 12 prongs. Accepts 10BP4, 2BP1, 5TP4, etc.; RCA 6199. Meets JETEC B12-43 specs. Wt., 4 oz.

47 D 0717	3M12	Socket	2.30	1.84	1.53	1.23	1.17

N DIHEPTAL CRT SOCKETS

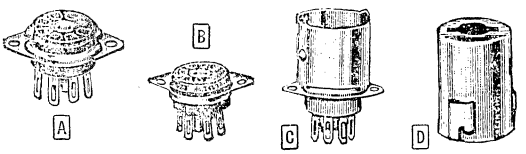
Black bakelite or mica-filled 14-prong sockets. Accept RCA 6217 and 5819 photo tubes. Meets JEDEC B12-37. Less mounting ring (order from table, below). Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249	250-499
47 D 0718	3B14	Black	2.00	1.61	1.34	1.07	1.01
47 D 0725	3M14	Mica-filled	2.11	1.68	1.41	1.12	1.07
47 D 0754	3R14	Steel mtg. ring	.75	.59	.50	.40	.39

Call the Nearest Allied Office for All Your Electronic Needs

Cinch-Jones and Grayhill Sockets and Shields

CINCH-JONES SOCKETS AND SHIELDS



MINIATURE TUBE SOCKETS, SHIELDS AND BASES

Socket saddles, shield base, shields are steel. 7-pin sockets, shield bases mount on 7/8" ctrs.; sockets require 5/8" hole. 9-pin sockets, shield bases mount on 1 1/8" ctrs.; sockets require 3/4" hole. Strap nuts are curved strips with 2 threaded holes that take place of 2 nuts in mounting miniature sockets. Diameter of rivet holes: †.125", §.098". Wt., 1 oz., except sockets, 2 oz.

A TOP-MOUNTING SOCKETS

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249
47 D 1117	7AB1	§7-pin black bakelite	.15	.12	.11	.10
47 D 1119	9AB	§9-pin black bakelite	.15	.12	.11	.10
47 D 1120	9AM	§9-pin mica-filled bakelite	.18	.13	.12	.10

B BOTTOM-MOUNTING SOCKETS

47 D 1126	7EB	§7-pin black bakelite	.13	.11	.10	.08
47 D 1127	7EM	§7-pin mica-filled bakelite	.15	.12	.11	.10
47 D 1128	9EB	§9-pin black bakelite	.15	.12	.11	.10
47 D 1129	9EM	§9-pin mica-filled bakelite	.18	.13	.12	.11

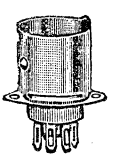
C TOP-MOUNT SHIELD BASE SOCKETS ("J" Slot)

Stock No.	Mfr's Type	Description	EACH 1-24	25-49	50-99	100-249
47 D 1131	7XB1	†7-pin black bakelite	.19	.14	.12	.11
47 D 1132	7XC	†7-pin ceramic	.46	.37	.32	.24
47 D 1133	7XM1	†7-pin mica-filled bakelite	.22	.18	.15	.13
47 D 1134	9XB	§9-pin black bakelite	.22	.18	.15	.13
47 D 1136	9XC	§9-pin ceramic	.37	.29	.24	.20
47 D 1139	9XM	§9-pin mica-filled bakelite	.24	.20	.16	.14

D TUBE SHIELDS ("J" Slot)

47 D 1141	7S3	1 3/4" high, 7-pin	.21	.15	.13	.12
47 D 1142	7S4	2 1/4" high, 7-pin	.28	.23	.20	.15
47 D 1150	9S2	1 15/16" high, 9-pin	.25	.21	.17	.14
47 D 1151	9S3	2 3/8" high, 9-pin	.48	.39	.33	.25

JAN/MIL TUBE SOCKETS WITH SHIELD BASE



Type 7JM-2. Use with standard 7-pin tubes. Provides reliable tube protection from stray magnetic fields. Shield is "J"-slot design; with "J"-slot base socket that is made to meet MIL-12883-A specifications; shield is made to meet JAN-S-23A. Top mount shield; brass base, cadmium plated with a chromate treatment. All contacts are silver plated; tails are hot tin dipped. Molded castings are type MFE material. Contacts are of phosphor bronze. Meet JAN/MIL TS-102 PO1 specs. Wt., 3 oz.

47 D 1182. 1-24.....Each .30 25-49.....Each .23
50-99.....Each .20 100-249...Each .16

VIDICON SOCKETS

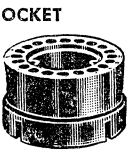
Type 7VT. 7-contact socket designed for RCA vidicon camera tubes 6198 and 7038. Mica base with silver-plated phosphor bronze contacts. Meets JETEC E8-11. Shpg. wt., 3 oz.

47 D 1349. 1-24...Ea. 2.60 25-49..... Ea. 2.07
50-99..Ea. 1.73 100-249..Ea. 1.39 250-499 Ea. 1.32

Type 8VT. 8-contacts. For RCA vidicon camera tubes. Silver-plated phosphor bronze contacts. Meets JETEC E8-11 specs. Shpg. wt., 3 oz.

47 D 1358. 1-24 .....Ea. 2.60 25-49.....Ea. 2.07
50-99.....Ea. 1.73 100-249.....Ea. 1.39
250-499.....Ea. 1.32

TYPE 20-PM PHOTOMULTIPLIER TUBE SOCKET



20-contact socket for RCA photomultiplier tubes. Accepts 6810, C7187A, C7122, 7265, or others with similar bases. Durable MAI-60 alkyd glass fibre base. Meets JETEC 20-102. Shpg. wt. 2 oz.

47 D 1348.....1-24 Ea. 5.23 25-49...Ea. 5.06
50-99.....Each 4.22 100-249.....Each 3.38
250-499.....Each 3.21

MULTI-CONDUCTOR PLUGS AND SOCKETS

Mount in 1 11/64" keyed holes (use 8RO retainer ring, order from page 325, top left hand column, Stock No. 47 F 3375). Type 8PB plug fits standard octal socket. Type 11RB socket accepts 11PB plug. Type 16F snap-on shield fits all plugs and sockets listed. 1 oz.

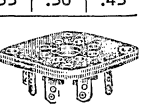
Stock No.	Type	Fig.	Description	EACH 1-24	25-49	50-99	100-249
47 D 0846	8PB	E	8-Contact Plug	.24	.20	.17	.14
47 D 0847	11PB	E	11-Contact Plug	.31	.23	.20	.17
47 D 0849	11RB	F	11-Contact Socket	.33	.26	.22	.18
47 D 0848	16F	....	Snap-on Shield	.77	.66	.52	.41

BAKELITE AND CERAMIC OCTAL SOCKETS

Saddle types have 4 ground lugs. Fig. G have 1 1/2" centers, clinch-on steel saddle; 1 1/8" dia. Fig. H 1 5/16" centers, press-on saddle; 1" dia. Fig. J: 1 11/64" dia., have keyway and retaining ring 8RO, extra ring. 8AP permits rivet mtg. of Fig. J types (slotted 1 1/2" to 1 7/8" centers). "Mtg." column is rivet-hole dia. or chassis thickness. Retainer ring and adapter plate for use with these sockets are listed at bottom of table below. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Description	Mtg.	PER PKG. OF 5 1-4	5-9	10-19
47 D 3371	8EB	G	Black	.143"	.74	.58	.52
47 D 3372	8EM	G	Mica-filled	.143"	.90	.65	.60
47 D 3369	8AB	H	Black	.136"	.74	.58	.52
47 D 3370	8AM	H	Mica-filled	.136"	.90	.65	.60
47 D 3373	8R1	J	Black	1/16"	1.10	.90	.75
47 D 3374	8R3	J	Mica-filled	1/16"	1.30	1.10	.95
47 D 3375	8RO	....	Retainer ring		.50	.44	.39
47 D 3376	8AP	....	Adapter plate		.55	.50	.45

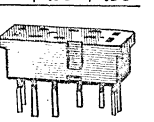
WAFER-TYPE SOCKETS



Sturdily constructed, laminated bakelite tube sockets. All are equipped with solder-coated brass contacts. *Sold in packages of 5.* Wt., 2 oz.

Stock No.	Mfr's Type	Mtg. Ctrs.	Ctrs.	1-4	5-9	10-19	20-49
47 D 0414	8W1	1 5/16"	8 (octal)	.65	.50	.45	.40
47 D 0415	8W2	1 1/2"	8 (octal)	.65	.50	.45	.40
47 D 0416	9W1	1 1/8"	9 (min.)	.75	.60	.55	.50

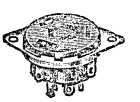
8-PIN RELAY SOCKET



Type 8RS. Mica-filled phenolic; attaches to chassis with cold rolled, cadmium-plated steel mounting clip. Contacts are silver-plated beryllium copper. Av. shpg. wt., 1 oz.

47 D 1350. 1-24.....Each .55
25-49.....Each .44 50-99.....Each .37 100-249.....Each .30

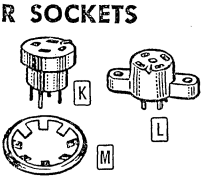
PLUG-IN SOCKETS FOR TWIST-PRONG ELECTROLYTICS



For Mallory FP type capacitors. Permit instant replacement when capacitor fails. Molded from black bakelite; recessed center contacts for extended prongs, flush outer contacts for short prongs. Steel mtg. saddle has 4 ground lugs. 2C5 has 1 1/2" mtg. centers; .140"-.145" mtg. hole dia. 2C7 has 1 27/32" mtg. centers; .156" mtg. hole dia. Av. wt., 2 oz.

Stock No.	Mfr's Type	For FP Size	EACH 1-24	25-49	50-99	100-249
47 D 0335	2C5	1" dia.	.55	.44	.37	.29
47 D 0336	2C7	1 3/8" dia.	.80	.64	.54	.43

GRAYHILL TRANSISTOR SOCKETS



For TO-12 and TO-33 types. Leads fit on 100-mil grid for printed circuits. Terminal numbers molded on bottom of sockets; top faces have key ribs for alignment with transistor tab. Mica-filled phenolic per MIL-M-14. Type MFE. 22-11 (Fig. L) fits 3/8" hole. 22-16-4 (Fig. K) can be soldered in printed circuits or fastened in "D" hole. 1 oz.

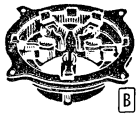
Stock No.	Mfr's Type	Fig.	No. of Pins	Mtg.	Loss Factor @ 1 MHz	EACH 1-49	50-99
47 D 5289	22-16-4	K	4	Ring	.06	.40	.30
47 D 5288	22-11	L	4	Screw	.06	.40	.30

M 47 D 5249. Mounting Ring for 22-16-4 Socket. For fastening 22-16-4 socket above, in punched "D" hole. Wt., 1 oz.....Each .01

Sockets, Shields, Chimneys and Connectors

EIMAC TUBE SOCKETS, CHIMNEYS, CONNECTORS

A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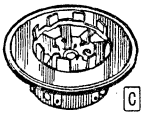
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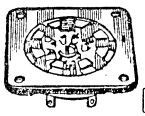

D

Tube Sockets. Maintain a free-moving air-stream for cooler operation, longer tube life. Types SK600 and SK610 have built-in 2700 pF, 400-volt screen grid bypass capacitors; all other types are without bypass capacitors. For correct chimney to use with air-system tube sockets, see listing below. Av. wt., 15 oz.

Stock No.	Mfr's Type	Fig.	For Tube Types	EACH
47 D 2163	SK410	A	4-250A, 4-400A, 4-125A, 3-4002, 3-400Z	10.70
47 D 2159	SK510	B	3-1000Z	10.70
47 D 2039	SK600	C	4CX250B/F, 4CX250A/F, 4X150A/D, 7580	12.00
47 D 2040	SK610	C	Same as SK600; cathode gnd. contact.	13.60
47 D 2124	SK640	D	Same as SK600.	10.00

Chimneys. (Not illus.) For use with air-system tube sockets shown above. Av. shpg. wt., 8 oz.

Stock No.	Type	For Socket	EACH
47 D 2049	SK406	SK410	6.50
47 D 2054	SK506	SK510	12.00
47 D 2055	SK606	SK600, SK610, SK640	.75

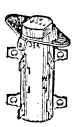
Heat-Dissipating Connectors. Provide maximum heat dissipation. Permit longer tube life through cooler plate and grid seal operation. Machined from solid dural rod; with screws. Fit tube types listed below. Av. shpg. wt., 2 oz.

Stock No.	Type	For Tube Types	EACH
47 D 2096	HR-6	2-150D, 2-240A, 4-65A, 4D21/4-125A, 5D22/4-250A, 4-400A, 100TH-TL plate, 250TH-TL plate, 250R plate, 304TH-TL grid	2.20
47 D 2073	HR-8	2-450A, 2-2000A, 253, 3-1000Z, 4-1000A, 4PR60A, 6C21, 450TH-TL, 750TL, 866A, 872A, 1500T, 2000T, 8020 (100R) plate	2.85

PREFORMED CONTACT FINGER STOCK

36″ strips of silver-plated spring material slotted and formed into a series of fingers for making sliding contacts. Ideal for connections with terminals or moving parts. Wt., 12 oz. per strip.

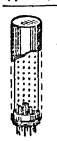
Stock No.	Mfr's Type	Width	Description	EACH
47 D 2086	CF-100	17/32″	Spooned	5.35
47 D 2087	CF-300	31/32″	Reverse radius finger tip	5.80
47 D 2088	CF-500	1 3/8″	Reverse radius finger tip	6.20



VECTOR TRANSISTOR SOCKET TURRET

Provides single transistor mounting with a place for associated circuit components. Combination transistor socket mounted in end of 1/8″ phenolic post with two rings of 12 terminals. Requires a .361″ hole for socket and two 1/8″ holes 3/4″ apart for 4-40 threaded saddle holes. 3 oz.

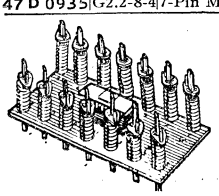
Stock No.	Mfr's Type	Lgth.	Ring Spacing	EACH 1-49	50-199	200-499	500-999
47 D 0947	6-A-12T	1½″	7/8″	1.22	1.10	.85	.82



ROUND PLUG-IN CANS

For packaging hand-wired, printed, and miniature transistorized modules. Complete with case, plugs, and vertical terminal-wall secured to base. Easily removable aluminum case provides excellent shielding. Side-screws at bottom of can screw into threaded bushings in plug to hold components securely. 2″ long. Shpg. wt., 5 oz.

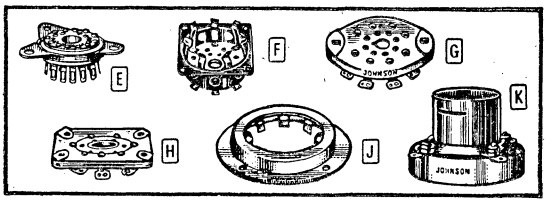
Stock No.	Mfr's Type	Socket	Dia.	EACH 1-49	50-199	200-499	500-999
47 D 0934	G2.1-8-4	9-Pin Min.	3/4″	2.09	1.88	1.46	1.40
47 D 0935	G2.2-8-4	7-Pin Min.	5/8″	2.07	1.86	1.45	1.39



SOLDERLESS IC BREADBOARD SOCKETS

Has 14 pin dual-in-line socket, mounted on 2.63x1.33″ epoxy glass wafer. Tabs soldered to Springclips. Can be press fit mounted to 3/32″ holes. Wt., 2 oz.
47 D 0944. 1-49.....Each 3.95
50-199..Each 3.60 200-499...Each 3.20

E. F. JOHNSON TUBE SOCKETS



SPECIAL SOCKET TYPES Av. shpg. wts.: *½ lb.; †¾ lb.

Stock No.	Mfr's Type	Fig.	Pins	Description	EACH 1-9	10-49	50-99
47 D 6392	122-244-1*	H	4	Steatite. For "super jumbo" tubes.	1.85	1.70	1.55
47 D 6393	122-275-1†	H	5	Steatite. For giant 5-pin base tubes.	2.35	2.16	1.98
47 D 6394	122-101-100*	F	7	Steatite with base-shield and retainer springs.	3.05	2.80	2.55
47 D 6420	124-311-100*	E	11	Silicone base. For 8072, 8121, 8462, other UHF tubes.	1.25	1.15	1.05

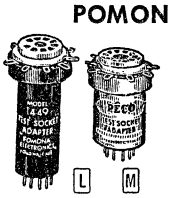
STEATITE WAFERS Cadmium-plated contacts. 1¾″ mtg. ctrs. 6 oz.

Stock No.	Mfr's Type	Fig.	Size	Prongs	EACH 1-9	10-49	50-99
47 D 6405	122-224-1	G		4	.76	.70	.64
47 D 6406	122-225-1	G	2 5/16x1 1/16″	5	.83	.76	.70
47 D 6409	122-228-1	G		Octal	1.10	1.00	.92

BAYONET SOCKETS Av. shpg. wts.: *½ lb.; †¾ lb.; §1 lb.

47 D 6398	123-209-1†	K	4	For "UX" base tubes. 4 mtg. holes 2 5/16″ centers.	2.00	1.84	1.68
47 D 6399	123-211-1§	K	4	Porcelain base. For "jumbo" tubes. 2 1/16″ mtg. centers.	2.60	2.39	2.18
47 D 6396	124-113-1*	J		1450 pF screen bypass capacitor. 1000 VDC. For 124 series sockets.	4.25	3.75	3.33

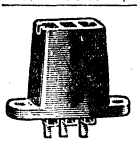
POMONA TEST-SOCKET TUBE ADAPTERS



L M

For measurement of voltage, resistance, audio and video signals from tube-side of chassis. Long test-tabs for easy connection. Types TVS are low-loss mica-filled molded phenolic per MIL-M-14 MFE; power factor less than .010 at 10 MHz. Types 1447, 1449, 2610 are used with captive or telescoping tube shields; 1 21/32″ (2610, 2.42″) high. Insul. res. 500,000 megs; breakdown exceeds 1700 VAC or DC. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Fig.	Pins	Description	EACH
47 D 0035	TVS-7	M	7	Miniature	1.85
47 D 0036	TVS-8	M	8	Octal	1.95
47 D 0037	TVS-9	M	9	Miniature	1.95
47 D 2211	TVS-12	M	12	Compactron	2.55
47 D 0038	1447	L	7	Miniature	1.95
47 D 0039	1449	L	9	Miniature	2.15
47 D 2286	1779	.....	9	Novar	2.25
47 D 0045	2610	L	10	Decal	2.55



MODEL TS-187 TRANSISTOR TEST SOCKET

Heavy-duty molded phenolic construction. 100° 200°C. test temperature. Accepts .017″ diameter leads. I.R.: 10^5 megohms at 40% R.H. at 24° C. Beryllium copper contacts. Shpg. wt., 3 oz.
47 D 2213. 1-24..Ea. 1.75 25-49.....Ea. 1.58
50-99.....Ea. 1.50 100-249.....Ea. 1.23

XS-8

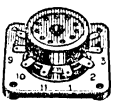
BREADBOARD SOCKETS

Surface-mount breadboard sockets for experimental design, use in enclosed units to eliminate double chassis construction. Insulated base with numbered connections. Phosphor bronze spring contacts. Standard center-to-center mtg. holes. 7- and 9-pin mount in center or on side, 8-pin mounts on side. 2 oz.

Stock No.	Mfr's Type	Description	EACH 1-49	50-99	100-249
47 D 2215	XS-7	7-pin miniature	.65	.59	.55
47 D 2216	XS-8	8-pin octal	.85	.77	.72
47 D 2217	XS-9	9-pin miniature	.75	.68	.64

Connectors and Relay Sockets

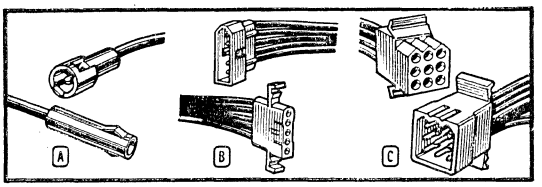
POMONA 11-CONTACT RELAY SOCKET



Type 2811. Above-chassis mount. Diallyl phthalate base and socket. Beryllium copper contacts rated 600V rms at 10 amps. 2x2x.85". 5 oz.

47 D 2420. 1-24...Ea. 2.75 25-49.....Ea. 2.48
50-99.....Ea. 2.34 100-249.....Ea. 1.93

WALDOM MOLEX NYLON CONNECTORS



Polarized, except single type. Male and female terminals of same diameter can be mixed in same housing. Crimping tools below. R-receptacle; P-plug; *no. circuits; †amps per circuit. U.L. Listed. Less contacts. Sold only in Std. Pkg. Quantity Listed.

MINIATURE CONNECTORS

Stock No.	Mfr's Type	*	Fig.	†	Std. Pkg.	EACH 1-99	100-499	500-Up
47 D 4027	1625-1P	1	A	5	10	.07	.048	.04
47 D 4028	1625-1R	1	A	5	10	.06	.041	.035
47 D 4029	1625-3P	3	B	5	10	.12	.09	.074
47 D 4030	1625-3R	3	B	5	10	.14	.10	.083
47 D 4031	1625-4P	4	B	5	10	.24	.177	.146
47 D 4032	1625-4R	4	B	5	10	.25	.179	.147
47 D 4033	1625-5P	5	B	5	5	.19	.133	.109
47 D 4034	1625-5R	5	B	5	5	.27	.168	.138
47 D 4035	1625-6P	6	C	5	5	.18	.125	.103
47 D 4036	1625-6R	6	C	5	5	.21	.141	.116
47 D 4037	1649-8P	8	B	5	5	.27	.153	.126
47 D 4038	1649-8R	8	B	5	5	.26	.185	.148
47 D 4039	1625-9P	9	C	5	5	.19	.133	.109
47 D 4040	1625-9R	9	C	5	5	.21	.15	.124
47 D 4041	1625-12P	12	C	5	5	.23	.157	.129
47 D 4042	1625-12R	12	C	5	5	.23	.159	.131
47 D 4043	1625-15P	15	C	5	5	.30	.219	.18
47 D 4044	1625-15R	15	C	5	5	.33	.247	.20
47 D 4045	1772-36P	36	C	4	5	1.15	.84	.681
47 D 4046	1772-36R	36	C	4	5	1.19	.875	.713

STANDARD CONNECTORS

47 D 4047	1619P	1	A	12	10	.07	.052	.04
47 D 4048	1619R	1	A	12	10	.06	.045	.035
47 D 4049	1545P	2	B	12	10	.11	.085	.065
47 D 4050	1545R	2	B	12	10	.12	.088	.067
47 D 4051	1396P	3	B	12	10	.11	.083	.064
47 D 4052	1396R	3	B	12	10	.12	.094	.072
47 D 4053	1490P	4	B	9	10	.13	.094	.073
47 D 4054	1490R	4	B	9	10	.14	.107	.082
47 D 4055	1653P	5	B	9	5	.16	.127	.098
47 D 4056	1653R	5	B	9	5	.22	.163	.126
47 D 4057	1261P	6	C	9	5	.17	.128	.101
47 D 4058	1261R	6	C	9	5	.19	.145	.114
47 D 4059	1292P	9	C	9	5	.20	.151	.119
47 D 4060	1292R	9	C	9	5	.27	.164	.129
47 D 4061	1360P	12	C	7.5	5	.23	.17	.133
47 D 4062	1360R	12	C	7.5	5	.24	.176	.138
47 D 4063	1375P	15	C	7.5	5	.28	.199	.156
47 D 4064	1375R	15	C	7.5	5	.31	.224	.176

PIN TERMINALS FOR ABOVE HOUSINGS

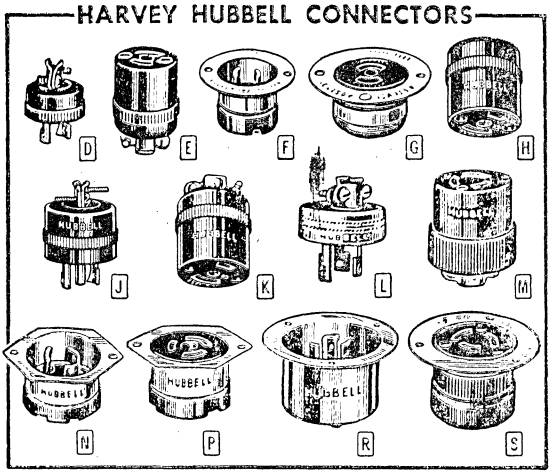
F, female; M, male. .093" for standard conn.; .062" for miniature.

Stock No.	Mfr's Type	Mating Dia.	Wire Size	PACKAGES OF 100 1-99	100-499	500-Up
47 D 4065	1189F	.093"	16-20	3.05	2.07	1.52
47 D 4066	1190M	.093"	16-20	3.05	2.07	1.52
47 D 4067	1380M	.093"	18-28	3.05	2.07	1.52
47 D 4068	1381F	.093"	18-28	3.05	2.07	1.52
47 D 4069	1560M	.062"	18-22	3.70	2.51	1.85
47 D 4070	1561F	.062"	18-22	3.70	2.51	1.85
47 D 4071	1854M	.062"	24-30	3.70	2.51	1.85
47 D 4072	1855F	.062"	24-30	3.70	2.51	1.85

CRIMPING TOOLS (includes an Ejector Tool)

Stock No.	Hand Tool	For	EACH	Stock No.	Prod. Tool	For	EACH
47 D 4073	HT1919	1189-1381	4.35	47 D 4075	HT1031C	1189-1381	25.00
47 D 4074	HT1921	1560-1855	4.35	47 D 4076	HT1719C	1560-1561	40.00
				47 D 4077	HT1885	1854-1855	50.00

HARVEY HUBBELL CONNECTORS



Feature unique "Twist Lock" design for positive, lock-fast electrical connections. Units lock with a twist of the cap—simply plug in—twist—and they lock! Never disconnect accidentally regardless of the treatment they are subjected to. Insure a maximum of safety and a minimum of time-loss. Meet National Electrical Code Standard *U.L. Recog.

MIDGET-SIZE CONNECTORS

2-WIRE NONPOLARIZED TYPES

Type 7428 male cap and Type 7427 female connector are brown bakelite with metal cable clamps for 5/16 to 1/2" O.D. cords. Type 7466 male base and Type 7468 female base are bakelite with metal housings. Rated 10 amps at 250 V; 15 amps, 125 V. Wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-9	10-49	50-99
47 D 1282	7428	D	Male Cap	.53	.47	.41
47 D 1283	7427	E	Female Conn.	.97	.86	.76
47 D 1284	7466	F	Male Base	1.15	1.02	.90
47 D 1287	7468	G	Female Base	1.40	1.24	1.08

3-WIRE POLARIZED TYPES

Similar to above connectors, but for use with 3-conductor cables. Insulation is black bakelite. Clamps will accommodate cords from 9/32" to 27/64" O.D. Polarization prevents incorrect connection. Rated 10 amps at 250 V, or 15 amps at 115 V. Wt., 3 oz.

47 D 1288	7485	D	Male Cap	1.26	1.12	.98
47 D 1289	7484	E	Female Conn.	1.81	1.61	1.41
47 D 1290	7486	F	Male Base	1.61	1.43	1.25
47 D 1291	7487	G	Female Base	1.96	1.74	1.53

3-WIRE GROUNDING TYPES

Midget "Twist Lock" series designed specifically for 15 amp, 125 V grounding applications. Hollow brass grounding sleeve in cap mates with brass split pin to provide safe, positive connection. All are 1 5/32" dia. *With cord grips. Wt., 3 oz.

47 D 1280	7591	H	Female Conn.	2.11	1.87	1.64
47 D 1286	7593	J	Female Conn.*	2.21	1.97	1.72
47 D 1285	7594	K	Male Cap*	1.65	1.46	1.28

STANDARD-SIZE CONNECTORS

3-WIRE POLARIZED TYPES

Type 7572 male cap, Type 7556 male base and Type 7557 female base have rust-resistant metal housings. Type 7555 female connector is bakelite. Clamps take cords from 19/64" to 9/16" O.D. All are rated 10 amps at 250 V; 15 amps, 125 V. *Armored. Wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-9	10-49	50-99
47 D 1292	7572	L	Male Cap*	1.49	1.33	1.16
47 D 1293	7555	M	Female Conn.	2.36	2.10	1.84
47 D 1294	7556	N	Male Base	1.96	1.74	1.53
47 D 1295	7557	P	Female Base	2.17	1.93	1.69

HEAVY-DUTY 3-WIRE POLARIZED TYPES

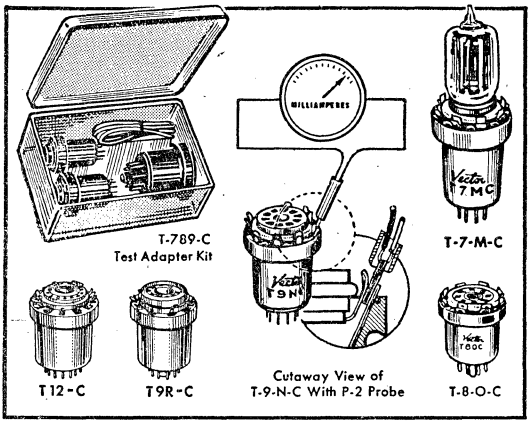
Type 7311 male cap, Type 7327 male base and Type 7328 female base have rust-resistant metal housings. Type 7313 female connector is bakelite. Clamps take cords from 7/16" to 3/4" O.D. Rated 20 amps at 250 V, or 10 amps at 575 V. *Armored. Wt., 4 oz.

47 D 1296	7311	L	Male Cap*	2.15	1.91	1.67
47 D 1297	7313	M	Female Conn.	3.30	2.94	2.57
47 D 1298	7327	R	Male Base	2.54	2.26	1.98
47 D 1299	7328	S	Female Base	2.90	3.47	3.03

*Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Vector Adapters, Turrets, Breadboard Accessories

VOLTAGE AND CURRENT TEST ADAPTERS



Type T-7-M-C. Measure tube current and voltage from tube side of equipment. Fits shield-base of 7-pin min. socket. Dual-contact test tabs on adapter break circuit when optional dual-contact probe (below) is inserted. Current is read on meter to which the two leads of the probe have been connected. Voltage is measured by connecting both probe leads in parallel to same voltmeter terminal. Cap., approx. 1 pF. Flashover voltage, over 1500 VDC. Phenolic body, 1.47″ long (less prongs). Shpg. wt., ¾ oz.

Type T-8-O-C. Fits standard 8-pin octal tube clamps. Same specifications as T-7-M-C above except length, less prongs is 1.5″. 1½ oz.

Type T-9-N-C. Fits into shield base for 9-pin miniature types. Same specifications as T-7-M-C above. Shpg. wt., ¾ oz.

Type T-9-R-C. Fits 9-pin Novar socket. Lgth., 1.81″. 2 oz.

Type T-12-C. Fits 12-pin Compactron socket. Lgth., 1.81″. 2 oz.

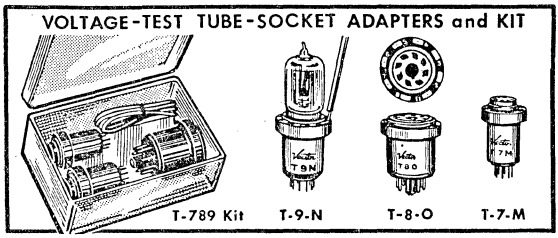
Stock No.	Mfr's Type	Socket	Shell Body Dia.	Shell Skirt Dia.	EACH 1-19	20-99	100-199
47 D 6035	T-7-M-C	7-Pin Min.	.74″	1.03″	2.53	2.28	2.12
47 D 6037	T-8-O-C	8-Pin Oct.	1.26″	1.56″	3.19	2.87	2.68
47 D 6038	T-9-N-C	9-Pin Min.	.87″	1.16″	2.70	2.43	2.27
47 D 4528	T-9-R-C	9-Pin Novar	1.26″	1.56″	3.65	3.29	3.07
47 D 4527	T-12-C	12-Pin Comp.	1.26″	1.56″	3.85	3.47	3.23
47 D 6040	P-2	Dual Side Plug-in Probe			.79	.79	.79

COMPLETE SOCKET ADAPTER KITS

T912C. T-12-C, T-9-R-C Adapters; P-2 Probe; plastic case. 6 oz.
47 D 1902. 1-19..Ea. 8.29 20-99..Ea. 7.46 100-199.....Ea. 6.96

T-789-C. T-7-M-C, T-8-O-C, T-9-N-C Adapters; P-2 Probe; plastic case. Shpg. wt., 6 oz.
47 D 6039. 1-19..Ea. 9.74 20-99..Ea. 8.75 100-199...Ea. 8.17

VOLTAGE-TEST TUBE-SOCKET ADAPTERS and KIT



Type T-7-M. Similar to T-7-M-C above, but without current-measuring feature. Fits 7-pin miniature tube socket. Tabs on adapter designed to grip optional P-1 Probe, listed in table. Flashover voltage, in excess of 1500 VDC. Length, less prongs, 1.5″. ½ oz.

Type T-8-O. Fits standard 8-pin octal tube clamps. Same specifications as T-7-M listed above. Shpg. wt., ¾ oz.

Type T-9-N. Fits into shield base for 9-pin miniature types. Same specifications as T-7-M listed above. Shpg. wt., ½ oz.

Stock No.	Mfr's Type	Socket	Shell Body Dia.	Shell Skirt Dia.	EACH 1-19	20-99	100-199
47 D 0040	T-7-M	7-Pin Min.	.75″	1.03″	1.65	1.49	1.39
47 D 0041	T-8-O	8-Pin Oct.	1.25″	1.56″	1.75	1.58	1.47
47 D 0042	T-9-N	9-Pin Min.	.87″	1.16″	1.85	1.67	1.55
47 D 0044	P-1	Plug-in Probe			.52	.47	.44

TYPE T-789 COMPLETE 3-SOCKET KIT

Includes all 3 adapters, and P-1 Probe, in plastic case. 6 oz.
47 D 0210. 1-19..Ea. 5.90 20-99..Ea. 5.31 100-199...Ea. 4.96

SOCKET TURRETS

Dependable terminal structures for limited space applications. Simplify construction of electronic equipment. Components mount on phenolic form. Turrets are ½″ dia. Octal units fit 1″ hole; 7-pin miniature, ⅝″ hole; 9-pin min., ¾″ hole. Av. 3 oz.

2½″ Turrets. Have 9 terminals in two rings, spaced 1⅜″ apart.

Stock No.	Mfr's Type	Socket	EACH 1-49	50-199	200-499	500-999
47 D 0211	10-0-9T	Octal	.72	.65	.50	.48

2″ Turrets. 9 terminals in two rings, spaced 1″ apart.

47 D 0212	8-O-9T	Octal	.68	.61	.48	.46
47 D 0217	8-M-9T	7-Pin Min.	.79	.71	.55	.53
47 D 0233	8-N-9T	9-Pin Min.	.79	.71	.55	.53

1½″ Turrets. Have 6 terminals in one ring only.

47 D 0218	6-M-6T	7-Pin Min.	.72	.65	.50	.48
47 D 0213	6-O-6T	Octal	.61	.55	.43	.41
47 D 0234	6-N-6T	9-Pin Min.	.72	.65	.50	.48

SQUARE MINIATURE PLUG-IN CASES

For building modular plug-in units. Tube socket, tubular term. post, plug, and shield can. Can sizes: B, 1.37″ sq., 2½″ high, C, 2″ sq., 2½″ high. Plug and socket are mica-filled phenolic. *8-pin octal. †9-pin novar. Wt., 5 oz.

Stock No.	Type	EACH 1-49	50-199	200-499	500-999
47 D 0249	*B10	1.57	1.41	1.10	1.05
47 D 0250	*C10	1.50	1.35	1.05	1.01
47 D 0238	†B10N	2.46	2.22	1.73	1.65

Shield Base. For miniature sockets above. Fastens above clamps on socket mtg. centers. Use with standard bayonet shield. 2 oz.

Stock No.	Mfr's Type	For Use With	EACH 1-499	500-999	1000-4999
47 D 0236	S9	9-pin sockets	.05	.05	.05

LOW-COST OCTAL PLUG

Similar to above, but with phenolic octal plug crimped into base. Base has two .136″ holes spaced diagonally 1.6″ apart. Can size: 2″ square, 3″ high. Av. wt., 5 oz.

Stock No.	Mfr's Type	EACH 1-49	50-199	200-499	500-999
47 D 0252	C-12-K1.02	1.10	.99	.77	.74
47 D 0255	511 Wall	.69	.62	.47	.46

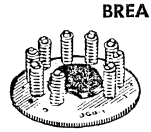
TERMINAL TURRETS

Simplify design and construction of electronic equipment and conserve chassis space. Two rings with 12 terminals, top and bottom ground lugs on ½″ dia. phenolic form. Mounts 6 or more resistors and capacitors. Turrets bolt to chassis through 0.150″ dia. mount hole by means of 6-32 screw, extends through turret length. Wt., 3 oz.

Stock No.	Mfr's Type	Length	Space Between Rings	EACH 1-49	50-199	200-499	500-999
47 D 0937	8-12	2″	1″	.60	.54	.42	.40
47 D 0943	10-12	2½″	1⅜″	.64	.58	.45	.43

BREADBOARD ACCESSORIES

B-20


568-1C

Solderless Sockets. Reliable solderless "Springclips" are soldered to socket contacts. Up to 6 leads connect to each "Springclip" for fast, reliable connection. Sockets mount on any "A" or "AA" pattern Vectorbord with furnished hardware. Shpg. wt., ¼ oz.

Stock No.	Mfr's Type	Description	EACH 1-49	50-199	200-499
47 D 5614	567-1C	8-Pin Octal	1.50	1.35	1.05
47 D 5615	568-1C	9-Pin Noval	1.65	1.49	1.16
47 D 5616	569-1C	7-Pin Miniature	1.35	1.22	.95
47 D 5617	570B	4-Lead Transistor Type	1.20	1.08	.84

Type B-20 Pot and Switch Brackets. Handy brackets made of durable aluminum. Used for quick and easy mounting of pots and switches on any "A" or "AA" pattern Vectorbords. Wt. per pkg., 6 oz.
47 D 5618..... Pkg. of 4 for .48

Bus Stripping. Precision punched fused-brass strip is tinned. .2″ wide with .093″ holes on .265″ centers. Mount with T9.4 zip terminals, solderless T30 springclips, or #4 self-tapping screws in an "A" or "AA" pattern Vectorbord. Wt. per pkg. of 10, 5 oz.

Stock No.	Mfr's Type	Size	Width	Mtg. Ctrs.	PKG. /10 EACH
47 D 5619	T-57 Pkg. X	16″	.2″	.265″	1.69
47 D 5620	T-58 Pkg. X	8″	.2″	.265″	1.05

H. H. Smith Teflon® Terminals, Inserting Tools

Body of virgin Teflon. Meets MIL-P-19468, Spec QQ-626. Terminals are precision machined of brass. Very easy to install—no restrictions as to chassis material. All standard plating finishes available. Terminals can be supplied in reverse on request. *After Fig. symbol indicates reverse positioning on insulator. †Indicates floating contact. Minipack terminals are for use on Minisert belt feed tools listed below. Average shpg. wt. per item, 4 oz.

SUBMINIATURE STANDOFFS — MINIPACK

Stock No.	Mfr's Type	Fig.	Dimensions A	B	C	L	M	N	O	PER PKG. OF 100 1-4	5-9	10-49	Stock No.	PER PKG. OF 500 EA.	2-Up
47 D 3800	92-1000	A	.148	.172	.040	.350	.210	.100	.040	5.95	5.50	4.66	47 D 3752	27.50	23.30
47 D 3828	92-1034	A	.093	.125	.040	.350	.210	.100	.040	8.50	7.50	6.66	47 D 3753	37.50	33.30
47 D 3829	92-1500	B	.148	.172	.040	.350	.210	.100	.040	9.35	8.25	7.33	47 D 3754	41.25	36.65
47 D 3830	92-1501	B	.148	.172	.040	.375	.210	.125	.040	8.50	7.50	6.66	47 D 3755	37.50	33.30
47 D 3831	92-1504	B	.148	.172	.046	.334	.154	.140	.040	9.35	8.25	7.33	47 D 3756	41.25	36.65
47 D 3832	92-1506	B	.148	.172	.040	.455	.250	.165	.040	9.35	8.25	7.33	47 D 3757	41.25	36.65
47 D 3833	92-1512	B	.148	.172	.040	.540	.250	.250	.040	9.35	8.25	7.33	.....	.....	.....
47 D 3834	92-1528	B	.093	.125	.040	.350	.210	100	.040	9.35	8.25	7.33	47 D 3758	41.25	36.65
47 D 3811	92-1542	B	.148	.172	.040	.359	.210	.109	.040	6.00	5.25	4.66	47 D 3774	26.25	23.30
47 D 3798	29-1500	B*	.148	.172	.040	.350	.210	.100	.040	6.80	6.00	5.33	47 D 3759	30.00	26.65
47 D 3883	29-1513	B*	.171	.188	.040	.405	.210	.155	.040	9.35	8.25	7.33	47 D 3760	41.25	36.65

SUBMINIATURE FEED THRU — MINIPACK

47 D 3835	82-1000	C	.148	.172	.040	.443	.210	.100	.040	6.80	6.00	5.33	47 D 3761	30.00	26.65
47 D 3836	82-1003	C	.148	.172	.040	.515	.210	.100	.040	6.37	5.62	5.00	47 D 3762	28.10	25.00
47 D 3838	82-1022	C	.093	.125	.040	.515	.210	.100	.040	8.50	7.50	6.66	47 D 3763	37.50	33.30
47 D 3846	82-1500	D	.148	.172	.040	.500	.210	.100	.040	6.37	5.62	5.00	47 D 3766	28.10	25.00
47 D 3847	82-1516	D	.093	.125	.040	.500	.210	.100	.040	8.50	7.50	6.66	47 D 3767	37.50	33.30
47 D 3848	82-1504	D	.148	.172	.040	.531	.210	.100	.040	9.35	8.25	7.33	47 D 3768	41.25	36.65
47 D 3812	82-1040	E	.093	.125	.040	.225	.125	.060	.040	8.00	7.00	6.25	.....	.....	.....
47 D 3764	28-1003	C*	.148	.172	.040	.515	.210	.100	.040	6.80	6.00	5.33	.....	.....	.....
47 D 3765	28-1500	D*	.148	.172	.040	.500	.210	.100	.040	9.35	8.25	7.33	47 D 3769	41.25	36.65

MINIATURE STANDOFFS — MINIPACK

Stock No.	Mfr's Type	Fig.	Dimensions A	B	C	L	M	N	O	PER PKG. OF 100 1-4	5-9	10-49	Stock No.	PER PKG. OF 500 EA.	2-Up
47 D 3852	93-1500	F	.165	.187	.046	.431	.156	.150	.125	10.20	9.00	8.00	.....	.....	.....
47 D 3853	93-1503	F	.165	.187	.046	.556	.281	.150	.125	10.20	9.00	8.00	.....	.....	.....
47 D 3855	93-1518	F	.148	.172	.040	.482	.250	.110	.125	10.20	9.00	8.00	.....	.....	.....
47 D 3856	93-1531	F	.171	.187	.046	.681	.281	.150	.250	11.90	10.50	9.33	.....	.....	.....
47 D 3857	93-2000	G	.171	.187	.148	.478	.203	.150	.125	10.20	9.00	8.00	.....	.....	.....
47 D 3858	93-2001	G	.171	.187	.148	.540	.203	.150	.187	11.00	9.75	8.66	.....	.....	.....
47 D 3777	93-1501	F	.165	.187	.046	.493	.156	.150	.187	11.00	9.75	8.66	.....	.....	.....
47 D 3782	93-2004	G	.217	.250	.148	.890	.203	.187	.500	18.70	16.50	14.66	.....	.....	.....

MINIATURE FEED THRU — MINIPACK

47 D 3863	83-1500	H	.264	.312	.040	.531	.210	.100	.040	11.90	10.50	9.33	.....	.....	.....
47 D 3841	83-1510	H	.148	.171	.046	.836	.250	.230	.125	10.00	9.00	8.00	.....	.....	.....
47 D 3864	83-1511	H	.171	.187	.040	.836	.250	.212	.187	12.75	11.25	10.00	.....	.....	.....
47 D 3865	83-1504	J	.171	.187	.050	.740	.125	.212	.187	11.90	10.50	9.33	.....	.....	.....
47 D 3842	82-1581	J	.148	.171	.040	.520	.190	.100	.040	3.00	2.50	1.50	47 D 3775	12.50	7.50
47 D 3866	83-1525	K	.218	.250	.062	.187	.281	.375	.250	17.00	15.00	13.33	.....	.....	.....
47 D 3867	83-2000	L	.171	.187	.148	.821	.203	.212	.187	13.60	12.00	10.66	.....	.....	.....
47 D 3791	83-1502	J	.171	.187	.046	.540	.133	.171	.063	9.35	8.25	7.33	.....	.....	.....
47 D 3792	83-2002	L	.171	.187	.148	.947	.203	.275	.250	16.15	14.25	12.66	.....	.....	.....

PROBES AND PLUGS

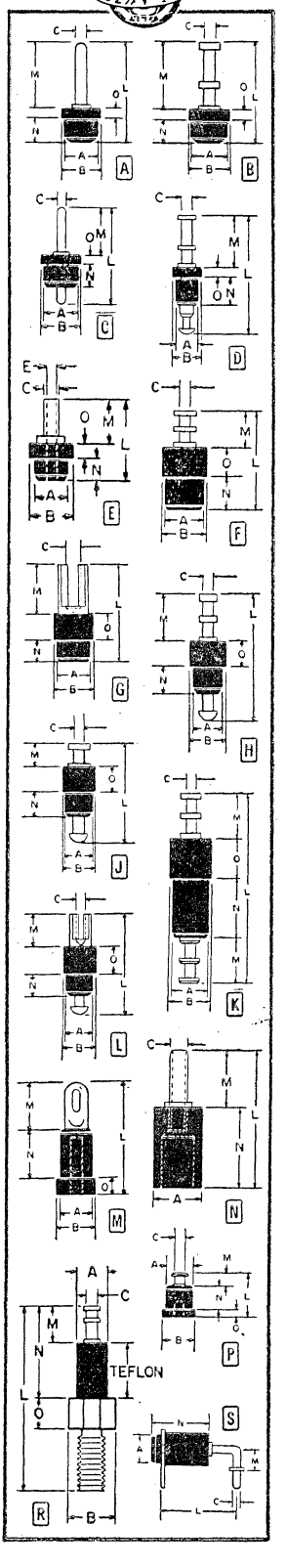
47 D 3871	73-3001	M	.218	—	.080	.645	.270	.375	—	10.20	9.00	8.00	.....	.....	.....

TEST JACKS — MINIPACK

47 D 3872	63-1000	N	.185	.218	.105	.687	.354	.287	.046	10.20	9.00	8.00	47 D 3770	45.00	40.00
47 D 3873	63-1003	P	.185	.218	.054	.437	.120	.271	.046	15.30	13.50	12.00	47 D 3771	67.50	60.00
47 D 3875	63-1005	P	.185	.218	.054	.640	.187	.400	.050	15.30	13.50	12.00	.....	.....	.....
47 D 3876	63-1006	P	.204	.250	.054	.437	.120	.271	.046	17.00	15.00	13.33	.....	.....	.....
47 D 3843	63-1500	P†	.148	.171	.040	.450	.110	.315	.060	15.00	13.50	12.00	47 D 3773	67.50	60.00
47 D 3877	63-1010	P	.148	.172	.040	.345	.120	.179	.046	15.30	13.50	12.00	47 D 3772	67.50	60.00
47 D 3881	63-3003	S	.187	.218	.050	.400	.140	.378	—	29.75	26.25	23.33	.....	.....	.....
47 D 3882	63-3005	S	.187	.218	.035	.400	.140	.378	—	30.60	27.00	24.00	.....	.....	.....

DOUBLE TURRET TERMINAL-THREAD STUD BASE

47 D 3844	53-1500	R	.125	.156	.045	.750	.148	.372	.128	21.25	18.75	16.66	.....	.....	.....
47 D 3861	53-1506	R	.125	.156	.045	.750	.148	.372	.128	21.42	18.90	16.79	.....	.....	.....



"MINISERT" TERMINAL INSERTER

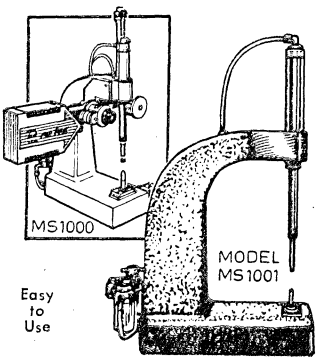
MS-1001. Air-operated, semi-automatic tool installs Teflon® terminals quickly and easily. Simply drop terminal into wide-mouth receptacle, position the terminal board, press switch. For lab or production use. Supplied with hand switch, filter lubricator and regulator. Less tool (listed below). Overall size, 21½x6½x12".

47 D 5360 X. Shpg. wt., 25 lbs. 189.95

47 D 5369 X. MS-1000. Belt-Drive "Minisert." As above, but with automatic terminal feed. Wt., 35 lbs. 529.80

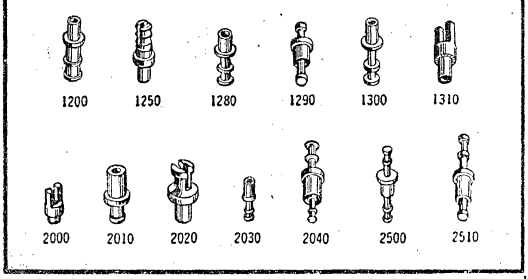
Tools for "Minisert." *Major dia. of terminal (maximum).

Stock No.	Type	Description	Size*	EACH
47 D 5362	MST 1250	Terminal tool set	.125"	39.95
47 D 5363	MST 1720	Terminal tool set	.172"	39.95
47 D 5364	MST 1880	Terminal tool set	.188"	39.95
47 D 5365	MST 2180	Terminal tool set	.218"	39.95
47 D 5366	MST 2500	Terminal tool set	.250"	39.95
47 D 5367	SU-1005	Tool storage unit	....	7.95
47 D 5368	FS-1007	Foot switch	....	39.95



Terminals, Swaging Tools and Handles

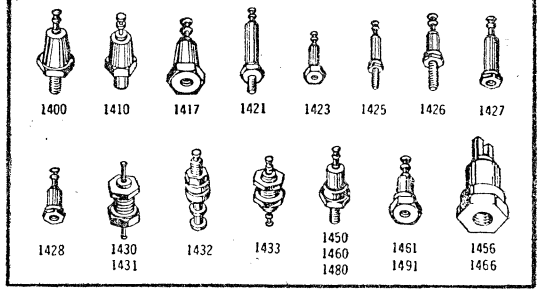
STANDARD TERMINALS



A large selection of standard terminals in miniature and subminiature sizes. Offer a wide choice of terminal configurations—includes hollow lug, bifurcated, turret and feed-through types. Satisfy requirements of all types of electronic assemblies. Simplify design and construction. All terminals are constructed of selected brass stock, in accordance with the requirements of MIL specification QQ-B-626, composition 22, ½ hard. All units are silver-plated according to the requirements of MIL specification QQ-S-365 Type III. In addition, terminals are treated with tarnish-resistant coatings of dichromate, water-dip lacquer and waxes. For further protection, terminals are packaged in vapor-resistant cellothene plastic to ensure user receives units in perfect condition. Av. shpg. wt. per pkg., 2 oz.

Stock No.	Mfr's Type	Shank Dia.	Shank Lgth.	PER PKG. OF 100 1-9	10-49	50-99	100-249
47 D 3604	1200B	.114″	.105″	1.70	1.54	1.43	1.30
47 D 3611	1200C	.114″	.135″	1.70	1.54	1.43	1.30
47 D 3613	1250B	.114″	.105″	3.13	2.70	2.50	2.21
47 D 3614	1250C	.114″	.135″	3.13	2.70	2.50	2.21
47 D 3617	1280A	.091″	.075″	1.22	1.11	1.03	.91
47 D 3618	1280B	.091″	.105″	1.22	1.11	1.03	.91
47 D 3619	1280C	.091″	.135″	1.22	1.11	1.03	.91
47 D 3620	1280D	.091″	.165″	1.22	1.11	1.03	.91
47 D 3621	1290B	.114″	.105″	1.83	1.62	1.50	1.33
47 D 3623	1300B	.114″	.105″	1.87	1.68	1.56	1.38
47 D 3624	1300C	.114″	.135″	1.87	1.68	1.56	1.38
47 D 3625	1300D	.114″	.165″	1.87	1.68	1.56	1.38
47 D 3626	1310B	.114″	.105″	2.39	2.10	1.95	1.73
47 D 3627	1310C	.114″	.135″	2.39	2.10	1.95	1.73
47 D 3628	1310D	.114″	.165″	2.39	2.10	1.95	1.73
47 D 3636	2000B	.063″	.084″	2.10	1.78	1.62	1.43
47 D 3637	2000C	.063″	.115″	2.10	1.78	1.62	1.43
47 D 3639	2010B	.063″	.084″	1.80	1.53	1.39	1.22
47 D 3640	2010C	.063″	.115″	1.80	1.53	1.39	1.22
47 D 3642	2020B	.063″	.084″	2.39	2.05	1.83	1.62
47 D 3643	2030B	.062″	.084″	2.02	1.74	1.55	1.37
47 D 3645	2040B	.126″	.105″	2.39	2.05	1.83	1.62
47 D 3647	2040D	.126″	.165″	2.39	2.05	1.83	1.62
47 D 3648	2500C	.091″	.115″	2.26	1.87	1.73	1.53
47 D 3649	2500D	.091″	.147″	2.26	1.87	1.73	1.53
47 D 3681	2510B	.073″	.084″	2.18	1.85	1.72	1.52
47 D 3682	2510D	.073″	.147″	2.18	1.85	1.72	1.52

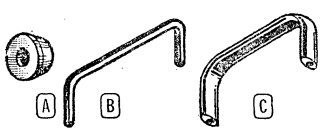
INSULATED TERMINALS



All are stand-off types, except Mfr's Types 1430 through 1433, which are feed-through types. Include standard, miniature and subminiature types, with turret and bifurcated terminal connections. Base connections are of stud, female, and swage types. Breakdown voltages from 1500 to 10,000 volts, AC. Made of brass, with .000015″ gold plate over .0003″ silver plate. Bases of cadmium-plated brass. Brass used meets MIL specification QQ-B-626, composition 22, ½ hard. "S" in table below is thread, or shank diameter; "X" is shank length, except * overall length. "Ins." indicates dielectric material: P, Phenolic (MIL-P-14020 CL 2); A, Alkyd (MIL-M-14E Ty, Mag.); T, Teflon (AMS-3651 B); H, Hi Alumina (JAN I-10, L-5A); D; Dialyl Phthalate (MIL-M-19833, GD1-30). Av. shpg. wt. per package, 2 oz.

Stock No.	Mfr's Type	S	X	Ins.	PER PKG. OF 25 1-3	4-10	11-19	20-39
47 D 3473	1400B	6-32	.250″	P	5.88	5.00	4.50	4.00
47 D 3474	1410D	.188″	.156″	P	5.88	5.00	4.50	4.00
47 D 3475	1417	6-32	....	A	6.38	5.38	4.88	4.25
47 D 3476	1418B	6-32	.250″	A	6.38	5.38	4.88	4.25
47 D 3477	1421	6-32	.250″	A	7.75	6.63	6.00	5.25
47 D 3478	1423	6-32	....	A	7.75	6.63	6.00	5.25
47 D 3479	1425	2-56	.218″	A	7.75	6.63	6.00	5.25
47 D 3480	1426B	.256″	.218″	A	7.25	6.13	5.50	5.00
47 D 3481	1427	2-56	....	A	7.75	6.63	6.00	5.25
47 D 3482	1428	.256″	....	A	7.25	6.13	5.50	5.00
47 D 3483	1430	10-32	.687″*	D	11.38	9.63	8.88	7.75
47 D 3484	1431	10-32	....	T	13.50	11.38	10.38	9.13
47 D 3485	1432	5-40	.796″*	T	10.63	9.00	8.13	7.25
47 D 3486	1433	¼-28	.875″*	D	13.50	11.38	10.38	9.13
47 D 3488	1450B	6-32	.250″	T	7.75	6.63	6.00	5.25
47 D 3489	1450H	4-40	.375″	T	7.75	6.63	6.00	5.25
47 D 3490	1451	6-32	....	T	7.75	6.63	6.00	5.25
47 D 3491	1456	6-32	....	T	8.00	6.75	6.13	5.48
47 D 3492	1456A	4-40	....	T	8.00	6.75	6.13	5.48
47 D 3493	1460B	6-32	.250″	H	7.75	6.63	6.00	5.25
47 D 3494	1460H	4-40	.375″	H	7.75	6.63	6.00	5.25
47 D 3495	1461	6-32	....	H	7.75	6.63	6.00	5.25
47 D 3496	1466	6-32	....	H	8.00	6.75	6.13	5.48
47 D 3497	1480B	.256″	.218″	H	8.77	7.38	6.62	6.00
47 D 3498	1480D	4-40	.218″	H	8.77	7.38	6.62	6.00
47 D 3499	1491A	2-56	....	T	8.77	7.38	6.62	6.00

NICKEL-PLATED BRASS HANDLES

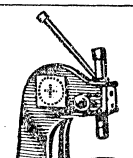


Sturdy handles for instrument panels, rack panels, portable equipment, etc. Each handle is made of brass, and is heavily nickel-plated. Rugged construction makes them stand up to even the most frequent and hard usage. 1015-12, 1017-12, 1033-12, and 1034-12 are oval handles that have 10-32 threaded mounting holes. Type 900-12 is a nickel-plated, brass mounting ferrule that fits Types 1005-12, 1010-12, 1012-12, 1013-12, 1015-12, and 1017-12 handles. Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Fig.	Mtg. Ctrs.	Hand Clearance	EACH 1-10	11-25	26-75	76-199
47 D 3728	1005-12	B	6.44″	1¾″	1.13	.95	.86	.77
47 D 3729	1010-12	B	4.25″	1½″	1.03	.87	.79	.70
47 D 3730	1012-12	B	4.00″	1½″	1.03	.87	.79	.70
47 D 3731	1013-12	B	4.56″	1½″	1.06	.88	.80	.72
47 D 3732	1015-12	B	3″	1½″	1.01	.85	.77	.69
47 D 3733	1017-12	B	2″	1½″	1.07	.90	.83	.73
47 D 3734	1033-12	C	3″	1 9/32″	1.97	1.65	1.51	1.34
47 D 3735	1034-12	C	4.56″	1½″	2.22	1.86	1.69	1.51

Stock No.	Mfr's Type	Fig.	Description	PER PKG. OF TWO 1-10	11-25	26-75	76-199
47 D 3739	900-12	A	1.50″ Brass Ferrule	.33	.29	.27	.22

SWAGING MACHINE



Model A. Hand-operated swaging machine of rugged rack and pinion construction. Precision machined to ensure smooth and rapid work. Designed for simplicity and ease in operation—means little or no man-hours devoted to training. With a 4-to-1 pressure ratio, 3¾″ stroke, and 3½″ throat depth, the Model A is ideally suited to light assembly. For use with swaging tools described below. Shpg. wt., 20 lbs.

47 D 3584 X..... 79.20

SWAGING INSTALLATION TOOLS

Accurately machined from chromium steel alloy, flame-hardened, and highly polished. All tools are ½″ dia. and mount in the Model A swaging machine above. Tool numbers (Mfr's Type) are the same as the numbers of the corresponding terminals (tool 1200 fits terminal 1200B, for example). Av. shpg. wt., 7 oz.

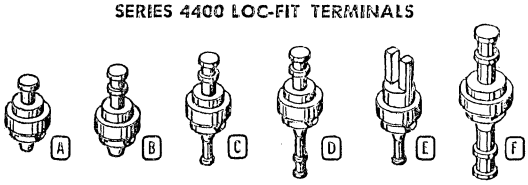
Stock No.	Mfr's Type	For Use With Terminal Type	Stock No.	Mfr's Type	For Use With Terminal Type
47 D 3585	1200	1200B, C	47 D 3591	2010	2010B, C, D
47 D 3586	1250	1250B, C	47 D 3592	2020	2020B
47 D 3587	1280	1280A, B, C, D	47 D 3593	2030	2030B, C
47 D 3588	1300	1300B, C, D	47 D 3594	2040	2040B, C, D
47 D 3589	1310	1310B, C, D	47 D 3595	2500	2500C, D
47 D 3590	2000	2000B, C	47 D 3596	2510	2510B, C

EACH..... 8.80

Write for Prices on Larger Quantities

Terminals, Boards, Hardware, Knobs

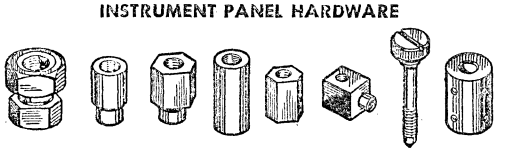
SERIES 4400 LOC-FIT TERMINALS



Simplify design and construction by offering convenient chassis mounting—simply push Teflon® grommet (supplied) into mounting hole and snap-fit terminal into grommet. Nominal chassis thickness 1/16". Types 4441, 4442, 4444 and 4449 are feed-thru types. Types 4435 and 4449 are taper-pin receptacles. 4435 is insulated terminal. Mounting hole: Fig. A-E, 3/64"; F, 3/16". Brass terminals and receptacles, 1/2 hard, composition 22 per QQ-B-626. Finished standard-9 (0.000015 gold over 0.0003 silver). Insulator material, Teflon per MIL-M-14077. Average shpg. wt. per pkg., 4 oz.

Stock No.	Mfr's Type	Fig.	Lgth.	PER PKG. OF 25			
				1-3	4-19	20-39	40-79
47 D 3065	4435B	A	.372"	2.63	2.25	2.00	1.75
47 D 3066	4440B	B	.455"	2.88	2.50	2.25	2.00
47 D 3067	4441B	C	.580"	3.50	2.87	2.62	2.38
47 D 3068	4442B	D	.693"	3.50	2.87	2.62	2.38
47 D 3070	4444B	E	.580"	3.62	3.12	2.75	2.50
47 D 3074	4449B	F	.830"	4.75	4.00	3.62	3.25

INSTRUMENT PANEL HARDWARE



Shaft lock is illustrated in Figure G; swage-type standoffs in Figures H and J; threaded standoffs in Figures K and L; chassis fastener in Figure M; captive panel screw in Figure N, shaft coupling in Figure P. In the heading of the table below, "T" indicates either the type of thread or the recommended board thickness. "X" in the table head indicates the hardware shank length, except *maximum shaft diameter, and †overall length. Stand-off types illustrated by Figure H have 1/4" standoff, except Type 1530B which has a 3/8" standoff. All are brass with cadmium plating, except Type 1510, Type 3200-6 and Series 3316 which are brass with nickel plating. Av. shpg. wt. per pkg., 6 oz.

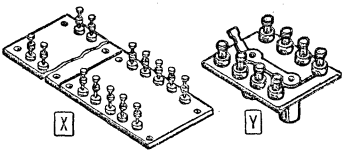
Stock No.	Mfr's Type	Fig.	T	X	PER PKG. OF 10			
					1-5	6-9	10-49	50-99
47 D 3013	1510	G	3/8-32	.250"*	2.00	1.70	1.55	1.35
47 D 3014	1530C	H	.094"	.135"	.80	.70	.60	.55
47 D 3018	1530D	H	.125"	.165"	.80	.70	.60	.55
47 D 3023	1531B	J	.062"	.105"	.80	.70	.60	.55
47 D 3026	1530B	H	.062"	.105"	.80	.70	.60	.55
47 D 3039	1550D	K	6-32	.375"†	1.45	1.25	1.05	.95
47 D 3040	1550F	K	6-32	.625"†	1.45	1.25	1.05	.95
47 D 3041	1550G	K	6-32	.750"†	1.45	1.25	1.05	.95
47 D 3042	1551C	L	6-32	.250"†	1.45	1.25	1.05	.95
47 D 3060	1551E	L	6-32	.500"†	1.45	1.25	1.05	.95
47 D 3045	1551G	L	6-32	.750"†	1.45	1.25	1.05	.95
47 D 3047	1590B	M	.062"	.105"	2.90	2.45	2.20	2.00
47 D 3048	1590C	M	.094"	.135"	2.90	2.45	2.20	2.00
47 D 3049	3200-6	N	6-32	.800"†	2.00	1.65	1.55	1.35
47 D 3052	3316A	P	.250"*	.750"†	5.10	4.65	4.40	4.00
47 D 3057	3316B	P	.125"*	.750"†	5.10	4.65	4.40	4.00

ALUMINUM KNOBS

Round aluminum knobs. For use on receivers, test equipment, hi-fi systems—electronic equipment of any type. All have straight knurl except Type 310-20 which has a diamond knurl. All fit 1/4" shaft. Have anodized aluminum finish. With 6-32 set screws, except Type 310-20 which has 8-32 set screw. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Knob Dia.	Skirt Dia.	EACH			
					1-9	10-24	25-49	50-149
47 D 3722	1000-20	R	5/8"	1"	1.05	.95	.85	.75
47 D 3724	500-20	S	1/2"	5/8"	.97	.88	.79	.70
47 D 3727	310-20	T	5 7/64"	1 1/4"	1.20	1.09	.98	.87
47 D 3725	625-20	W	5/8"	.....	.99	.90	.80	.72

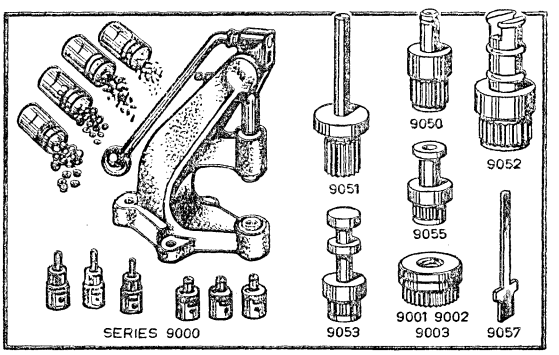
TERMINAL BOARDS



For use where highest quality construction and wiring standards are observed. All boards with 50 terminals are scored .02" deep after every group of 10 terminals so that five identical sections may be snapped off. Each section has four mtg. holes. Boards with 8 terminals have grounding strap in center and mount on 1/4" brass stand-offs with 3-48 tapped hole. Types 1180, 1181 and 1182 are designed to mount 1/2, 1, and 2-watt resistors, respectively, and are .062" thick. Series 1100 is .094" thick with .116" mtg. holes. Series 2200 is .062" thick with .062" mtg. holes. Distance between rows of terminals: Type 1100B, C and D—1 1/2, 2 and 2 1/2", respectively; Types 2200B and C—1/2 and 3/4"; Types 1180, 1181 and 1182—1/2, 3/4 and 7/8". Series 1100 and 2200 are made of phenolic; Types 1180, 1181 and 1182 are glass melamine. All terminals are brass. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	No. of Term.	Size	EACH			
					1-5	6-24	25-49	50-149
47 D 2910	1100B	X	50	2x1 3.12"	3.40	2.87	2.61	2.30
47 D 2911	1100C	X	50	2 1/2x1 3.12"	3.56	3.01	2.73	2.41
47 D 2912	1100D	X	50	3x1 3.12"	3.75	3.17	2.88	2.55
47 D 2916	2200B	X	50	.75x7.81"	2.99	2.53	2.30	2.03
47 D 2917	2200C	X	50	1x7.81"	2.97	2.51	2.28	2.02
47 D 2920	1180	Y	8	.719x.88"	.78	.66	.60	.53
47 D 2921	1181	Y	8	1.03x1.22"	.78	.66	.60	.53
47 D 2922	1182	Y	8	1.16x1.5"	.88	.74	.67	.60

SELF-PUNCHING COMPONENTS



SERIES 9000 DESIGN KIT

Install hardware in almost any material without pre-punching or drilling. Component punches own hole and is installed in one operation. Includes: 1/2-ton press with 3 1/2" throat, 6 sets of color-coded tools, and 6 different components. 11 3/4x9 1/2x5". Wt., 17 1/2 lbs.

47 D 3472 X.....Each 199.50
47 D 3500. 9053T Tool for 9000 Press.....Each 27.50
47 D 3501. 9055T Tool for 9000 Press.....Each 27.50
47 D 3502. 9062T Tool for 9000 Press.....Each 27.50
47 D 3503. 9057T Tool for 9000 Press.....Each 77.28

SELF-PUNCHING TERMINALS AND BUSHINGS

Terminals are tin-plated brass per QQ-B-626; brass bushings, cadmium plated per QQ-P-416. Tools (above) for installing terminals and bushings have same part number but with letter T added. *Installation tool included in 9000 kit. Wt. per pkg. of 100, 4 oz.

TERMINALS

Stock No.	Mfr's Type	Shank		PER PKG. OF 100			
		Dia.	Lgth.	1-9	10-49	50-99	100-249
47 D 3504	*9050	.095"	.100"	2.55	2.38	2.21	2.01
47 D 3505	*9051	.073"	.078"	3.08	2.87	2.67	2.42
47 D 3506	*9052	.129"	.100"	4.30	4.02	3.73	3.39
47 D 3507	9053	.095"	.066"	2.24	2.09	1.94	1.76
47 D 3513	9055	.095"	.078"	2.39	2.23	2.07	1.88
47 D 3508	9062	.073"	.078"	4.48	4.06	3.64	3.22
47 D 3509	9057	Post Dimen. .050x.032"		2.32	2.12	1.94	1.68

THREADED BUSHINGS

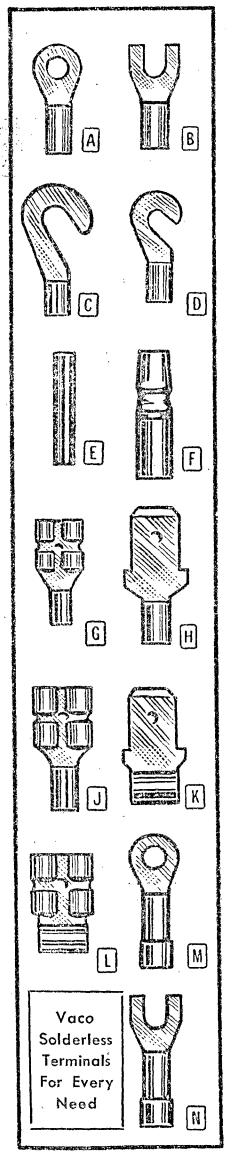
Stock No.	Mfr's Type	Dia.	Lgth.	Thd.	PER PKG. OF 100			
					1-9	10-49	50-99	100-249
47 D 3510	*9001	.312"	.125"	6-32	5.54	5.02	4.50	4.09
47 D 3511	*9002	.375"	.125"	10-32	6.10	5.53	4.96	3.81
47 D 3512	*9004	.250"	.125"	4-40	4.62	4.18	3.75	3.40

Solderless Terminals and Crimping Tools

VACO

Form excellent electrical connections. Constructed of copper alloy for maximum conductivity.

Explanation of symbols in table: †1¼" male tab. §Female tab socket. ‡¼" angle male tab. #Angle female tab socket. **Butt connector. ††Snap term.



See Manufacturers' Index for more Vaco crimping tools, accessories. Allied maintains complete stocks of Vaco equipment and can supply any component in larger quantities. Contact Allied's facility nearest you for prompt price and delivery quotations.

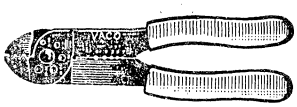
NON-INSULATED TERMINALS

Wire Size	Stud Size	Lth.	Fig.	Stock No.	Mfr's Type	PER PKG. OF 100 1-9	10-49	50-99	100-Up
22-18	4	19/32"	A	47 D 4200	11204	2.71	1.62	1.31	1.18
22-18	5-6	17/32"	A	47 D 2800	11205	2.71	1.62	1.31	1.18
22-18	5-6	3/4"	A	47 D 2801	11206	2.71	1.62	1.31	1.18
22-18	8	43/64"	A	47 D 4201	11208	2.71	1.62	1.31	1.18
22-18	10	3/4"	A	47 D 2802	11210	2.71	1.62	1.31	1.18
16-14	5-6	17/32"	A	47 D 2803	11305	2.71	1.62	1.31	1.18
16-14	5-6	23/32"	A	47 D 2804	11306	2.71	1.62	1.31	1.18
16-14	8	23/32"	A	47 D 4204	11308	2.71	1.62	1.31	1.18
16-14	10	23/32"	A	47 D 2805	11310	2.71	1.62	1.31	1.18
12-10	10	3/4"	A	47 D 2807	11410	3.38	2.02	1.63	1.47
12-10	12-¼	29/32"	A	47 D 2808	11414	4.49	2.69	2.18	1.96
8	10	17/64"	A	47 D 2806	31510	14.66	8.79	7.12	6.41
8	¼	17/64"	A	47 D 2814	31514	14.66	8.79	7.12	6.41
8	3/8	17/64"	A	47 D 2815	31538	14.66	8.79	7.12	6.41
8	5/16	17/64"	A	47 D 2824	31556	14.66	8.79	7.12	6.41
22-18	4	17/32"	B	47 D 4205	13204	2.42	1.45	1.17	1.05
22-18	5-6	17/32"	B	47 D 2812	13206	2.42	1.45	1.17	1.05
22-18	8	41/64"	B	47 D 4206	13208	2.71	1.62	1.31	1.18
22-18	10	11/16"	B	47 D 4207	13210	2.71	1.62	1.31	1.18
16-14	4-6	49/64"	B	47 D 2810	13306	2.71	1.62	1.31	1.18
16-14	8	21/32"	B	47 D 4208	13308	2.71	1.62	1.31	1.18
16-14	10	49/64"	B	47 D 2811	13310	2.71	1.62	1.31	1.18
22-18	4-6	9/16"	B	47 D 2809	14206	2.42	1.45	1.17	1.05
22-18	8	5/8"	C	47 D 2819	15208	2.71	1.62	1.31	1.18
16-14	4-6	19/32"	D	47 D 4209	15306	2.71	1.62	1.31	1.18
16-14	8	21/32"	C	47 D 4210	15308	2.71	1.62	1.31	1.18
22-18	.....	9/16"	E	47 D 2816	17202**	2.71	1.62	1.31	1.18
16-14	.....	9/16"	E	47 D 2817	17302**	2.71	1.62	1.31	1.18
12-10	.....	11/16"	E	47 D 2818	17402**	3.38	2.02	1.63	1.47
16-14	.....	5/8"	F	47 D 2813	19301††	2.10	1.25	1.01	.91
22-18	.....	17/32"	G	47 D 4213	18204§	2.71	1.62	1.31	1.18
16-14	.....	23/32"	H	47 D 2820	18301†	2.71	1.62	1.31	1.18
16-14	.....	23/32"	J	47 D 2821	18302§	2.71	1.62	1.31	1.18
16-14	.....	9/16"	K	47 D 2822	18303‡	2.71	1.62	1.31	1.18
16-14	.....	15/32"	L	47 D 2823	18304#	2.71	1.62	1.31	1.18

INSULATED TERMINALS

Stock No.	Mfr's Type	PER PKG. OF 100 1-9	10-49	50-99	100-Up
47 D 4214	51204	4.73	2.83	2.29	2.06
47 D 2828	51205	4.73	2.83	2.29	2.06
47 D 2829	51206	4.73	2.83	2.29	2.06
47 D 4215	51208	4.73	2.83	2.29	2.06
47 D 2830	51210	4.73	2.83	2.29	2.06
47 D 2831	51305	4.73	2.83	2.29	2.06
47 D 2832	51306	4.73	2.83	2.29	2.06
47 D 4217	51308	4.73	2.83	2.29	2.06
47 D 2833	51310	4.73	2.83	2.29	2.06
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
47 D 4218	53204	4.73	2.83	2.29	2.06
47 D 2840	53206	4.73	2.83	2.29	2.06
47 D 4219	53208	4.73	2.83	2.29	2.06
47 D 4220	53210	4.73	2.83	2.29	2.06
47 D 2838	53306	4.73	2.83	2.29	2.06
47 D 4221	53308	4.73	2.83	2.29	2.06
47 D 2839	53310	4.73	2.83	2.29	2.06
47 D 2837	54206	4.73	2.83	2.29	2.06
.....	.....	.....	.....	.....	.....
47 D 4222	55306	4.73	2.83	2.29	2.06
47 D 4223	55308	4.73	2.83	2.29	2.06
47 D 2841	57202	4.73	2.83	2.29	2.06
47 D 2842	57302	4.73	2.83	2.29	2.06
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
47 D 2847	58301	4.73	2.83	2.29	2.06
47 D 4225	58302	5.25	3.31	2.68	2.41
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

MODEL 1900 CRIMPING TOOL



For fast crimping of solderless terminals. Has 3 dies for use with non-insulated terminals on 18-22, 14-16, and 10-12 wires. Also strips insulation from No. 22 to 10 wire; cuts wire and bolts. Rugged steel; comfortable plastic handles. Wt., 1 lb.

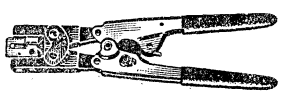
47 D 4233.....4.50

MODEL 1963 ALL-PURPOSE CRIMPING TOOL

Provides everything needed for electrical connections without soldering. Has crimping dies for insulated and non-insulated terminals. Cuts and strips wire; shears bolts. Wire cutter located at tip of tool for close work. Stripping notches for Nos. 10, 12, 14, 16, 18, 20 and 22 wire. Shears bolts 10-32, 6-32, 5-40, 10-24, 8-32 and 4-40. Steel tool, comfort grip plastic handles. Shpg. wt., 1 lb.

47 D 4237.....4.95

MODEL T-1710 CRIMPING TOOL



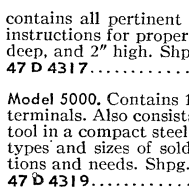
Crimps all terminals in wire range of 22 to 10 gauge. Built-in ratchet, safety release for uniform crimps. Compound lever action. Wt., 1 lb.

47 D 2836.....35.00

DOUBLE-GRIP INSULATED TERMINALS

Wire Size	Stud Size	Lgth.	Fig.	Stock No.	Mfr's Type	PER PKG. OF 100 1-9	10-49	50-99	100-Up
22-18	5-6	47/64"	M	47 D 4244	91205	8.27	4.96	4.02	3.62
16-14	5-6	23/32"	M	47 D 4249	91305	8.27	4.96	4.02	3.62
16-14	10	55/64"	M	47 D 4252	91310	8.27	4.96	4.02	3.62
22-18	4	23/32"	N	47 D 4253	93204	8.27	4.96	4.02	3.62
22-18	8	51/64"	N	47 D 4255	93208	8.27	4.96	4.02	3.62
22-18	10	27/32"	N	47 D 4256	93210	8.27	4.96	4.02	3.62
16-14	8	51/64"	N	47 D 4258	93308	8.27	4.96	4.02	3.62
16-14	10	27/32"	N	47 D 4259	93310	8.27	4.96	4.02	3.62

VACO TERMINAL KITS



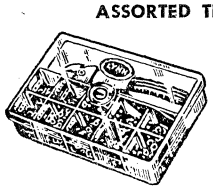
Model 4900-63. Popular assortment contains 500 insulated single-grip solderless terminals, plus a rugged combination crimper-cutter tool for correct installation. Package includes: 20 different types and sizes of terminals; Vaco Model 1963 high-grade steel service tool that cuts and strips wire 22 to 10 gauge and crimps insulated solderless terminals (two crimping dies, marked stripping notches); steel storage case with individual compartments for terminals and tool. Handy reference card in the cover of the box contains all pertinent information about the terminals. Complete instructions for proper crimping procedure. Case, 13¼" wide, 9¼" deep, and 2" high. Shpg. wt., 10 lbs.

47 D 4317.....32.50

Model 5000. Contains 1000 single-grip non-insulated type solderless terminals. Also consists of a combination crimping-cutter installing tool in a compact steel storage box. Includes 50 each of 20 different types and sizes of solderless terminals to meet almost all applications and needs. Shpg. wt., 10 lbs.

47 D 4319.....32.50

ASSORTED TERMINALS SERVICING KIT



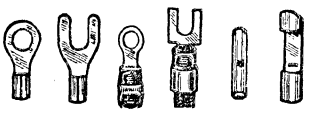
Model 2195. Handy kit contains approximately 170 solderless terminals in most popular sizes, in addition to a Type 1900 crimper/cutter tool described on opposite page. Terminal assortment and tool are supplied in handy clear plastic case with slotted compartment dividers for index tabs. Case size, 8¾x6x1¾". Wt., 2 lbs.

47 D 4427.....8.95

Terminals, Tools, Connectors, Patch Cords

AMERICAN PAMCOR TERMINALS AND TOOLS

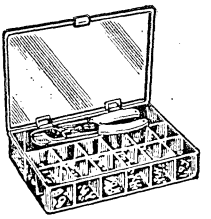
SOLDERLESS TERMINALS



General Wiring Terminals. Excellent for radio-TV, electronic assemblies and electrical repairs. Ideal for use where power for soldering iron is not available. Require crimping tools below, right—Type 47100-1 for insulated terminals and Type 49835-1 for non-insulated terminals. *Indicates insulated terminals—plastic outer sleeves. U.L. Component Program-Recognized. 100 per pkg. Wt. per pkg. of 100, 8 oz.

Stock No.	Mfr's Type	Fig.	Type	Wire Size	Stud Size	PER PKG.
47 D 5311	34194	A	Ring	22-16	4-6	4.11
47 D 5310	33214	A	Ring	16-14	8-10	4.69
47 D 5313	34197	A	Ring	16-14	4-6	4.69
47 D 5314	33217	A	Ring	16-14	8-10	4.11
47 D 5315	33477	B	Spade	16-14	4-6	5.24
47 D 5316	33219	B	Spade	16-14	8-10	5.24
47 D 5301	34149*	C	Ring	22-16	8-10	6.96
47 D 5302	34142*	C	Ring	22-16	4-6	6.96
47 D 5303	34070*	.....	Splice	22-16	.....	8.36
47 D 5304	34158*	C	Ring	16-14	4-6	6.96
47 D 5305	34161*	C	Ring	16-14	8-10	6.96
47 D 5306	34165*	D	Spade	16-14	4-6	6.96
47 D 5307	34167*	D	Spade	16-14	8-10	6.96
47 D 5308	34071*	.....	Splice	16-14	.....	8.36
47 D 5323	34154*	D	Spade	22-16	5-6	6.96
47 D 5312	31818	E	Splice	22-16	.....	4.90
47 D 5317	31762	F	Knife	22-16	.....	11.80
47 D 5318	31763	F	Knife	16-14	.....	11.80
47 D 5319	35115*	.....	Pigtail	22-14	.....	4.49
47 D 5320	35653*	.....	Pigtail	18-10	.....	7.27

29033 SOLDERLESS TERMINAL KIT



Kit contains a wide assortment of most popular types of insulated solderless terminals for a wide variety of general-purpose wiring applications. It's ideal for radio and TV servicemen and technicians, automobile mechanics and repairmen, hobbyists and experimenters. Permits a wide range of fast and easy component connections without using a soldering iron. Includes heavy-duty "Super-Champ" crimping and wiring tool (Type 47100-1) described below. Insulated terminals including ring, spade, splice and pigtail types (see illustrations at left). All items are housed in compact, transparent plastic case which has compartments for each type of terminals, plus section for "Super-Champ" crimping tool. Terminals are for use with wire sizes from 10 to 22. Case, 9¾x6½x2". Shpg. wt., 2 lbs.

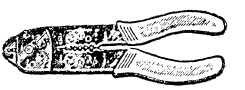
47 D 5322 ..... 24.00

"SUPER-CHAMP" CRIMPING TOOLS

47100-1

Type 47100-1. Crimps insulated solderless terminals; shears machine screws, measures stud sizes, cuts and strips wire. Constructed of tool steel. Has insulated plastic handles with a comfortable "feel," permits long use without tiring. 1 lb.

47 D 5321 ..... 4.95



49835-1

Type 49835-1. For crimping non-insulated terminals. Otherwise same as above tool—shears machine screws, measures stud sizes, cuts and strips wire. 1 lb.

47 D 4453 ..... 4.95

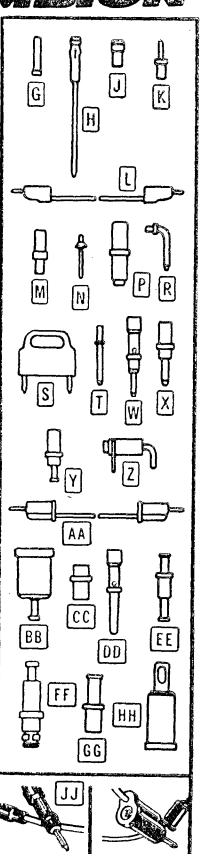
CAMBION®

MINIATURE CONNECTORS AND PATCH CORDS (Av. pkg. wt., 2 oz.)

Cambion miniature connectors for high-density circuit and packaging applications. Made for reliability and flexibility in interconnecting modern miniaturized components, IC's, and PC boards. Available in wide range of styles: jacks, plugs, taper-pin receptacles, and combination units, in sizes from .016" to .080". Cage-design jacks have beryllium copper contacts. Connectors, pkgs. of 100 (2 oz.); patch cords, pkgs. of 10 (10 oz.). *For 1/16" PC board; also available for 1/32" or 3/32" board. †Specify: Black, Red or Blue. ‡Thru-hole.

JJ 3892-01-01 PATCH CORD KIT. Contains 100 assorted patch cords with .040" pins. Wt., ½ lb.

47 D 2616 ..... 49.59



Stock No.	Mfr's Type	Fig.	Description	Jack/ Pin Dia.	Pkg. Qty.	PER PACKAGE 1-4	5-9	10-24	25-49	50-99
47 D 2552	3750-01-03	G	Jack PC Dip Solder	.014"	100	11.50	10.50	9.50	9.00	.....
47 D 2553	3844-01-03	H	Jack/Wire Wrap Pin	.014"	100	20.00	18.00	16.00	15.00	.....
47 D 2557	3772-01-03	G	Jack PC Dip Solder	.016-.020"	100	11.50	10.50	9.50	9.00	.....
47 D 2558	3703-01-03	G	Jack PC Dip Solder	.025"	100	11.50	10.50	9.50	9.00	.....
47 D 2559	3230-01-03	J	Jack PC Dip Solder	.025"	100	24.00	22.00	20.00	18.00	.....
47 D 2560	3394-02-03*	M	Jack PC Swage Type	.025"	100	24.00	22.00	20.00	18.00	.....
47 D 2561	3309-01-03	P	Jack/Jack	.025-.040"	100	28.00	26.00	23.00	22.00	.....
47 D 2562	3231-02-03*	K	Pin-.125" (.040" mtg. dia.)	.025"	100	5.82	5.82	4.48	4.48	4.19
47 D 2563	3393-02-03*	K	Pin-.188" (.058" mtg. dia.)	.025"	100	3.55	3.55	2.73	2.73	2.56
47 D 2564	3889-01-03	N	Pin-.188" (.031" mtg. dia.)	.025"	100	4.51	4.51	3.47	3.47	3.25
47 D 2567 C	3389-02-031†	L	4" Piggyback Patch Cord	.025-.025"	10	7.60	7.60	6.50	6.50	5.70
47 D 2569	1521-02-03*	R	Right-Angle Pin	.040"	100	8.99	8.99	6.92	6.92	6.47
47 D 2570	2970-02-03*	T	Pin (.300" pin lgth.)	.040"	100	4.81	4.81	3.70	3.70	3.46
47 D 2571	2971-02-03*	T	Pin (.150" pin lgth.)	.040"	100	4.05	4.05	3.12	3.12	2.92
47 D 2573	3232-02-03‡	T	Pin (.300" pin lgth.)	.040"	100	5.59	5.59	4.30	4.30	4.02
47 D 2574	3233-02-03‡	T	Pin (.150" pin lgth.)	.040"	100	4.69	4.69	3.61	3.61	3.38
47 D 2575	3241-01-03‡	T	Pin (.100" pin lgth.)	.040"	100	5.82	5.82	4.48	4.48	4.19
47 D 2576 C	2871-01-031-†	S	Shorting Plug	.040"	100	25.00	25.00	21.00	19.00	.....
47 D 2582	3388-01-03	J	Jack PC Dip Solder	.040"	100	24.00	22.00	20.00	18.00	.....
47 D 2583	3704-01-03	G	Jack PC Dip Solder	.040"	100	11.50	10.50	9.50	9.00	.....
47 D 2584	3422-01-03	Z	Side-Mounted Jack	.040"	100	28.00	26.00	23.00	22.00	.....
47 D 2586	3320-02-03†	Y	Jack/Terminal .040"	.040"	100	27.00	25.00	22.00	21.00	.....
47 D 2587 C	4352-01-031-†	BB	Insul. Jack/Terminal	.040"	100	24.00	22.00	20.00	18.00	.....
47 D 2590	3310-02-03*	X	Jack Pin Swage	.040-.040"	100	27.00	25.00	22.00	21.00	.....
47 D 2591 C	3306-02-031-†	L	4" Patch Cord	.040"	10	4.80	4.80	4.10	4.10	3.60
47 D 2592 C	3705-01-031-†	AA	2" Patch Cord	.040-.040"	10	8.30	8.30	7.10	7.10	6.20
47 D 2594	3308-01-03	W	Pin MS3191 Crimp	.040"	100	8.99	8.99	6.92	6.92	6.47
47 D 2568	3220-02-05*	K	Pin-.188" (.060" mtg. dia.)	.045"	100	2.94	2.94	2.26	2.26	2.12
47 D 2547	2378-02-08*	FF	Jack/Term.	.045"	100	.31	.24	.22	.20	.18
47 D 2595	1781-01-03	DD	.061" Taper Pin	.053"	100	8.57	8.57	6.60	6.60	6.17
47 D 2596	1015-02-04*	CC	.061" Taper Receptacle	.053"	100	3.51	3.07	2.73	.....	.....
47 D 2597	2115-03-04	EE	.061" Taper Receptacle	.053"	100	8.67	8.67	6.68	6.68	6.24
47 D 2598	2186-02-04*	GG	.061" Taper Receptacle	.053"	100	6.45	6.45	4.97	4.97	4.64
47 D 2599	3398-01-03	G	Jack PC Dip Solder	.080"	100	27.00	25.00	22.00	21.00	.....
47 D 2605	3888-01-03	X	Side-Mounted Jack	.080"	100	49.00	45.00	40.00	38.00	.....
47 D 2607	4354-01-0310	H	.215" Press-Mount Jack	.080"	100	31.00	28.00	25.00	24.00	.....
47 D 2611	4355-01-0310	H	.185" Press-Mount Jack	.080"	100	17.00	16.00	14.00	13.00	.....
47 D 2614	3369-03-03	W	Pin MS3191 Crimp	.080"	100	8.99	8.99	6.92	6.92	6.47

H. H. Smith Spacers, Posts . . Raytheon Hardware

H. H. SMITH BRASS SPACERS

BRASS SPACERS

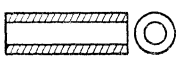
Round spacers for raising sub panels, chassis, condensers, etc. Durable cadmium-plated brass. Precision machined; lengths and outer diameters accurate to ±1/32". Tapped bushings for threads indicated in tables. **Packed 10 per package.** Av. shpg. wt., 6 oz.

ROUND—NON-THREADED ¼" O.D.

Stock No.	Mfr's Type	Screw Size	Length	PER PKG. OF 10		
				1-9	10-24	25-49
47 D 4628	8700	4	⅛"	.25	.23	.21
47 D 4629	8703	4	3/16"	.28	.25	.23
47 D 4718	2340	4	¼"	.33	.30	.27
47 D 4630	8706	4	5/16"	.37	.33	.31
47 D 4719	2341	4	⅜"	.44	.39	.36
47 D 4720	2342	4	½"	.53	.48	.44
47 D 4721	2343	4	¾"	.63	.57	.52
47 D 4723	2344	4	1"	.72	.65	.60
47 D 4632	8701	6	⅛"	.25	.23	.21
47 D 4633	8704	6	3/16"	.28	.25	.23
47 D 4724	2100	6	¼"	.33	.30	.27
47 D 4634	8707	6	5/16"	.37	.33	.31
47 D 4725	2101	6	⅜"	.44	.39	.36
47 D 4726	2102	6	½"	.53	.48	.44
47 D 4728	2103	6	¾"	.63	.57	.52
47 D 4729	2104	6	1"	.72	.65	.60
47 D 4637	8705	8	3/16"	.28	.25	.23
47 D 4730	2105	8	¼"	.33	.30	.27
47 D 4731	2106	8	⅜"	.44	.39	.36
47 D 4732	2107	8	½"	.53	.48	.44
47 D 4733	2108	8	¾"	.63	.57	.52
47 D 4734	2109	8	1"	.72	.65	.60

ROUND—THREADED ¼" O.D.

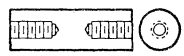
Stock No.	Mfr's Type	Tap	Length	PER PKG. OF 10		
				1-9	10-24	25-49
47 D 4755	2370	4-40	¼"	.39	.35	.32
47 D 4642	8766	4-40	5/16"	.43	.39	.36
47 D 4756	2371	4-40	⅜"	.50	.45	.41
47 D 4758	2372	4-40	½"	.60	.54	.50
47 D 4645	8775	4-40	⅝"	.70	.63	.58
47 D 4759	2373	4-40	¾"	.84	.76	.70
47 D 4760	2374	4-40	1"	1.04	.94	.86
47 D 4761	2120	6-32	¼"	.39	.35	.32
47 D 4648	8767	6-32	5/16"	.43	.39	.36
47 D 4765	2121	6-32	⅜"	.50	.46	.41
47 D 4766	2122	6-32	½"	.60	.54	.50
47 D 4650	8773	6-32	9/16"	.65	.59	.54
47 D 4767	2123	6-32	¾"	.84	.76	.70
47 D 4768	2124	6-32	1"	1.04	.95	.86
47 D 4771	2126	8-32	⅜"	.50	.46	.41
47 D 4772	2127	8-32	½"	.60	.54	.50
47 D 4773	2128	8-32	¾"	.84	.76	.70
47 D 4774	2129	8-32	1"	1.04	.94	.86



ALUMINUM SPACERS

¼" O.D. tubular spacers with precision machined ends, lengths accurate to ±.005". Aluminum with iridite finish (meet MIL-C-5541 specifications). Inside diameter for #4 screws is .113"; for #6 screws, .140"; for #8, .169". **Packed 10 to a package.** Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Screw Size	Length Inches	PER PKG. OF 10		
				1-9	10-24	25-49
47 D 4676	8481	4	¼	1.05	.95	.87
47 D 4677	8483	4	½	1.17	1.08	.99
47 D 4678	8501	6	¼	1.05	.95	.87
47 D 4679	8503	6	½	1.17	1.08	.99
47 D 4680	8505	6	¾	1.42	1.28	1.18
47 D 4681	8507	6	1	1.50	1.35	1.24



ALUMINUM POSTS

Round .250" O.D. metallic rods tapped through, or at each end. Support and separate components or structural members without need for long screws or machine nuts. Aluminum with iridite finish. Length and O.D. within ±.005" tolerance. *Minimum full-thread depth. **Packed 10 posts to a package.** Av. wt., 3 oz.

Stock No.	Mfr's Type	T	Length Inches	*d	PER PKG. OF 10		
					1-9	10-24	25-49
47 D 4686	8323	4-40	½	Thru	1.30	1.17	1.08
47 D 4687	8327	4-40	1	¼	1.80	1.62	1.49
47 D 4688	8329	4-40	1½	¼	2.02	1.80	1.65
47 D 4689	8343	6-32	½	Thru	1.30	1.17	1.08
47 D 4690	8345	6-32	¾	Thru	1.55	1.40	1.28
47 D 4691	8347	6-32	1	⅜	1.80	1.62	1.49
47 D 4692	8349	6-32	1½	⅜	2.02	1.80	1.65
47 D 4693	8351	6-32	2	⅜	2.17	1.99	1.82
47 D 4695	8352	6-32	2½	⅜	2.40	2.16	1.98
47 D 4697	8353	6-32	3	⅜	2.55	2.30	2.11
47 D 4698	8355	6-32	4	⅜	3.20	2.88	2.65

FIBER SPACERS

Round fiber bushings for screw sizes indicated in table. Meet MIL-F-1148A, Grade CH specifications. Ideal for use in raising sub panels, chassis, condensers, transformers, etc. in electronic assemblies. Have ¼" outside diameter. **Packed 10 spacers to a package.** Av. wt. 2 oz.

Stock No.	Mfr's Type	Screw Size	Length	PER PKG. OF 10		
				1-9	10-24	25-49
47 D 4656	8880	4	⅛"	.30	.27	.25
47 D 4657	8883	4	3/16"	.34	.31	.28
47 D 4700	2335	4	¼"	.39	.35	.32
47 D 4658	8886	4	5/16"	.40	.36	.33
47 D 4701	2336	4	⅜"	.50	.45	.42
47 D 4702	2337	4	½"	.60	.54	.50
47 D 4703	2338	4	¾"	.72	.65	.60
47 D 4705	2339	4	1"	.83	.75	.69
47 D 4660	8881	6	⅛"	.30	.27	.25
47 D 4706	2130	6	¼"	.39	.35	.32
47 D 4662	8887	6	5/16"	.40	.36	.33
47 D 4707	2131	6	⅜"	.50	.45	.42
47 D 4708	2132	6	½"	.60	.54	.50
47 D 4665	8896	6	⅝"	.65	.59	.54
47 D 4709	2133	6	¾"	.72	.65	.60
47 D 4710	2134	6	1"	.83	.75	.69
47 D 4711	2140	8	¼"	.39	.35	.32
47 D 4714	2142	8	½"	.60	.54	.50
47 D 4715	2143	8	¾"	.72	.65	.60
47 D 4716	2144	8	1"	.83	.75	.69

LEATHER EQUIPMENT HANDLES

Black leather with matching stitching. **Spring Glide** contoured handle moves up for carrying, down when not in use. Will not rattle under extreme sound conditions. Chrome plated caps. **Retracto-Link** handle attaches with rivets or screws, drops down when not in use. Nickel plated steel hardware. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Description	Lgth.	EACH		
				1-9	10-49	50-99
47 D 4354	2089	Spring Glide	6"	3.00	2.50	2.25
47 D 4365	2093	Retracto-Link	4½"	2.70	2.25	2.03
47 D 4366	2094	Retracto-Link	5½"	2.70	2.25	2.03
47 D 4367	2095	Retracto-Link	6¾"	2.70	2.25	2.03

RAYTHEON CAPTIVE SCREW AND INSERT

Meet MIL-E-16400 Specs

Made of corrosion-free, non-tarnishing stainless steel. Meets MIL-E-16400 (Ships) specs. The CS-122 slotted head thumbscrew requires a PIN-122 panel insert bushing to secure captive screw to a panel. Fit panels from .119" to .156" thick. Fits hole .272" countersunk .359 to .406". Captive screw is 1" long, less head. Straight-knurled head is 7/16" long. Bushing is ⅜" dia. Wt., 2 oz.

Stock No.	Mfr's Type	Thread Size	EACH		
			1-499	500-999	1000-2499
47 D 5358	CS-122	10-32	.60	.52	.49
47 D 5361	PIN-122	10-32	.25	.21	.20

RAYTHEON CIRCUIT-BOARD MOUNTING BRACKETS

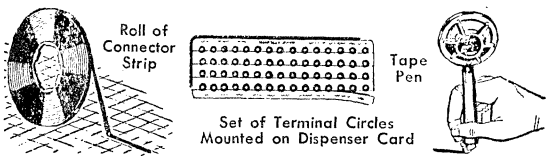
Heavy-duty "L" brackets, to be used in pairs to mount one or two terminal or resistor boards rigidly. Cadmium-plated .090" cold-rolled carbon steel. Meet MIL-STD-202 and MIL-S-901 (Ships) specifications. *Distance between centers of holes in panel supports. Wt., 4 oz.

Stock No.	Mfr's Type	Overall Height	Support Centers*	EACH		
				1-99	100-199	200-499
47 D 6619	MB-125	2 1/16"	1"	.26	.22	.21
47 D 6620	MB-126	2 3/16"	1½"	.27	.23	.22
47 D 6621	MB-127	3 1/16"	2"	.28	.24	.22
47 D 6623	MB-128	3 3/16"	2½"	.30	.26	.24

Allied Is Your Dependable Source for Everything in Electronics

Self-Sticking Numbers, Drafting Aids, Etch Kits

BRADY PRECISION-MADE PC DRAFTING AIDS



Black self-sticking circles and connector strips for use in printed circuit drafting. Save drafting time and costs. Precision cut to size, dimensionally stable. Photograph an opaque jet black without highlights. Meet Military Standard MS16912 (NORD).

TERMINAL CIRCLES (Av. shpg. wt., 1 oz.)

Stock No.	Type No.	O.D.	I.D.	Circles Per Card	MIL-S-MS 16912 (NORD)
47 D 0166	TC125-031	.125″	.031″	112	1E
47 D 0188	TC187-062	.187″	.062″	112	2E
47 D 0200	TC250-062	.250″	.062″	96	....
47 D 0202	TC312-062	.312″	.062″	80	....
47 D 0205	TC375-062	.375″	.062″	54	8E
47 D 0207	TC375-094	.375″	.094″	54	....
47 D 0208	TC400-095	.400″	.095″	48	....
47 D 0215	TC500-062	.500″	.062″	42	12E
47 D 0263	TC500-125	.500″	.125″	42	13E

1-24 Cards.....Each .50 25-99 Cards.....Each .28
100-499 Cards.....Each .25 500-999 Cards.....Each .22

CONNECTOR STRIPS IN ROLLS (18 Yds. Per Roll)

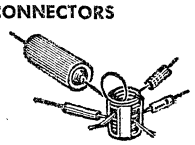
Stock No.	Type No.	Size	Rolls Per Pkg.	PER PKG. 1-24	25-99	100-499
47 D 1749	CSR015	.015″	5	3.75	3.37	3.00
47 D 1750	CSR031	.031″	5	3.75	3.37	3.00
47 D 1752	CSR062	.062″	5	4.00	3.60	3.20
47 D 1753	CSR080	.080″	5	4.00	3.60	3.20
47 D 1754	CSR093	.093″	5	4.00	3.60	3.20
47 D 1756	CSR100	.100″	5	4.00	3.60	3.20
47 D 1758	CSR125	.125″	5	4.00	3.60	3.20
47 D 1759	CSR156	.156″	3	2.40	2.16	1.92
47 D 1765	CSR187	.187″	3	2.40	2.16	1.92
47 D 1771	CSR200	.200″	3	2.40	2.16	1.92
47 D 1773	CSR250	.250″	2	1.80	1.62	1.44

MODEL TP-4 TAPE PEN

Precision drafting instrument provides fast, accurate method of drawing with self-sticking tape. Applies straight, curved or irregular lines. Can be used freehand, with straight edge, French curve or beam compass (below). Handles 18-yd. roll of tape; built-in blade cuts off tape at end of line. 7¼″ long. Shpg. wt., 13 oz.

47 D 0466.....14.95
47 D 0469. BCA-1 Beam Compass Attachment. 6 oz.....12.50

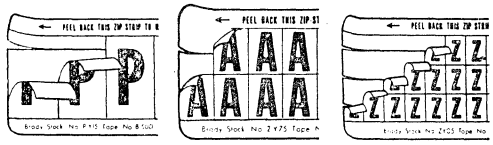
OMNI-GRIP SOLDERLESS CONNECTORS



High-quality connectors for fast, efficient, firm wire connections. Have tension spring inside a forked cup. Leads are held between coils of spring. Type AB-1 is peg-board mount; Type A is screw mount. Accept up to 8 leads. 9/64x1 5/16″ diameter. Shpg. wt., per pkg. of 100, 1 lb.

Stock No.	Mfr's Type	PER PKG. OF 100 1-9	10-49	50-99	100-Up
47 D 2899	A	9.00	8.10	7.30	6.60
47 D 2881	AB-1	14.50	13.40	12.40	11.60

BRADY SELF-STICKING NUMBERS AND LETTERS



A 7/8x1½″ Markers B 9/16x¾″ Markers C 3/4x½″ Markers

Self-sticking markers come on handy dispenser card for easy application. Low cost way to mark parts, drawers and shelves, control boards, panels, terminals. Brady numbers and letters are bold and black, in three sizes, printed on durable, bright-yellow vinyl cloth. Just strip the marker from card and apply to any clean, dry surfaces. Markers stick without water or adhesives. Identical Marker Cards carry multiples of same letter or number. Comb. Cards carry a consecutive series of letters or numbers. Comb. Pacs have alphabet or numerical sequences. *15 cards, 1-5; 10 cards, 6-0. 2 oz.

IDENTICAL MARKER CARDS (Specify Letters or Numbers Wanted)

Stock No.	Mfr's Type	Fig.	Markers Per Card	Type	EACH CARD 1-24	25-99	100-499	500-999	1000-2499	2500-4999
47 D 3168 C	Y15	A	10	A-Z, 0-9	.25	.20	.18	.16	.145	.135
47 D 3169 C	Y75	B	32	A-Z, 0-9	.25	.20	.18	.16	.145	.135
47 D 3170 C	Y05	C	78	A-Z, 0-9	.25	.20	.18	.16	.145	.135

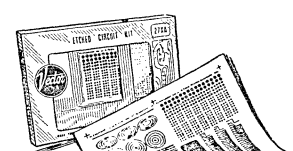
COMBINATION CARDS (Consecutive Series of Letters or Numbers)

47 D 3171	Y15	A	10	A-J	.25	.20	.18	.16	.145	.135
47 D 3172	Y15	A	10	K-T	.25	.20	.18	.16	.145	.135
47 D 3174	Y15	A	10	0-9	.25	.20	.18	.16	.145	.135
47 D 3175	Y75	B	32	A-Z	.25	.20	.18	.16	.145	.135
47 D 3176	Y75	B	32	0-9	.25	.20	.18	.16	.145	.135
47 D 3177	Y05	C	78	A-Z	.25	.20	.18	.16	.145	.135
47 D 3178	Y05	C	78	0-9	.25	.20	.18	.16	.145	.135

COMBINATION PACS (Multi-Card Assortments)

Stock No.	Mfr's Type	Fig.	No. of Cards	Type	EACH MULTI-CARD PAC 1-3	4-19	20-39	40-99	100-199	200-299
47 D 3180	Y15-NC	A	25	Numer.*	5.00	4.50	4.00	3.63	3.38	3.13
47 D 3181	Y75-LC	B	26	A-Z	5.00	4.50	4.00	3.63	3.38	3.13
47 D 3183	Y05-LC	C	26	A-Z	5.00	4.50	4.00	3.63	3.38	3.13
47 D 3184	Y05-NC	C	25	Numer.*	5.00	4.50	4.00	3.63	3.38	3.13

VECTOR ETCHED CIRUIT KIT



Type 27XA. "Vectoresist" rub-on transfer resist sheet with lines, dots and connector pattern. Replaces conventional tapes and liquid resists. Includes: two 4½x6½″ 1-side copper-clad XXXP phenolic; 10x15″ Vectoresist sheet; 2 bags of dry etchant; activator in etching bag; layout paper; instructions. 1¼ lbs.

47 D 5602. 1-49...Each 6.50
50-199.....Each 5.85
200-499.....Each 4.55
500-999.....Each 4.36

47 D 5603. Type R322 Vectoresist Sheet. Replacement 10x15″ rub-on transfer resist sheet with assorted line width, dots, circles and 44 contact .156″ spaced connector pattern. 2 oz.....Each 2.00

DATAK DRY STENCIL LETTERING AND SYMBOL SETS

Electronic Equipment Title Set. Complete set of pre-printed titles for 95% of electronic markings. Instant dry-transfer process; 24 easy-to-handle sheets, 3x5″, in black or white letters. Shpg. wt., 4 oz.

Stock No.	Type	Description	Color	EA.
47 D 4185	958	Title Set	Black	4.95
47 D 4186	959	Title Set	White	4.95
47 D 4187	960	Refill Alphabet	Black	2.50
47 D 4188	961	Refill Alphabet	White	2.50
47 D 4189	962	Refill Numerals	Black	2.50
47 D 4190	963	Refill Numerals	White	2.50

Terminal and Chassis Set. 24 sheets, letters and numerals, in black or white. 3 oz.

Stock No.	Type	Description	Color	EA.
47 D 4191	966	Term./Chas.Set	Black	4.95
47 D 4192	967	Term./Chas.Set	White	4.95

968 Meter and Dial Marking Set. 12 sheets in black, white and red, with designs, letters, numerals for dials, panels. 4 oz.

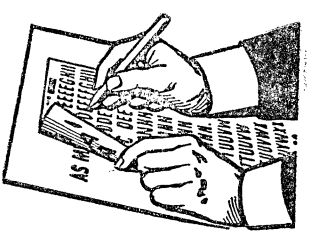
47 D 4199.....4.95

971 Logic Diagram Symbols Kit. Size same as full scale MIL STD 806 B Spec and ASA STD Y 32 and 14. Line width, .020″, blends with #2 Rapidograph pen or 2H pencil. Black. Eight 4¾x7¼″ sheets. 3 oz.

47 D 4202.....3.50

Protective Coatings. Colorless coatings protect Instant Lettering transfers. †Aerosol spray cans. Datakoat is for metal and other non-porous surfaces. 4 oz.

Stock No.	Type	Oz.	EA.
47 D 4193	Protect. spray-matte†	16	2.95
47 D 4194	Protect. spray-gloss†	16	2.95
47 D 4195	Datakoat spray-gloss†	16	2.95
47 D 4196	Datakoat spray-matte†	16	2.95
47 D 4197	Datakoat brush-on	3	1.00



970 Electronic Symbol Set. Dry-transfer symbols produce neater, clearer schematics. Just rub and it's transferred—permanent—looks like printing. All you draw are connecting leads. Opaque black, repro. quality.

47 D 4198. Contains 40 Sheets, 8 oz.. 15.95

Printed Circuit, Layout and Nameplate Kits

KEPRO KITS

Kepro kits offer an introduction to the processing techniques of etched circuit board production. They provide the engineer and experimenter with materials and knowledge to produce accurate, professional circuit boards by tested and proven methods. No prior experience needed. Each kit includes comprehensive instructions that fully describe processing in a simple step-by-step form. All necessary materials and equipment are included. Progress quickly and logically from simple experimental PC boards to short-run production quantities with full assurance of professional results.

STANDARD ETCHED CIRCUIT KIT

S-101A. Etching kit produces basic circuit patterns quickly, accurately. Liquid or pressure-sensitive tape resists are applied directly to copper-clad boards in the desired pattern, then etched. Perforated copper-clad panel, supplied with kit, speeds component mounting. Includes materials for completely processing three single-clad panels, 3x6".
47 D 1100. Shpg. wt., 2 lbs.....3.95

S-101A-G. Standard Etched Circuit Kit. As above, but with G-10 glass epoxy boards instead of XXXP paper-base phenolic boards.
47 D 1101. Shpg. wt., 2 lbs.....5.25

PROFESSIONAL ETCHED CIRCUIT KIT

P-101A Etched circuit kit utilizes photo engraving process to produce professional-quality etched circuits. Negative of layout can be produced photographically or mechanically with materials supplied. A sensitized sheet of XXXP phenolic copper-clad is exposed through your prepared negative, then developed and etched. Includes materials for completely processing three single-clad panels, one 3x3" and two 3x6".
47 D 1036. Shpg. wt., 3 lbs.....5.85

P-101A-G. Professional Etched Circuit Kit. As above, but G-10 glass epoxy boards instead of XXXP paper-base phenolic boards.
47 D 1037. Shpg. wt., 3 lbs.....7.40

ETCHED CIRCUIT KIT LAB

L-505A. Spans range from single experimental breadboards to high-quality, photo-processed, short-run production boards. Boards up to 70 sq. in. may be processed. Includes PL-2A Photo Layout Kit; 15 photo-sensitized copper-clad phenolic XXXP boards; 4 unsensitized boards; developing and etching trays; printing frame, mechanical negative; solutions; accessories.
47 D 1034 U. Shpg. wt., 20 lbs....34.75

L-505A-G. Etched Circuit Kit Lab. Same as above, but with G-10 glass epoxy boards instead of XXXP paper-base phenolic boards.
47 D 1035 U. Shpg. wt., 21 lbs.....42.95

PHOTO LAYOUT KIT

PL-2A. Eliminates necessity of inking and lettering through use of mechanical negative and pressure-sensitive characters. Layout time is reduced; errors easily corrected. May be used directly as negative when made to 1:1 scale or photographed and reduced to desired scale when produced at 2:1 or 4:1. Materials supplied will produce two sheets of artwork each 8x10".
47 D 1016. Shpg. wt., 14 oz.....3.95

PL-200A Master Layout Kit. (Not illus.) Includes materials to make 18x24" artwork. Contents: 2 pcs.—18x24" matte surface "Mylar"; 2 pcs.—18x24" mechanical negative, "Mylar" base; 4 pcs.—17x21" graph paper; Mylar-Master layout grid sheet. 112/1⅛", 224/3⅜", 288/¼", 192/7⁄16", 252/½", 36/1" dots. 18 yds. ea. 1⁄16", 3⁄32", ⅛", 3⁄16", ¼" tape strips; letters; opaquing fluid; tools; data. Wt., 4 lbs.
47 D 1024 U......38.70

PHOTO REVERSING KIT

FK-701. Easy 2-step process for preparing line negatives and positives from taped or ink artwork or to reverse existing negatives and positives. No darkroom, tanks or trays required. Includes 2 pieces of reversing film 10x24", plus all necessary processing chemicals.
47 D 0160. Shpg. wt., 1½ lbs. 7.20

RF-1024 Extra Photo Reversing Film. Size: 10x24".
47 D 0161. Shpg. wt., 8 oz.....3.00

RFD-2. Extra Photo Reversing Film Developer.
47 D 0162. Shpg. wt., 6 oz.....60

NAMEPLATE KITS

NP-303A. Enamel Nameplate and Panel Kit. Utilizes photographic process to produce high contrast nameplates on aluminum panels. Kit includes pressure sensitive opaque letters and numerals in 3 fonts. Characters are arranged on a clear acetate sheet and used as positive film to expose photosensitized blue aluminum plate. Plates require only development—no fixing. With two 8x10" aluminum plates, accessories and solutions.
47 D 1206. Shpg. wt., 1 lb.....7.25

NP-404. Anodized Aluminum Nameplate and Panel Kit. All materials needed to produce detailed aluminum lettering on a black anodized panel. Includes pressure-sensitive opaque letters and numerals; three 3x6" plates; accessories; etching solutions.
47 D 1207. Shpg. wt., 1½ lbs.....6.55

SILK SCREEN KIT

SC601A. Photo silk screen kit includes materials to produce one silk screen with print area up to 7x9" plus silk and film emulsion for two additional patterns. Produces lacquer resistant film type photo stencil. No dark room required. With squeegee, mounting hinges, black and white printing and etch resist inks. Designed for screen-printing production quantities of etched circuit boards, nameplates, instrument panels, decorative screen printing.
47 D 1033 U. Shpg. wt., 25 lbs.....35.00

ETCHED CIRCUIT PROCESSING CHEMICALS

Stock No.	Type	Description	Size	EACH
47 D 1102	RMP-700	Resist Marking Pen	.....	.75
47 D 1104	R-2	Paint Resist (for unsensitized sheet)	2 oz.	.60
47 D 1106	T-2	Resist Thinner	2 oz.	.50
47 D 1107	D-1PT	Develop'g Sol'n (for sensitized sheet)	pint	1.15
47 D 1130	D-1G	Develop'g Sol'n (for sensitized sheet)	gal.	5.50
47 D 1143 U	D-5G	Developing Solution. Wt. 75 lbs.	5 gal	25.00
47 D 1159	E-1PT	Etching Solution—Ferric chloride	pint	.85
47 D 1176	E-1G	Etching Solution—Ferric chloride	gal.	3.50
47 D 1200 U	E-5G	Etch'g Sol'n—Ferric chloride base	5 gal.	15.25
47 D 1203	EP-1G	Etch'g Powder—ammonium p'sulfate	1 gal.	3.00
47 D 1204	EP-4G	Etch'g Powder—ammonium p'sulfate	4 gal.	7.50

EXTRA PHOTO LAYOUT SUPPLIES

Stock No.	Mfr's Type	Description	EA.
47 D 1025	MN-1212	12x12" Mechanical Negative. Wt., 4 oz.	1.25
47 D 1026	MS-3	Stable Base Drafting Film. Wt. 8 oz.	1.95
47 D 1027	AT-810	Pressure Sensitive Letters and Numerals on transparent base (3 sizes, 4 fonts). 4 oz.	2.50
47 D 1028	GS110-3	1/10" Layout Grid Sheet (18x24"). 1 lb.	7.95

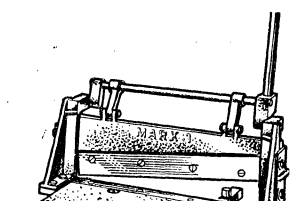
NP-303A MATERIALS

Stock No.	Type	Description	Size	EACH
47 D 1208	NP-EP1220	Sensitized Enamel Plate	12x20"	4.13
47 D 1209	NPD-16A	Developer	16 oz.	2.90
47 D 1227	NP-AS1722	Pressure Sens. Adhesive Sheet	17x22"	2.75

NP-404 MATERIALS

Stock No.	Type	Description	Size	EACH
47 D 1228	NP-SA1212	Anodized Aluminum Plate	12x12"	4.90
47 D 1230	NP-SA1220	Anodized Aluminum Plate	12x20"	7.75
47 D 1107	D-1PT	Developer	pint	1.15
47 D 1240	NP-E	Etching Powder	pkg.	.40

"MARK 1" 12" CIRCUIT BOARD SHEAR



MIS-12. Designed to be used in shearing and trimming circuit board materials. Operates equally well with either copper clad or unclad plastic laminates. G-10 glass epoxy, XXXP paper-base phenolic, FR3 paper epoxy and polyester laminates through 3⁄32-inch thickness are easily sheared. Sheet metals through 1⁄16" thick may also be cut. *Note: paper-filled laminates require warming to approximately 125° F to eliminate cracking.* Blade clearances are easily adjustable and the shear blade may be reversed to provide a new cutting edge. Shear is equipped with a convenient fixed side squaring gauge, and adjustable length gauge up to 5¼" long. Size: 19½x13½x11".
47 D 0163 U. Shpg. wt., 18 lbs.....94.00

Call Your Nearest Allied Office for All Your Electronic Supplies

Kits and Materials for Engineers

KEPRO PRINTED CIRCUIT MATERIALS, TECHNIQUES KITS AND SUPPLIES

ETCHED CIRCUIT COPPER-CLAD MATERIALS

Laminated 1-oz. (.00135) copper-clad materials. Available in 1/16" XXXP paper base phenolic, glass mat polyester, and 1/16" G-10 glass epoxy with foil on two sides, except types marked with *, coating on one side only. Fully meet standard NEMA grade tolerances; Cimclad equals or exceeds. Supplied unsensitized for screen processed parts and photo-sensitized for photo processed boards. Photosensitized materials are ready for exposure with no further sensitizing required. M at end of Type No. indicates polyester.

XXXP PAPER BASE PHENOLIC TYPE (.00135)

UNSENSITIZED

Stock No.	Mfr's Type	Wt. per package	Size	PER PKG. OF 5 1-4	5-9	10-19	20-Up
47 D 0592	P1-365*	1 lb.	3x6"	2.05	1.80	1.65	1.50
47 D 2090	P1-465	1 lb. 3 oz.	4x6"	2.30	2.00	1.85	1.70
47 D 0593	P1-12125*	3 lbs. 6 oz.	12x12"	11.15	9.45	7.35	7.00
47 D 0594	P1-365PB*	1 lb.	3x6"	2.45	2.20	2.05	1.90
47 D 2091	P2-335	11 oz.	3x3"	1.65	1.45	1.30	1.20
47 D 0599	P2-365	1 lb.	3x6"	2.55	2.25	2.05	1.85
47 D 2092	P2-465	1 lb. 3 oz.	4x6"	2.80	2.45	2.25	2.05
47 D 0676	P2-12125	3 lbs. 6 oz.	12x12"	14.85	12.60	9.80	9.35

PHOTOSENSITIZED

47 D 0679	S1-335*	9 oz.	3x3"	2.35	2.00	1.85	1.70
47 D 0681	S1-365	11 oz.	3x6"	3.85	3.30	3.00	2.80
47 D 0767	S1-465	1 lb. 6 oz.	4x6"	4.60	3.95	3.60	3.30
47 D 0694	S1-665	1 lb. 2 oz.	6x6"	6.90	5.85	5.30	4.90
47 D 0709	S1-7105	1 lb. 14 oz.	7x10"	12.55	10.80	9.80	9.05
47 D 0727	S1-12125	3 lbs.	12x12"	25.55	21.20	16.85	16.10
47 D 2094	S2-335	9 oz.	3x3"	3.15	2.70	2.45	2.25
47 D 0731	S2-365	11 oz.	3x6"	5.45	4.70	4.25	3.95
47 D 2095	S2-465	14 oz.	4x6"	6.60	5.70	5.15	4.72
47 D 0762	S2-665	1 lb. 2 oz.	6x6"	10.10	8.70	7.90	7.30
47 D 2097	S2-7105	1 lb. 13 oz.	7x10"	18.25	15.70	14.25	13.15
47 D 0764	S2-12125	3 lbs. 5 oz.	12x12"	36.85	30.60	24.30	23.20

GLASS MAT POLYESTER (.00135)

UNSENSITIZED

47 D 2098	P2-465M	1 lb. 1 oz.	4x6"	3.30	2.90	2.65	2.40
47 D 1268	P1-12125M	1 lb. 6 oz.	12x12"	12.95	11.00	8.55	8.15
47 D 1269	P2-12125M	3 lbs. 6 oz.	12x12"	17.85	15.15	11.75	11.25

PHOTOSENSITIZED

47 D 1270	S1-12125M	3 lbs. 6 oz.	12x12"	27.35	22.70	18.05	17.20
47 D 1271	S2-12125M	3 lbs. 10 oz.	12x12"	40.85	33.90	29.95	25.75
47 D 2099	S2-365M	1 lb.	3x6"	5.75	4.95	4.50	4.15

G-10 GLASS EPOXY 1 OZ. (.00135)

UNSENSITIZED

Stock No.	Mfr's Type	Wt. per package	Size	PER PKG. OF 5 1-4	5-9	10-19	20-Up
47 D 0765	P1-335G*	11 oz.	3x3"	2.75	2.40	2.20	2.00
47 D 0766	P1-365G*	1 lb.	3x6"	4.75	4.20	3.80	3.45
47 D 2102	P1-465G*	1 lb. 2 oz.	4x6"	5.30	4.65	4.25	3.85
47 D 0768	P1-12125G	3 lbs. 6 oz.	12x12"	32.55	27.65	21.50	20.50
47 D 0788	P2-335G	11 oz.	3x3"	2.85	2.50	2.25	2.05
47 D 0789	P2-365G	1 lb.	3x6"	4.95	4.35	3.95	3.60
47 D 2103	P2-465G	1 lb. 3 oz.	4x6"	5.60	4.90	4.50	4.10
47 D 0929	P2-12125G	3 lbs. 10 oz.	12x12"	34.05	28.95	22.45	21.45

PHOTOSENSITIZED

47 D 0930	S1-335G*	11 oz.	3x3"	3.65	3.20	2.90	2.65
47 D 0932	S1-365G*	1 lb.	3x6"	6.65	5.75	5.25	4.80
47 D 2104	S1-465G*	1 lb. 2 oz.	4x6"	7.60	6.90	6.10	5.55
47 D 0936	S1-665G*	1 lb. 6 oz.	6x6"	12.10	10.65	9.70	8.85
47 D 0942	S1-7105G*	2 lbs. 2 oz.	7x10"	22.95	19.75	17.90	16.65
47 D 1002	S1-12125G*	3 lbs. 6 oz.	12x12"	46.95	38.95	31.00	29.55
47 D 1007	S2-335G	11 oz.	3x3"	4.35	3.80	3.45	3.15
47 D 1012	S2-365G	1 lb.	3x6"	7.85	6.80	5.75	5.50
47 D 2105	S2-465G	1 lb. 3 oz.	4x6"	9.40	8.25	7.50	6.85
47 D 1013	S2-665G	1 lb. 6 oz.	6x6"	15.00	13.20	12.00	10.95
47 D 1014	S2-7105G	2 lbs. 2 oz.	7x10"	28.45	24.50	22.20	20.50
47 D 1015	S2-12125G	3 lbs. 10 oz.	12x12"	57.35	47.60	37.85	36.10

G-10 GLASS EPOXY 2 OZ. (.0127)

UNSENSITIZED

47 D 2109	P12-365G*	1 lb. 2 oz.	3x6"	4.85	4.30	3.90	3.55
47 D 2112	P12-465G*	1 lb. 6 oz.	4x6"	5.50	4.85	4.55	4.00
47 D 2114	P12-12125G*	3 lbs. 11 oz.	12x12"	33.85	28.75	22.35	21.30
47 D 2115	P22-335G	14 oz.	3x3"	2.95	2.60	2.35	2.15
47 D 2120	P22-365G	1 lb. 4 oz.	3x6"	5.05	4.45	4.05	3.70
47 D 2121	P22-465G	1 lb. 8 oz.	4x6"	5.70	5.00	4.55	4.15
47 D 2123	P22-12125G	3 lbs. 13 oz.	12x12"	35.55	30.20	23.45	22.40

PHOTOSENSITIZED

47 D 2130	S12-335G*	14 oz.	3x3"	3.75	3.30	3.00	2.75
47 D 2139	S12-365G*	1 lb. 2 oz.	3x6"	6.65	5.85	5.35	4.85
47 D 2146	S12-465G*	1 lb. 8 oz.	4x6"	7.80	6.85	6.25	5.70
47 D 2147	S12-7105G*	1 lb. 9 oz.	7x10"	22.55	19.40	17.60	16.25
47 D 2160	S12-12125G*	3 lbs. 11 oz.	12x12"	48.25	44.00	31.85	30.40
47 D 2164	S22-465G	1 lb. 8 oz.	4x6"	9.50	8.35	7.60	6.95
47 D 2166	S22-665G	1 lb. 1 oz.	6x6"	11.40	10.05	9.15	8.35

TECHNIQUES PRINTED CIRCUIT KITS AND SUPPLIES

5002 EXPERIMENTERS KIT

Beginners etched circuitry kit with six copper-clad boards from 3x2¼" to 4½x3"; 3 tube sockets; etchant; tape resist; resist circles; eyeletassortment; drill. Plastic case. 5¼x1¾x4".

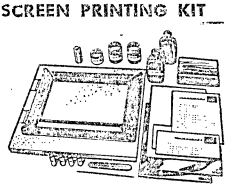
47 D 1250. Shpg. wt., 1 lb.....4.75

5003 TECHNICIANS KIT

Contains 10 single and double faced copper-clad boards from 3x2¼" to 4½x6"; six tube and transistor sockets; etching solution; tape resist; liquid resist; resist circles; eyelets; drill; circuit diagrams. Plastic case. 9¾x6½x2".

47 D 1266. Shpg. wt., 1½ lbs.....9.75

5006 SILK SCREEN PRINTING KIT



Accurate, rapid method for making larger sample quantities or short production runs of printed circuits. 8x12" frame is hinge-mounted on formica covered plywood base with silk already stretched. With neoprene squeegee; photo stencil film; screen process etch resistant ink; blockout medium; tape masking; solvent; spare bottle and all chemicals necessary for making stencils.

47 C 1273. Shpg. wt., 6 lbs.....29.95

BALL POINT RESIST TUBES

Make resist patterns directly on copper clad boards as easily as using a ball point pen. Deposits line 1/16" wide. Lets you color code circuit easily—liquid resist ball point tubes are available in various colors: yellow, green, blue, red, brown, black and orange. Wt., 3 oz.

47 D 1275 C. Specify Color.....1.25

5100 PRINTED CIRCUIT KIT

Laboratory-quality printed circuit kit lets you etch your own circuitry on copper-clad insulating boards. All materials provided.

Efficient method incorporates ready-to-use presensitized copper-clad laminate. Cuts to a minimum the time required for making outstanding prototype printed circuits.

Kit includes: twenty pieces of single and double-clad XXXP and epoxy fiberglass laminates in assorted sizes, both presensitized and uncoated; 20 assorted tube and transistor sockets; 2 rolls of tape resist, 1/16" and 1/8" wide; 200 die-cut tape circles; 1 bottle of resist and brush; ball point resist pen; eyelets and terminals; No. 51 drill; layout paper; exposure clamp; developing and etching solution and trays. With complete easy-to-follow instructions.

47 D 0165 X. Shpg. wt., 9½ lbs....29.95

CLARK ELECTRONICS "MICRO-DUCER"

Pressure-sensitive paint makes a pressure-transducer when applied to any conducting surface. Has little weight or volume. Resistance changes with force, pressure or strain.

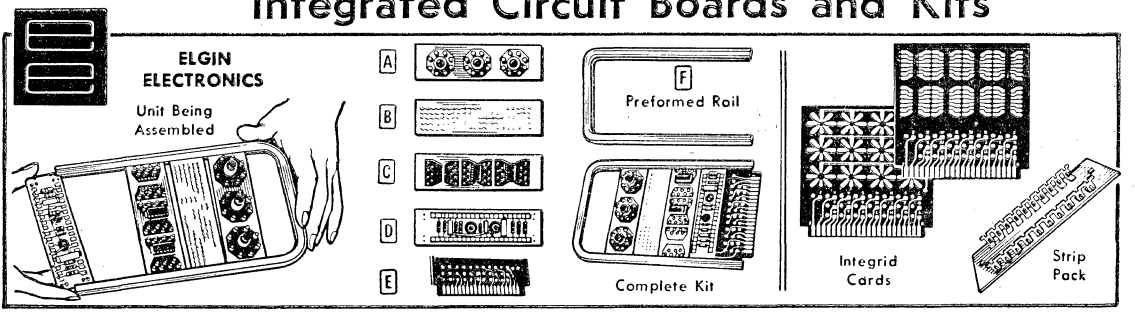
Type 5E. High sensitivity type. Over 1000 ohms resistance change per oz. force. 10 lbs. max. force on 0.1" diameter spot.
47 D 0474. Shpg. wt., 3 oz.....35.00

Type 9-E. Low pressure type 2 lbs. Varies from infinity to 1K ohms with 2-lb. force at 75° F.
47 D 0497. Shpg. wt., 3 oz.....35.00

Type 10E. Medium pressure type with 250 lbs. max. force. ¼x.025" spot at 200 lbs. Res. change of 10,000 ohms.
47 D 0523. Shpg. wt., 3 oz.....35.00

Type 472. Special Micro-Ducer paint thinner.
47 D 0823. Shpg. wt., 3 oz.....5.00

Integrated Circuit Boards and Kits



INTEGRID® INTEGRATED CIRCUIT BOARD KITS

Permit mixing the most up-to-date 8 and 10-pin TO-5 IC's with 14 and 16-pin dual in-line circuits. Each kit consists of modular elements which fit into preformed aluminum rail (Fig. F). Rail fits standard 4½" card racks. IC elements (Figs. A and C) accept up to 3 circuits. Econo-Grid® element (Fig. B) provides "bussing" and access to discrete components. Strip pack element (Fig. D) permits linking of discrete components (resistors, etc.) to IC boards. Connector element (Fig. E) has 22-position double-sided gold-plated readout tabs with standard .156" spacing. Kit components available separately, order from table below.

Kit A, Type 4217-001. Two TO-5 8-pin elements; two 14-pin dual in-line elements. Econo-Grid, Strip Pack, Connector, Rail.
47 D 2683. Shpg. wt., 1 lb. 21.95

Kit B, Type 4217-002. Two TO-5 10-pin elements; two 16-pin dual in-line elements. Econo-Grid, Strip Pack, Connector, Rail.
47 D 2684. Shpg. wt., 1 lb. 21.95

Individual Elements. G-10 Epoxy Glass, 1/16" thick. Alum. rail.

Stock No.	Type 4217-	Board Element (Double-Sided Except*)	EACH 1-49	50-99	100-249	250-499	500-999
47 D 2685	201	14-pin dual in-line	2.50	2.25	2.00	1.80	1.60
47 D 2686	202	8-pin TO-5	2.50	2.25	2.00	1.80	1.60
47 D 2687	203	10-pin TO-5	2.50	2.25	2.00	1.80	1.60
47 D 2688	204	16-pin dual in-line	2.50	2.25	2.00	1.80	1.60
47 D 2689	205	Connector	5.50	4.95	4.45	4.00	3.60
47 D 2690	207*	Strip Pack XXXP, 1/16"	.95	.85	.75	.65	.55
47 D 2691	208*	Econo-Grid	.95	.85	.75	.65	.55
47 D 2692	209	Formed Rail	1.75	1.60	1.45	1.30	1.15

INTEGRID® INTEGRATED CIRCUIT CARDS (1/16" G-10 Epoxy Glass)

4x4 1/16". 22 position double-sided tabs, .156" spacing. Power connections: 201, Vcc, pin 11; gnd., pin 4. 202, Vcc, pin 8, gnd., pin 4.

Stock No.	Type 4206-	Description and No. of Circuits	EACH 1-49	50-99	100-249	250-499	500-999
47 D 2693	201	(8) 14-pin dual in-line	10.00	9.00	7.50	6.50	6.00
47 D 2694	205	(8) 14-pin dual in-line	10.00	9.00	7.50	6.50	6.00
47 D 2695	208	(8) 16-pin dual in-line	10.00	9.00	7.50	6.50	6.00
47 D 2696	202	(12) 8-pin TO-5	10.00	9.00	7.50	6.50	6.00

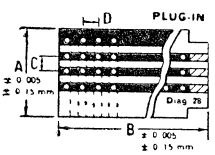
STRIP PACK® COMPONENT BOARDS (1/16" XXXP Phenolic)

Boards with continuous metal terminals. 205, 1⅛" wide, .875" between rows; 228, 1½" wide, 1.25" between rows. 5/32" mtg. holes.

Stock No.	Mfr's Type	No. Stations	EACH 1-49	50-99	100-249	250-499	500-999
47 D 2697	205-1	5	.36	.30	.26	.22	.19
47 D 2698	205-2	10	.42	.36	.29	.25	.21
47 D 2699	205-3	15	.45	.40	.33	.29	.25
47 D 2700	205-4	20	.50	.44	.40	.34	.29
47 D 2701	205-5	25	.60	.54	.48	.44	.38
47 D 2703	205-6	30	.66	.60	.54	.48	.42
47 D 2704	228-1	5	.54	.48	.44	.41	.37
47 D 2710	228-2	10	.60	.54	.46	.43	.40
47 D 2717	228-3	15	.66	.60	.54	.49	.45
47 D 2718	228-4	20	.71	.66	.60	.54	.50
47 D 2719	228-5	25	.80	.72	.66	.62	.56
47 D 2724	228-6	30	.86	.80	.74	.68	.60

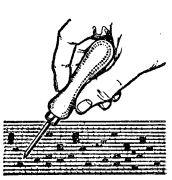
VERO INTEGRATED CIRCUIT BOARDS AND ACCESSORIES

DOUBLE-SIDED X-Y 0.1" PLUG-IN BOARDS



For dual in-line and TO-5 I/C's and sockets. Copper connecting strips on each side at right angles, spaced 0.1". Gold-plated contacts at 1 end. Made of XXXP paper base phenolic, 1/16" thick. Holes, 0.04" dia. spaced 0.1x0.1". Type 2142 terminal pins make X-Y connections. Use spot face cutter tool (2022 below) to break strips. Av. wt., 4 oz.

Stock No.	Mfr's Type	Size Wide	Size Length	Contacts	EACH 1-5	6-25	26-100
47 D 6272	1911	5.0"	7.85"	32	8.05	7.00	5.83
47 D 6273	1912	4.5"	6.5"	32	7.35	6.45	5.40
47 D 6274	1913	5.0"	7.85"	40	9.50	8.40	7.00
47 D 6275	1914	4.43"	8.0"	40	9.25	8.10	6.75
47 D 6276	1915	2.495"	4.75"	24	4.10	3.75	3.40
47 D 6277	2142	Pkg. of 500 Pins ..... Each 3.00					
47 D 6278	2151	Insertion Tool ..... Each 2.00					
47 D 6279	2022	Spot Face Cutter ..... Each 1.50					

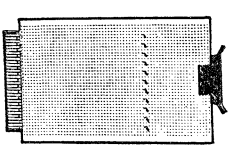


MODEL BK-6 BOARD KIT

Basic circuit board kit with 6 Veroboards and spot-face cutter. A simplified, reliable method of circuit construction. Lay parts on board with leads in holes, break strips with cutter and solder. In minutes you have a finished, ready-to-use circuit. Shpg. wt., 1 lb.
47 D 6001 ..... Each 5.95

VBK-7 VEROBOARD LAB KIT

Perfect for constructing prototype circuit boards. Easy to use. Includes 8 assorted Veroboards, cutter, 500 pins, insertion tool, design sheet. Boards up to 18" long.
47 D 6280. Shpg. wt., 2 lbs. ..... Each 29.95



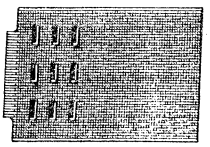
EPOXY-GLASS FINGER BOARDS

Have high-density 0.1x0.1" hole pattern, .052" dia. holes. Easy plug-in of dual in-line sockets. Flame retardant, 1/16" thick. Gold-plated connector fingers on one edge spaced 0.1", 0.156", or 0.125". *22 connector fingers on each end of board. Av. wt., 4 oz.

Stock No.	Mfr's Type	Size	Contacts	Spacing	EACH 1-5	6-25	26-100	101-499
47 D 6262	10239/1	5x8"	32	0.1"	6.95	6.20	5.60	5.05
47 D 6263	10236	4.5x6.5"	22	0.156"	6.65	6.00	5.45	4.80
47 D 6264	10290/1	4.5x8.5"	44*	0.156"	7.00	6.35	5.75	5.15
47 D 6265	10238/1	5x8"	22	0.156"	7.15	6.50	5.90	5.30
47 D 6266	10250	2.438x5"	18	0.125"	4.50	4.15	3.75	3.20

FINGER BOARD ACCESSORIES

Stock No.	Mfr's Type	Description	Pkg. of	EACH 1-4	5-9	10-Up
47 D 6269	10035	Lug Clip Handles	10	1.50	1.20	1.00
47 D 6270	10036	River/Screw Handles	10	2.80	2.30	1.90
47 D 6271	10037	Large Lug Handles	10	2.80	2.30	1.90
47 D 6267	2143	Brass Term. Pins	500	Each 5.75		
47 D 6268	2150	Insertion Tool	1	Each 2.00		

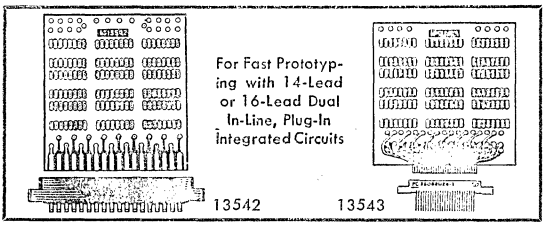


MC-10 BREADBOARD KIT

Veroboards for dual in-line IC's with 0.1x0.1" matrix. Single-sided board with with copper strips; plug-in single-sided board; double-sided plug-in board; plain epoxy glass board; 500 pins, insertion tool; cutter; design sheet; connector.
47 D 6261. Wt., 3 lbs. 29.95

Printed Circuit Cards and Breadboard Kits

TRIAD DUAL IN-LINE BOARDS



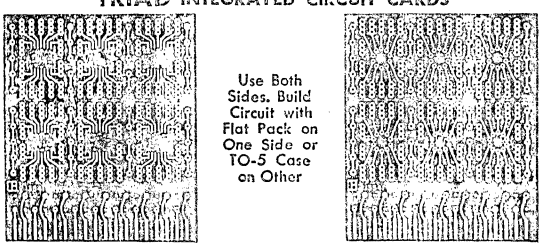
For Fast Prototyping with 14-Lead or 16-Lead Dual In-Line, Plug-In Integrated Circuits

13542 13543

Two-sided cards for mounting up to 9 plug-in IC's. Gold-plated G-10 glass epoxy, 1/16" thick. Holes, .030" dia. Type 13543 mates with 25 contact double-side connector on .050" centers. Type 13542, with 18-contact double-side connector on .156" centers. Wt., 3 oz.

Stock No.	Mfr's Type	Dimensions (Inches)	Contacts	EACH 1-9	10-24	25-49	50-99
47 D 2930	13542	2.976x3.273	18	6.60	5.95	5.35	4.95
47 D 2931	13543	3.000x3.187	25	6.60	5.95	5.35	4.95
47 D 2932	CO-13542 With Connector		18	9.00	8.10	7.30	6.80
47 D 2933	CO-13543 With Connector		25	13.60	12.25	11.00	10.25

TRIAD INTEGRATED CIRCUIT CARDS

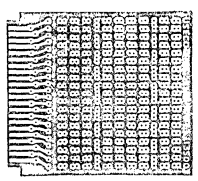


Use Both Sides. Build Circuit with Flat Pack on One Side or TO-5 Case on Other

For breadboarding integrated circuits or discrete components. Two-sided 1/16" G-10 glass epoxy, gold-plated. Types 13540 and 13541 flat pack mounting tabs on one side and TO-5 pads with .032" hole on the other. Interconnection pads have .040" hole. 13540 mates with 25 contact double-side connector on .050" centers; 13541, 18 contact double-side connector on .156" centers. Type 13544 for up to 16 8-pin TO-5's. Types 13545, 13546 have six 8-pin TO-5 pads on one side, six 14-pin flat pack pads on other, but different connector patterns. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Dimensions (Inches)	EACH 1-9	10-24	25-49	50-99
47 D 2923	13540	3.00x3.187"	6.60	5.95	5.35	4.95
47 D 2924	13541	2.97x3.273"	6.60	5.95	5.35	4.95
47 D 2941	13544	3.00x4.860"	12.25	11.03	9.93	9.23
47 D 2942	13545	3.00x3.187"	6.60	5.95	5.35	4.95
47 D 2943	13546	2.976x3.273"	6.60	5.95	5.35	4.95
47 D 2915	13540 With Connector		13.60	12.25	11.00	10.25
47 D 2918	13541 With Connector		9.00	8.10	7.30	6.80
47 D 2944	13544 With Connector		19.60	17.65	15.90	14.80
47 D 2945	13545 With Connector		13.60	12.25	11.00	10.25
47 D 2946	13546 With Connector		9.00	8.10	7.30	6.80

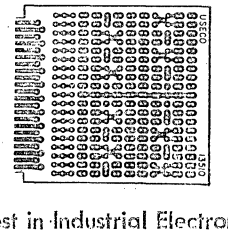
TRIAD TYPE 13500 UNIVERSAL CIRCUIT CARD



An invaluable aid in developing experimental or prototype circuits. Land pattern is compatible with standard. .1 grid design. Circuit card has 233 mounting pads of one or more holes each, front and back for a total of 444 holes per card; 22 fingers fit any standard plug-in, right-angle or swage-type connector with .156" spacing. Standard hole size .052". Gold-plated finish for optimum performance. 4x4½". 1/16" thick. 6 oz.

47 D 2926. 1-9.....Each 6.60
10-24.....Each 5.95 25-49.....Each 5.35

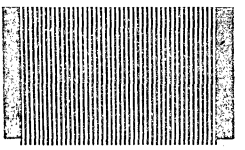
TRIAD TYPE 13510 UNIVERSAL CIRCUIT CARD



Has transistor locating holes, a ground bus down center of card, convenient location for pad rows. Takes Elco 6007 or Amphenol 143 series connectors. 190 mtg. pads of one or more holes each, front and back. 22 fingers for connectors with .156" spacing, plus 22 pairs of pads. Hole size, .052". Gold plated finish. 4x4½"; 1/16" paper-epoxy. 3 oz.

47 D 2927. 1-9.....Each 6.60
10-24...Each 5.95 25-49...Each 5.35

TRIAD TYPE 13600 EXTENDER CARD

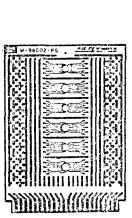


Used to extend the fingers of a circuit card to allow access to boards mounted in racks/panels. Frees both sides of electronic circuit for maintenance. Has 43 extension strips on each side of board; standard .156" connector spacing. Gold-plated finish. 5x8", 1/16" thick paper-epoxy base material. Wt., 6 oz.

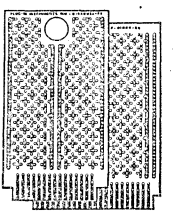
47 D 2929. 1-9.....Each 9.20
10-24.....Each 8.25 25-49.....Each 7.45

PLUG-IN INSTRUMENTS PRINTED CIRCUIT BLANKS

1/16" XXXP paper phenolic or epoxy-glass, with 1-oz. copper, Sealbrite or tin finish. Undrilled except as indicated (DH). Transistor pads, PG and PJ styles. †12 DH pad, I.C. blank. Fit Amphenol Type 143, 10 and 14/15/22 pin conn. Suffix EG—epoxy-glass; TI—tin immersion plating; DH—No. 59 holes in pads; RF—rhodium-plated contacts. Hgt: PG, PE, 5½"; PJ, 4¾". Widths: 10-pin, 2¾"; 14-pin, 3 11/32"; 15-pin, 3 5/16". 22; 4". 4 oz.



With Bracket

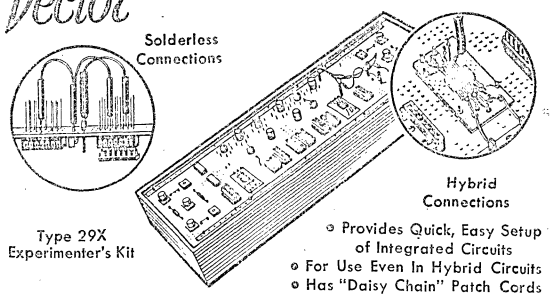


With Finger Connections

WITH FINGER CONNECTIONS

Stock No.	Mfr's Type	Pins	Pads	EACH 1-9	10-24	25-49	50-99
47 D 6691	M94010APJ	15	282	2.65	2.55	2.45	2.30
47 D 6692	M94010APJ-EG-RF-DH	15	282	3.95	3.80	3.65	3.45
47 D 6681	M94003A-PG	15	764	2.40	2.30	2.20	2.10
47 D 6682	M94003A-PG-DH	15	764	3.70	3.55	3.40	3.25
47 D 6683	M94003A-PG-EG-RF-DH	15	764	5.25	5.05	4.85	4.60
47 D 6684	M96001A-PG	22	909	2.50	2.40	2.30	2.20
47 D 6685	M96001A-PG-DH	22	909	4.20	4.00	3.85	3.70
47 D 6686	M96001A-PG-EG-RF-DH	22	909	5.95	5.70	5.45	5.25
47 D 6689	M96002-PG-EG-TI	22/44	.....	3.40	3.25	3.10	3.00
47 D 6690	M96002-PG-EG-TI-DH	22/44	.....	8.30	7.95	7.65	7.30
47 D 6679	M96003-PG-EG-TI	†22	1430	3.40	3.25	3.10	3.00
47 D 6680	M96003-PG-EG-TI-DH	†22	1430	7.40	7.10	6.80	6.50

Vector EXPERIMENTER'S IC BREADBOARD KIT



Solderless Connections

Hybrid Connections

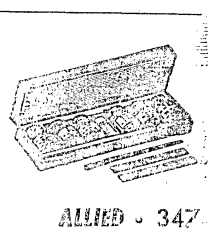
Type 29X Experimenter's Kit

- Provides Quick, Easy Setup of Integrated Circuits
- For Use Even In Hybrid Circuits
- Has "Daisy Chain" Patch Cords

Deluxe integrated circuit breadboarding kit provides fast, convenient means of interconnecting most configurations of IC packages for experimental uses. Mounting surface is of pre-punched Micro-Vectorboard with .042" dia. holes on .100" grid spacing; supported by 2" high aluminum Frame-Loc rails. Kit includes 14 and 16-pin dual-in-line IC sockets, plus circular lead pattern TO-5 IC sockets with adapters for mounting to rectangular grid. Vector's T42-1 push-in Micro-Klips and K24C push-in pins for fast, easy connections. Wiring may be done with polyurethane coated wire, solderable thru insulation, or "Daisy Chain" solderless patch cords (both included). Flat bus strip supplied. 4½x14x2".

47 D 2733. Shpg. wt., 2 lbs.....59.75

MICRO S-21 CIRCUIT KIT



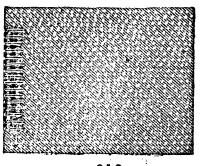
Make components on a miniature scale; paint your own circuits; repair printed circuits. With: brush; silver conducting paint; resistance paints; insulating lacquer; solvent brush cleaner; manual, "Design and Repair of Printed Circuits," plus other information.

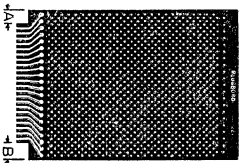
47 D 0164. Shpg. wt., 1¾ lbs....27.75

Terminal Boards, Terminals and Accessories

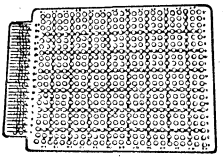
VECTOR "PLUGBORDS" AND RECEPTACLES

R616-1

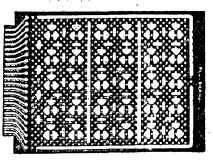

812



838A


2536WE

For Test Circuits, P.C. Prototypes, Short Runs


838PWE

"Plugbords." 1/16" thick epoxy paper, EXXXP per MIL-P-22324 except *1/16" epoxy glass, Grade G-10 per MIL-P-18177. Have grid of .062" holes on .1" ctrs. except 2536WE has .093" holes on .2" grid, front and back printed alpha-numeric grid layout. Contacts on .156" centers, .072" wide except †.090" wide. New "—1" etched contact boards have "A" and "B" dim. of .453". Other etched boards have "A" .408", "B" .508". GN Type have nickel-plated gold flashed contacts. Av. shpg. wt., 3 oz.

PLUGBOARDS WITH INSTALLED ELCO VARICON CONTACTS

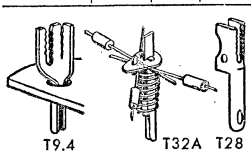
Stock No.	Mfr's Type	Size, Inches	No. of Contacts	EACH 1-19	20-99	100-199	200-999
47 D 0928	812	4½x6½	16	2.98	2.68	2.50	2.00
47 D 5606	*812WE	4½x6½	16	3.53	3.18	2.97	2.37
47 D 0927	837	3x4½	12	2.33	2.10	1.96	1.56
47 D 5607	*837WE	3x4½	12	2.58	2.32	2.17	1.73
47 D 5608	*848WE	4½x6½	35	6.09	5.48	5.12	4.08
47 D 6023	2536WE	4½x6½	35	6.97	6.27	5.85	4.67

ETCHED CONTACT PLUGBOARDS 4½x6½"—.156" spaced contact

Stock No.	Mfr's Type	No. Contacts Front	Back	Dim. A	B	EACH 1-49	50-199	200-499	500-999
47 D 6022	838	22	21	.408"	.508"	3.89	3.50	3.27	2.61
47 D 6192	838-1	22	21	.453"	.453"	3.89	3.50	3.27	2.61
47 D 6193	*838WE-1GN	22	21	.453"	.453"	5.81	5.23	4.88	3.89
47 D 5609	838A	22	—	.408"	.508"	2.81	2.53	2.36	1.88
47 D 6194	838A-1	22	—	.453"	.453"	2.81	2.53	2.36	1.88
47 D 5610	838AWE	22	—	.408"	.508"	3.17	2.85	2.66	2.12
47 D 6195	838AWE-1	22	—	.453"	.453"	3.17	2.85	2.66	2.12
47 D 6196	*838AWE-1GN	22	—	.408"	.508"	4.70	4.23	3.95	3.15
47 D 5611	*1838PWE	22	—	.408"	.508"	3.65	3.29	3.07	2.45
47 D 5613	838WE	22	21	.408"	.508"	3.86	3.47	3.24	2.59

Receptacles. With solder and taper tab leads. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Contacts	For	EACH 1-99	100-249	250-999
47 D 6024	R612-1	12	837, 837WE	1.80	1.32	1.12
47 D 6026	R616-1	16	812, 812WE	2.24	1.74	1.49
47 D 5635	R635	35	848WE, 2536WE	4.91	3.27	2.73
47 D 5612	R644	44	838, 838A, 838AWE, 838PWE, 838WE	2.62	2.10	2.10


T9.4 T32A T28

VECTOR PUSH-IN TERMINALS

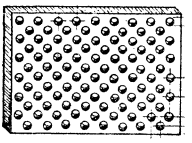
Solderless T32A springclip has less than .020 ohm resistance. Fits .093" "Vectorbord." T9.4 and T28 press-fit; teeth in slots hold lead till soldered. Shpg. wts.: Pkg./100, 2 oz.; Pkg./1000, 12 oz.

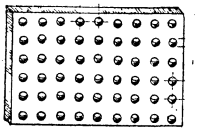
Mfr's Type	Fits Holes	Description	Stock No.	PER PKG. OF 100 1-19	20-99	Stock No.	PER PKG. OF 1000 1-4	5-24
T9.4	.093"	Tinned brass	47 D 0878	1.44	1.30	47 D 1437	10.18	8.55
T28	.062"	Tinned copper	47 D 0879	1.61	1.45	47 D 1438	11.44	10.30
T28S1	.062"	Silvered copper	47 D 6041	1.72	1.55	47 D 6042	13.51	12.17
T32A	.093"	Nickeled brass	47 D 6046	10.30	10.30	47 D 6047	78.00	78.00
T32A1	.062"	Nickeled brass	47 D 6048	10.30	10.30	47 D 6049	78.00	78.00

Insertion Tools. Simplify insertion of push-in terminals. Wt., 2 oz.

Stock No.	Mfr's Type	Used For	EACH 1-49	50-199	200-499	500-999
47 D 0601	P-91	T28	.50	.45	.35	.34
47 D 6004	P-136	T-32	1.20	1.20	1.20	1.20
47 D 0607	P-122B	T9.4	1.40	1.40	1.40	1.40

"VECTORBORD" PRE-PUNCHED TERMINAL BOARDS


Pattern G


Pattern A, AA, B, F, H

No suffix letters indicate boards are phenolic, XXXP per MIL-P-3115B; suffix EP indicates epoxy paper, EXXXP per MIL-P-22324; suffix WE indicates epoxy glass, G-10 per MIL-P-18177. Patterns A, B, F, G, H are 1/16" thick; AA is 3/32" thick. Patterns A and AA have .093" holes on .265" grid; B has .062" holes on .188" grid; F has .062" holes on .2" grid; G has .062" holes on staggered .1" grid; H has .062" holes on .1" grid. All 17" long except *8½", **35". Push-in T9.4 and T32A terminals, below left, fit pattern A and AA. T28, T28S1, T32A1 terminals fit B, F, G and H or standard terminals, and eyelets fit pre-punched holes. User can make own etched circuits. May be sawed, drilled or punched. Av. shpg. wt., 5 oz.

Stock No.	Mfr's Type	Width	Pattern	No. Holes	EACH 1-19	20-99	100-199	200-999
47D0916	85G24EP	4 13/16"	G	(85x23)x2	2.14	1.93	1.80	1.43
47D0917	32AA18*	4 13/16"	AA	32x18	.87	.78	.73	.58
47D0918	64A18	4 13/16"	A	64x18	1.30	1.17	1.09	.87
47D0919	64AA18	4 13/16"	AA	64x18	1.66	1.49	1.39	1.11
47D0926	32AA9*	2 7/16"	AA	32x9	.62	.56	.52	.42
47D5601	64A18WE	4 13/16"	A	64x18	3.87	3.48	3.25	2.59
47D5604	85G24WE	4 13/16"	G	(85x23)x2	3.96	3.56	3.33	2.56
47D5605	85F24EP	4 13/16"	F	85x23	2.14	1.93	1.80	1.43
47D6008	64AA18EP	4 13/16"	AA	64x18	2.84	2.56	2.39	1.90
47D6009	42G24WE*	4 13/16"	G	(42x24)x2	1.97	1.77	1.65	1.32
47D6005	45B30*	5 5/8"	B	45x30	.87	.78	.73	.58
47D6006	90B30	5 5/8"	B	90x30	1.68	1.51	1.41	1.13
47D6007	64AA32	8½"	AA	64x32	2.86	2.57	2.40	1.92
47D6197X	64AA132**	17"	AA	64x32	10.45	9.41	8.78	7.00
47D6198	85G42EP	8½"	G	(85x41)x2	3.30	2.97	2.77	2.21
47D6199	85G42WE	8½"	G	(85x41)x2	5.64	5.08	4.74	3.78
47D6256	170H48WE	4 13/16"	H	47x169	4.23	3.81	3.55	2.83

VECTOR 2-OZ. COPPER CLAD TERMINAL BOARDS

Punched and unpunched boards for making printed circuits, shielding, or RF construction. Suffix 1XXXP and C1 are phenolic grade XXXP per MIL-P-3115, copper clad on one side; suffix C2 is the same but both sides clad; WEC1 epoxy glass Grade G-10 per MIL-P-13949B, 1 side; WEC2 same but both sides clad. Patterns F and G have .062" holes, .2" and .1" grid respectively. For Type T28 terminals, below left. 1/16" thick, 4½" wide. Av. shpg. wt., 1 lb.

PUNCHED BOARDS

Stock No.	Mfr's Type	Lgth	W'th	Pattern	EACH 1-19	20-99	100-199	200-999
47 D 6013	3070-1XXXP	6½"	4½"	F	.87	.78	.73	.58
47 D 6010	3070-2XXXP	6½"	4½"	F	1.08	.97	.91	.72
47 D 6016	42F22C1	8½"	4½"	F	1.04	.94	.87	.70
47 D 6017	42F22C2	8½"	4½"	F	1.37	1.23	1.15	.92
47 D 6019	42G22WEC2	8½"	4½"	G	2.70	2.43	2.27	1.81
47 D 6020	85F42WEC1	17"	4½"	F	9.70	8.73	8.15	6.50
47 D 6021	85F42WEC2	17"	4½"	F	10.66	9.59	8.95	7.14

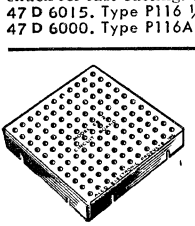
UNPUNCHED BOARDS

Stock No.	Mfr's Type	Size, Inches Lgth.	Width	EACH 1-19	20-99	100-199	200-999
47 D 6204	CU45/30-1	4½	3	.31	.28	.26	.21
47 D 6207	CU45/30-WE1	4½	3	.72	.65	.60	.48
47 D 6208	CU65/45-1	6½	4½	.62	.56	.52	.42
47 D 6209	CU65/45-WE1	6½	4½	1.39	1.25	1.17	.93

VECTOR PAD CUTTER TOOLS

For isolating terminals from ground plane. Tools cut off ring of copper around hole to isolate it from the rest of the copper cladding. Small isolated pad is left for soldering if desired. Pad cutter permits use of inexpensive ZIP T28 terminals in place of expensive insulated standoffs. Mounts easily in any drill chuck for fast cutting. Shpg. wt., 2 oz.

47 D 6015. Type P116 ¼" dia. Circle Cutter.....Each 1.85
47 D 6000. Type P116A 3/16" dia. Pad Cutter.....Each 1.98



ALCO CB-1 CIRCUIT BOARD

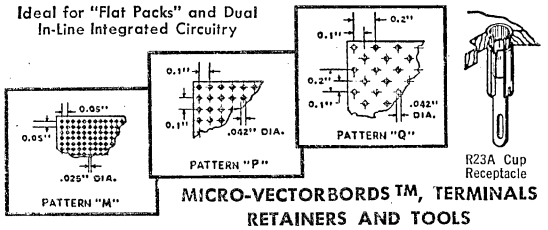
Circuit board modules provide an excellent base for various types of breadboarding. Designed especially to accept the MEP-NB and MEH-NB series of Alcostrips which may be inserted or removed as desired (see page 313). Units may be fastened together to form larger board. High strength. 5x6".

47 D 6796. Shpg. wt., 4½ oz.....95

See Page 322 for Vector Patch Boards and Patchcords

Printed Circuit Equipment

VECTOR INTEGRATED CIRCUIT BOARDS AND ACCESSORIES



MICRO-VECTORBORDS™, TERMINALS RETAINERS AND TOOLS

Prepunched boards, ideal for mounting "flat packs" and dual in-line integrated circuits. Prepunching and accessories make changes easy. Pattern-M boards, with .025" holes on .05" grid, recommended for "flat packs;" Pattern-P, with .042" holes on .1" grid, for dual in-line devices; Pattern-Q has .042" holes on staggered .2" grid. Hole patterns correspond to IC lead spacing. Thickness is indicated by last three digits of Mfr's Type. Suffix C1 indicates copper-clad (one-side) epoxy glass per MIL-P-13949 Type FL-GE; other boards are G-10 epoxy glass per MIL-P-18177 Type GEE. "Inboard" pins are phosphor bronze, nickel-plated and gold-flashed. Pin pushed into hole gives semi-tight fit. Brass retainer provides tighter fit. Pin holders (tools) are used to install pins and retainers. Av. shpg. wt. of Micro-Vectorbord, 2 oz. Av. shpg. wt. of terminals, pins and pin holders, 3½ oz.

Stock No.	Mfr's Type	Size, L x W	Pat-tern	EACH 1-19	20-99	100-199	200-999
47 D 4500	59P19/032	6x2"	P	1.13	1.02	.95	.76
47 D 4501	59P44/032	6x4½"	P	1.61	1.45	1.35	1.08
47 D 4502	169P59/032	17x6"	P	5.01	4.51	4.21	3.36
47 D 4503	169P59/016	17x6"	P	5.01	4.51	4.21	3.36
47 D 4504	169P59/047	17x6"	P	6.42	5.78	5.39	4.30
47 D 4505	169P59/032C1	17x6"	P	6.87	6.18	5.77	4.60
47 D 4506	84Q29/032	17x6"	Q	4.57	4.11	3.84	3.06
47 D 4507	84Q29/016	17x6"	Q	4.57	4.11	3.84	3.06
47 D 4508	76M38/032	4x2"	M	1.58	1.42	1.33	1.06
47 D 4509	126M76/032	6½x4"	M	3.04	2.74	2.55	2.04
47 D 4510	166M76/032	8½x4"	M	7.54	6.79	6.33	5.05
47 D 4511	336M76/032C1	17x4"	M	10.08	9.07	8.47	6.75

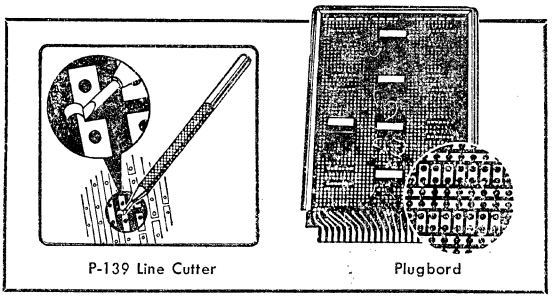
TERMINAL PINS AND CUP RECEPTACLE

Provide easy-to-wire terminals and test points on Micro-Vectorbord. Knurled shank of pin pushed into prepunched hole gives a semi-tight fit. For tightest fit, a tinned-brass retainer is placed over bottom of pin, pressed against board, soldered to pin. *For 1/16" bd.

Mfr's Type	Pin Lgth.	Fits Holes	Stock No.	PKG. of 50	Stock No.	PKG. OF 1000 1-4	5-Up
K24A	5/8"	.040"	47 D 4515	1.44	47 D 4517	20.59	18.53
K27A	3/8"	.025"	47 D 4516	.86	47 D 4518	11.16	10.02
*R23A	5/8"	.140"	47 D 1960	4.25	47 D 1954	65.00	55.00

PIN RETAINERS AND TOOLS

Stock No.	Mfr's Type	Desc.	Used For	EACH Pkg. of 100	Stock No.	Mfr's Type	Used For	EACH Pkg.of1000
47 D 4519	T102	Ret.	K24A	.78	47 D 4520	T102	K24A	4.16
47 D 4521	T103	Ret.	K27A	1.30	47 D 4522	T103	K27A	9.57
47 D 4523	P134	Holder	K24A	Ea. 1.75	47 D 4524	P132	K27A	Ea. 1.75
47 D 4525	P133	Holder	T102	Ea. 1.75	47 D 4526	P131	T103	Ea. 1.75



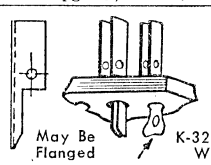
D.I.P. PLUGBORDS

For 14-lead dual inline ICs. Have .041" diameter holes punched on 0.1" centers. Boards with X-Y matrix have parallel .070" wide 2-oz. copper lines lengthwise on one side, horizontal on reverse side. All have aluminum "Kardej" frame. Measure 4½x6½"; 1/16" card guides. Board of epoxy paper per MIL-P-22324, Type PEE Nickel-plated gold-flashed contacts. Use K24A terminal pins for connections between front and back. With layout sheets and instructions. *Elco Varicon contacts. See Elco 7000 Series, page 300. Y matrix only, one side. Line cutter tool interrupts etched copper lines. Push-in terminals below. Types 3477-7 and 3477-8 mate with Elco 6309 series, page 302; Amphenol 261 Series, page 293. 3 oz.

Stock No.	Mfr's Type	X-Y Ma-trix	Con-tacts	Spa-cing	EACH 1-19	20-99	100-199	200-999
47 D 1914	3474	Yes	44	.156"	10.50	9.45	8.82	7.04
47 D 1915	3474-2	No	44	.156"	7.95	7.16	6.68	5.33
47 D 1916	3476	Yes	35*	.1"	11.40	10.26	9.58	7.64
47 D 1917	3476-2	No	35*	.1"	5.68	5.11	4.77	3.81
47 D 1997	3477-7	Yes	72	.1"	9.94	8.95	8.35	6.66
47 D 1999	3477-8	Y†	36	.1"	7.53	6.78	6.33	5.05

47 D 1920 P-139 Line Cutter Tool. Shpg. wt., 2 oz..... Each 1.50

MICRO-CLIP PUSH-IN MINIATURE TERMINALS



T-42-1 Micro-Klip terminals push into prepunched holes in "P" or "Q" pattern Micro-vectorboards and similar PC boards. Can be used as mounts for D.I.P. or Flat Pack IC leads; no staking required. Main slot and .025" cross-through hole, plug .018" hole in tab end. .042" thin. Insertion tool with friction fit below. Wt., 4 oz. K-32 provides wire wrap tail extension for T42-1.

47 D 1905. T42-1 Micro-Klips 2 oz.....Bag of 100 1.75
47 D 1921. T42-1 Bag of 1000. 4 oz. 1-4.....Each 12.99
5-24.....Each 11.69 25-49.....Each 10.89

47 D 1906. P149. Insertion Tool. Straight type.....Each .50
47 D 1907. P149A. Insertion Tool. Handle type.....Each 1.50

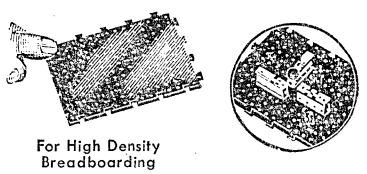
47 D 1951. K-32 Terminals. Bag of 100. 10 oz. 1-19.....Each 1.49
20-99.....Each 1.34

47 D 1953. K-32 Terminals. Bag of 1000. Wt., 10 oz. 1-4..Each 10.35
5-24.....Each 9.32 25-49.....Each 8.39

DeVRY CIRCUIT COMPONENTS

SOLDERLESS BREADBOARD COMPONENTS

For high-density solderless breadboarding in circuit development. Permit a maximum number of circuit combinations to be wired in a minimum of time —no soldering, no clips or plugs, no damaged parts.

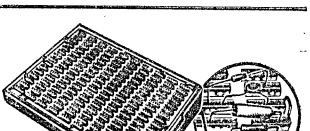


Panels. Molded of red Cycolac. Each 3x4" panel accepts up to 40 connectors (200 contact points) without stacking. Dovetail construction permits firm interlocking of panels in any direction, retaining the .30" hole spacing across interlocks.

Connectors. Molded of white Celcon, have phosphor-bronze spring contacts that permit secure contact between as many as five wires of different size. Molded feet plug into panels or into sides and ends of other connectors without affecting insulation. Capacity, 1pF or less between connectors. Compact, only 1 1/16x1 1/8x5/16".

Stock No.	Type	Description	EACH
47 D 0688	2500-2	Cycolac Panel	.75
47 D 0689	2500-3	Celcon Connector	.30

15000 BUILDING PANEL



Provides a fast, simple means of breadboarding a circuit. No clips, jacks, connectors or soldering. Simply plug in any size wire, or component lead, from #30 to #17 gauge for instant contact. Connections are easily changed. Spring-tempered phosphor bronze contact strips. Insulation resistance between strips is 1000 megohms. Dielectric strength, 5000 V rms. Has 150 contact strips, 750 contact points. Molded acrylic, puch vinyl plastic. Type 15500 same except of high-temperature plastic for −200° F to +250° F. 9½x14½x½".

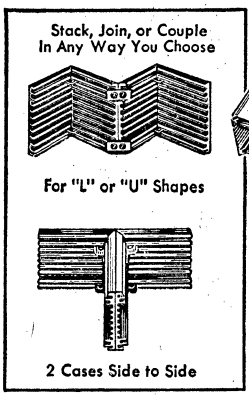
47 D 0654. 15000. Shpg. wt., 2¼ lbs.....Each 37.50
47 D 0959. 15500 High-Temp. Wt., 2¼ lbs.....Each 60.00
47 D 0659. Model 15006 Base for Above. Wt., 2 lbs.....Each 15.00

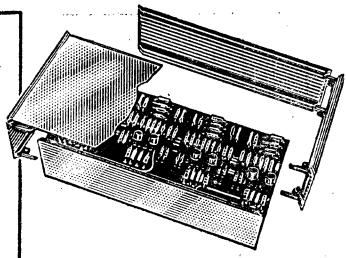
PLUG-IN TUBE AND TRANSISTOR SOCKETS FOR ABOVE

Stock No.	Type	Socket Type	EACH
47 D 0655	15070	Octal	1.80
47 D 0656	15060	9-Pin	1.80
47 D 0657	15050	7-Pin	1.80
47 D 0658	15080	Transistor	1.65

Vector Breadboard Kits and Expandable Cases

EXPANDABLE CASES FOR BREADBOARD KITS





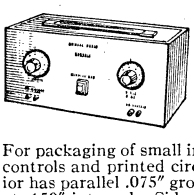
Aluminum Frame Loc Rails have 45-degree end cuts to form cases. Inside grooves spaced .150" apart. Corner fasteners and screws lock corners together. .040" aluminum cover panels (listed below) complete case or chassis. 24" length furnished without fasteners, with square-cut ends (#4 self tap screws attach into rail end holes). *Indicates rails 1" wide for 1/16" panels; †2" wide rails for 1/16" panels; ‡2" wide rails for 3/32" panels; §3" wide rails for 1/16" panels. Pkgs. of 2. Av. wt., 8 oz.

Stock No.	Mfr's Type	No. Inside Board Grooves	Accommodates Panel Lgth.	PKG. OF TWO 1-49	50-199	200-499	500-999
47 D 5951	SR1-46-062*	2	4.5"	1.18	1.06	.83	.79
47 D 5952	SR1-66-062*	2	6.5"	1.40	1.26	.98	.94
47 D 5953	SR1-24-062*	2	24"	2.93	2.64	2.05	1.96
47 D 5954	SR2-31-062†	9	3"	1.23	1.11	.86	.82
47 D 5955	SR2-46-062†	9	4.5"	1.44	1.30	1.01	.96
47 D 5956	SR2-66-062†	9	6.5"	1.72	1.55	1.20	1.15
47 D 5957	SR2-100-062†	9	10"	2.21	1.99	1.55	1.48
47 D 5958	SR2-240-062†	9	24"	3.84	3.46	2.69	2.57
47 D 5960	SR2-48-093‡	7	4.8"	1.46	1.31	1.02	.98
47 D 5961	SR2-85-093‡	7	8.5"	1.92	1.73	1.34	1.29
47 D 5963	SR2-170-093‡	7	17"	3.20	2.88	2.24	2.14
47 D 5965	SR3-46-062§	14	4.5"	1.52	1.37	1.06	1.02
47 D 5966	SR3-66-062§	14	6.5"	1.85	1.67	1.30	1.24
47 D 5967	SR3-100-062§	14	10"	2.32	2.09	1.62	1.55
47 D 5968	SR3-240-062§	14	24"	4.19	3.77	2.93	2.81

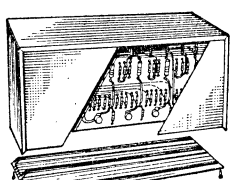
COVER PANELS

Stock No.	Mfr's Type	Cover Plate Dimensions	PER PKG. OF 2 1-49	50-199	200-499	500-999
47 D 1932	PL3045	3" x 4.5"	.75	.68	.53	.50
47 D 1933	PL4565	4.5" x 6.5"	1.00	.80	.70	.67
47 D 1934	PL48-85	4.8" x 8.5"	2.74	2.47	1.92	1.84
47 D 1936	PL48-170	4.8" x 17"	4.14	3.73	2.90	2.77
47 D 1939	PL85-170	8.5" x 17"	6.29	5.66	4.40	4.21

"MULTI-MOD" ALUMINUM CASES



Typical Uses

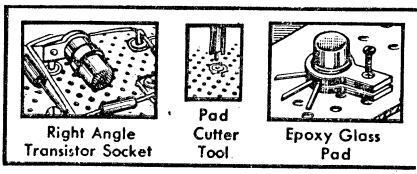


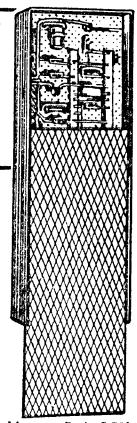
Case with Panel

For packaging of small instruments, controls and printed circuits. Interior has parallel .075" grooves spaced at .150" intervals. Side panels slide out for easy access to interior, may be drilled or perforated for ventilation. Exterior of each box has smooth sides, except for one surface. Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Size and Description	EACH 1-49	50-199
47 D 2728	W20-46-31	2"Wx4.6"Lx3.1"H for 4½x3½" cards	3.93	3.54
47 D 1910	W20-66-46	2"Wx6.6"Lx4.6"H for 4½x8½" cards	5.15	4.64
47 D 2730	W30-66-46	3"Wx6.6"Lx4.6"H for 4½x6½" cards	5.95	5.36
47 D 1911	W30-86-46	3"Wx8.61"Lx4.61"H for 4½x8½" cards	6.15	5.85
47 D 2731	W30-100-46	3"Wx10.0"Lx4.6"H for 4½x10" cards	7.00	6.30
47 D 1912	W45-86-46	4½"Wx8.6"Lx4.61"H for 4½x8½" cards	6.95	6.26
47 D 2732	W45-100-46	4.5"Wx10.0"Lx4.6"H for 4½x10" cards	7.60	6.84
47 D 1913	FT-1	Rubber feet for above. Pkg. of 8 for .86		

PAK 28X HIGH-FREQUENCY CIRCUIT BREADBOARDING KIT





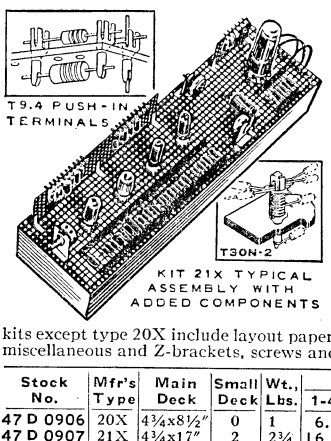
Vector-Pak 28X

A simple method of constructing "RF tight" circuits for VHF and UHF. Virtually duplicates performance of more expensive techniques. Circuit may be slipped out and replaced. Kit includes: aluminum case with 2 slide-out sides, 8½x3x2"; pre-punched, copper-clad, epoxy glass Vectorboard, 8½x3x1/16"; 4 standoff term. strips, 8 terms.; 2 standoff term. strips with 12 terms.; 3 punched wall strips, 0.64x1.94" with "L" mtg. bkts., without terms.; 3 copper-clad punched strips for internal shielding, 0.90x2.85"; 50 "Miniklip" terms.; term. inserting tool; pad cutter tool; 3 transistor sockets, without saddle; 3 right-angle-mounting transistor sockets. Also, 2 power transistor sockets; 36 screws (#0-80x5/16"), nuts and nut wrench; 15 spacers; 10 transistor mtg. pads; 1 roll each #24 vinyl covered and tinned copper wire; 18 pieces plastic tubing 1/16" O.D.; 50 eyelets 1/16x3/32". Overall kit size, 8½x3x2". Shpg. wt., 2 lbs.

47 D 6034 ..... 27.50

Case Alone. Type HF20-86/31. With slide-out sides. Shpg. wt., 8 oz.
47 D 6036. 1-49..Ea. 5.50 50-199..Ea. 4.95 200-499..Ea. 3.85

EXPERIMENTERS' CHASSIS KITS



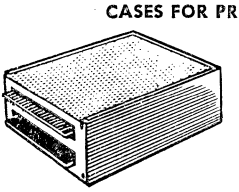
Designed for rapid setup of experimental circuits. Include push-in terminals, perforated XXXP phenolic decks, aluminum supports, T-30N-2 installation tool, spring pusher tool, hardware. Terminals: T-9.4 with insert tool (push-in type require soldering); T-30N-2 ("Springclip" holds up to 6 wires tightly without soldering); patchcords (supplied) slip in between spring coils of solderless terminals and speed wiring. Each pair of small decks is: 1 3/8x1 29/32x3/32" and 1 29/32x8 1/2x3/32". All kits except type 20X include layout paper, pot, and switch brackets, miscellaneous and Z-brackets, screws and nuts.

Stock No.	Mfr's Type	Main Deck	Small Deck	Wt., Lbs.	EACH 1-49	59-199	200-499	500-999
47 D 0906	20X	4¾x8½"	0	1	6.75	6.08	4.73	4.52
47 D 0907	21X	4¾x17"	2	2¾	16.75	15.08	11.73	11.22
47 D 0908	22X	4¾x8½"	2	1¼	11.50	10.35	8.05	7.71
47 D 0945	22XA	8½x17"	2	3½	28.00	25.20	19.60	18.76
47 D 0909	25X	8½x17"	2	3½	21.45	19.31	15.05	14.38

KITS ABOVE INCLUDE THE FOLLOWING:

Mfr's Type	Terminals T-9.4	T-30N-2	T-32A	Patch-cords	Tube Skt. 7P	8P	9P	Trans. Skt. 3, 4P	Power
20X	75	20	0	0	2	3	3	0	0
21X	100	50	0	8	2	3	3	4	2
22X	75	20	0	6	0	0	0	6	2
22XA	100	100	18	14	0	0	0	6	2
25X	100	90	10	13	3	2	2	4	2

CASES FOR PRINTED CIRCUIT CARDS



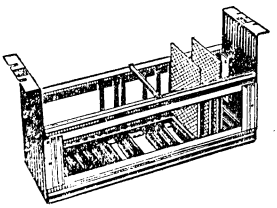
2" wide extruded aluminum cases, brushed satin finish. 2 slide-out sides allow access to internal cards yet provide shielding with interlocking design. 9 inside 1/16" grooves spaced .150" apart to allow choice of positions. 2 cover grooves. Cases have plain .040" bases for cutting Plugboard slots or mount plugs. Dimensions: *2.0x3.12x 4.21", and †2.0x4.62x6.21". Wt., 10 oz.

Stock No.	Type HF20-	Maximum Size Inside Board	EACH 1-49	50-199	200-499
47 D 6002	31-42/1*	4.21 H x 3 W x 4" L	3.74	3.37	2.62
47 D 6003	46-62/1†	6.21 H x 4.5 W x 6" L	4.40	3.96	3.08

Depend on Allied for the Latest in Industrial Electronic Equipment

Printed Circuit Card Enclosures

ELCO VARIPAK II PC CARD ENCLOSURES



Designed to be adapted to any packaging technique utilizing printed or etched circuitry. Provides maximum density. Aluminum racks hold boards and connectors in alignment for efficient stacking. Fits standard 19" rack or cabinet. Adjusts to hold PC boards to 8½" long, from 3½ to 4½" wide. Supplied with blank connector panel for your own cut-out design, except Type 03-9016-06-02-00 has strap in place of panel mount. Dimensions: 1) depth of guide plate; 2) depth of mtg. hanger. *Double tier. Avg wt., 2½ lbs. Allied stocks the entire Elco Varipak series. Call Allied for Information.

Stock No.	Mfr's Type	Dimensions 1	Dimensions 2	EACH 1-9	EACH 10-24	EACH 25-99
47 D 5488	03-9016-02-01-00	4"	5½"	17.89	15.90	13.92
47 D 5695 X	03-9016-06-01-00	5½"	8½"	17.89	15.90	13.92
47 D 5696 X	03-9016-06-02-00	5½"	8½"	17.98	15.98	13.99
47 D 5489	03-9016-10-01-00	7"	8½"	18.79	16.70	14.62
47 D 5490	03-9016-14-01-00	8"	11"	18.79	16.70	14.62
47 D 5352 X	03-9016-21-01-00*	4"	5½"	33.84	30.08	26.32
47 D 5353 X	03-9016-25-01-00*	5½"	8½"	33.84	30.08	26.32

COMPONENTS FOR VARIPAK II

Type 33-9016-2201-Front Panel. Provides a mounting for gauges, etc. Attractive clear aluminum. For 03-9016-06-01-00 only. 1 lb.
47 D 5480. 1-9.....Each 10.62 10-24.....Each 9.44
25-99.....Each 8.26 100-499.....Each 7.08

Type 33-9016-2210-Front Panel. For Double-Tier Varipak only. 1½ lbs.
47 D 5856. 1-9.....Each 23.40 10-24.....Each 20.80
25-99.....Each 18.20 100-499.....Each 15.60

Type 33-9016-1301-02 Extra Guide Plates. For 4½" w. Varipaks. 1 oz.
47 D 5691. 1-9....Ea. 4.05 10-49...Ea. 3.60 50-199..Ea. 3.15

Type 63-9016-7504 Reinforcement Bar. For additional rigidity. 10 oz.
47 D 5326. 1-9.....Each .90 10-24.....Each .80
25-99.....Each .70 100-499.....Each .60

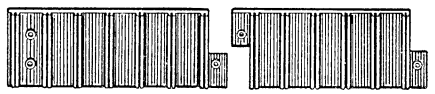
Type 63-9016-2402 Marker Strip. Flexible, white poly-vinyl chloride locator for guides, PC cards. 16⅜" long. Wt., 2 oz.
47 D 5454. 1-9....Ea. .36 10-24....Ea. .32 25-99..Ea. .28

ELCO POLYCARBONATE GUIDES FOR VARIPAK II

Printed circuit boards slide into slots on guides. Guides snap into place in guide slots. Snap rivets sold separately. Available in three thicknesses to accommodate boards of different sizes. Styles: A, for 03-9016-02-01-00 Varipaks: B, for 03-9016-06-01-00 and 03-9016-06-02-00; C, for 03-9016-10-01-00; and D, for 03-9016-14-01-00. Shpg. wt., 2 oz. 10 per package. Rivets, 100 per pkg. 1 oz.

Stock No.	Mfr's Type	Size	Style	PER PACKAGE 1-9	10-24	25-99	100-499
47 D 5340	63-9016-1201-01	1/16"	A	1.70	1.50	1.30	1.10
47 D 5341	63-9016-1201-02	3/32"	A	1.20	1.10	1.00	.80
47 D 5342	63-9016-1201-04	1/16"	B	.80	.70	.60	.50
47 D 5343	63-9016-1201-05	3/32"	B	1.30	1.20	1.10	.90
47 D 5344	63-9016-1201-06	1/8"	B	1.30	1.20	1.10	.90
47 D 5345	63-9016-1201-07	1/16"	C	1.00	.90	.80	.70
47 D 5346	63-9016-1201-08	3/32"	C	1.20	1.10	1.00	.80
47 D 5347	63-9016-1201-09	1/8"	C	1.20	1.10	1.00	.80
47 D 5348	63-9016-1201-10	1/16"	D	1.60	1.40	1.20	1.00
47 D 5349	63-9016-1201-11	3/32"	D	1.60	1.40	1.20	1.00
47 D 5350	63-9016-1201-12	1/8"	D	2.20	2.00	1.80	1.50
47 D 5351	Snap rivets for above (Pkg./100.)			1.00	....	....	.....

GUIDE STRIPS

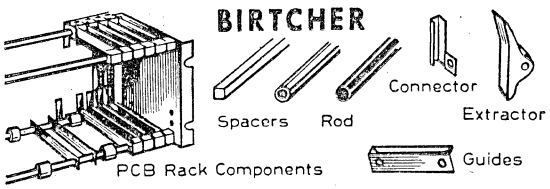


63-9011.3011 63-9011.3021

Accurately guides printed circuit cards—strips made for 1/16" cards at .750" spacing. Constructed of molded glass-filled diallyl phthalate. Guide strips are assembled as "building-blocks"—permit designer to include as many strips as required—in increments of 7 guide locations. 9012 has no extended mtg. plate. *Height. 10 oz.

Stock No.	Type 63-	Description	*H	EACH 1-19	20-49	50-199	200-999
47 D 5449	9011-3011	Right guide	2"	1.53	1.36	1.19	1.02
47 D 5450	9011-3021	Center guide	2"	1.53	1.36	1.19	1.02
47 D 5452	9012-3029	Right guide	3⅞"	3.76	3.44	2.93	2.51
47 D 5453	9012-3019	Left guide	3⅞"	3.56	3.15	2.77	2.38

BIRTCHER



SERIES 55 PCB UNIVERSAL RACK COMPONENTS

For 1/16" PC tracks. Brackets (.062" thick) and guides (.025" thick) are cold-rolled steel per MIL-QQ-S-698. Insulated guides, ABS plastic per MIL-22544. Side plates punched for widths 3" to 4.5" in .50" increments. *2.25" long bracket. †Decimal suffixes indicate guide length in inches. Wt., 10 oz.

BLANK CONNECTOR BRACKET AND GUIDES

Stock No.	Mfr's Type	Style	EA. PER PKG. OF 10 1	2-4	5-9	10-49
47 D 3262	75808	Single In-Line*	1.80	1.40	1.10	.85
47 D 3291	75748-2-3.00†	Single Standard	2.00	1.60	1.30	.95
47 D 3290	5028-2-6.00†	Single Insulated	4.40	3.50	2.80	2.30

SPACERS (Length, 20"; O.D., .375"; I.D., .257")

Stock No.	Mfr's Type	Shape/ Material	EACH PER PKG. OF 4 1-2	3-6	7-12	13-24
47 D 3258	75809	Square/Plastic	4.24	3.40	2.72	2.16
47 D 3259	75810	Round/Aluminum	8.00	6.40	5.12	4.08

SUPPORT ROD (With hardware for mtg. O.D., .250")

47 D 3257	75807	Steel, 20" length	8.80	7.04	5.64	4.52

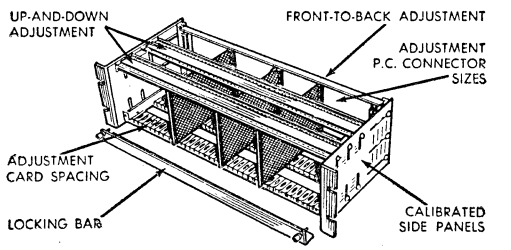
UNIVERSAL SIDE PLATES (8.50"x7", std. RETMA screw slots.)

Stock No.	Mfr's Type	Material	EACH PER PKG. OF 2 1-4	5-12	13-24
47 D 3260	75806	.059" Steel	9.60	7.66	6.14

PC CARD EXTRACTOR (For 1/16" PC boards.)

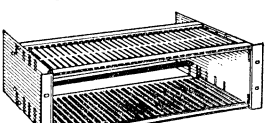
Stock No.	Mfr's Type	Material	EACH PER PKG. OF 5 1	2-4	5-9	10-19
47 D 3273	75764-1-2	Plastic	1.80	1.50	1.20	.95

H. H. SMITH 3050 UNIVERSAL CARD RACK



Fits 19" racks. Card guide and connector rails slide smoothly on nylon bushing for easy adjusting to keep cards centered. Front locking bar holds cards against rear connectors. Capacity, 39 cards; includes guides for 39. For card size: 1/16" thick; 2⅜-4¾" w.; 3½-7¼" long. Card spacing: .400 min. centers adj. in .400 increments. Aluminum. 19x5¼x8". Shpg. wt., 2½ lbs.
47 D 3786. 1-9.....Each 27.95
10-24.....Each 25.95 25-99.....Each 23.95
47 D 3785. Extra 3051 Card Guides. 100 Per Pkg.....5.00

VERO VERORACK SERIES 3 CARD FRAME KITS



Verorack series 3 card frame kit has 16 pieces excluding screws. Features .5" card spacing with polycarbonate guide slabs that slide into precision anodized extrusions. Guide temperature range, −60 to +125°C. Guide lengths combine for extra length cards with special center extrusion. Slotted 5¼" anodized end plates accept card heights up to 4½". Kit includes connector mounting rails, hardware and identification strip. Shpg. wt., 4½ lbs.

Stock No.	Mfr's Type	Guide Length	EACH
47 D 2936	VR3/S	2⅝"	21.00
47 D 2937	VR3/M	5⅜"	22.00
47 D 2938	VR3/L	6⅜"	23.00

RAYTHEON

Knobs, Knob and Shaft Locks

STANDARD CONTROL KNOBS

A variety of round and pointer knob types and sizes combining strength with modern styling. Knobs are molded from top-quality, long-lasting polycarbonate resin. Each knob with anodized aluminum insert molded in for maximum strength. Two Allen-head setscrews with cup-point hold round or flatted control shafts securely. Knobs with Suffix "G" in Type No. are built to MIL-K-3926A specs, and have uniform non-reflecting MIL-MS-91528C matte finish. Others are commercial types with high-gloss mirror finish. All for use with 1/4" shafts except 50 Series, 1/8" shaft size only. Types: A, Round; B, Skirted Round; C, Round Dial; D, Pointer; E, Skirted Pointer; F, Crank. *Knob diameter, excluding skirt. †Length. Av. shpg. wt., 3 oz.

50 SERIES

Stock No.	Mfr's Type	MIL Type	Fig.	Knob Dia.	EACH 1-99	100-199	200-499
47 D 6545	50-1-1	.....	A	17/32"	.55	.47	.44
47 D 6546	50-1-1G	ON1B	A	17/32"	.61	.52	.49
47 D 6549	50-2-1	.....	B	17/32"	.64	.54	.51
47 D 6550	50-2-1G	OD1B	B	17/32"	.70	.60	.56
47 D 6551	50-3-1	.....	C	*17/32"	.72	.61	.58
47 D 6552	50-3-1G	OF1B	C	*17/32"	.78	.66	.62
47 D 6553	50-4-1	.....	D	†111/16"	.57	.47	.44
47 D 6554	50-4-1G	OP1B	D	†11/16"	.61	.52	.49
47 D 6556	50-5-1	.....	E	†111/16"	.64	.54	.51
47 D 6557	50-5-1G	OK1B	E	†11/16"	.70	.60	.56

70 SERIES

Stock No.	Mfr's Type	MIL Type	Fig.	Knob Dia.	EACH 1-99	100-199	200-499
47 D 6558	70-1-2	.....	A	23/32"	.70	.60	.56
47 D 6559	70-1-2G	1N2B	A	23/32"	.76	.65	.61
47 D 6563	70-2-2	.....	B	23/32"	.79	.67	.63
47 D 6564	70-2-2G	1D2B	B	23/32"	.85	.73	.68
47 D 6567	70-3-2	.....	C	*23/32"	.88	.75	.70
47 D 6568	70-3-2G	1F2B	C	*23/32"	.94	.80	.75
47 D 6569	70-4-2	.....	D	†13/32"	.70	.60	.56
47 D 6570	70-4-2G	1P2B	D	†13/16"	.76	.65	.61
47 D 6571	70-5-2	.....	E	†13/16"	.79	.67	.63
47 D 6572	70-5-2G	1K2B	E	†113/16"	.85	.72	.68

90 SERIES

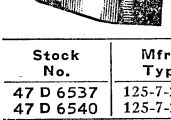
Stock No.	Mfr's Type	MIL Type	Fig.	Knob Dia.	EACH 1-99	100-199	200-499
47 D 6575	90-1-2	.....	A	59/64"	.74	.63	.60
47 D 6576	90-1-2G	2N2B	A	59/64"	.80	.68	.64
47 D 6577	90-2-2	.....	B	59/64"	.83	.71	.66
47 D 6578	90-2-2G	2D2B	B	59/64"	.89	.76	.71
47 D 6580	90-3-2	.....	C	*59/64"	.92	.78	.74
47 D 6581	90-3-2G	2F2B	C	*59/64"	.98	.83	.78
47 D 6583	90-4-2	.....	D	†13/8"	.79	.67	.63
47 D 6584	90-4-2G	2P2G	D	†13/8"	.85	.72	.68
47 D 6586	90-5-2	.....	E	†13/8"	.88	.75	.70
47 D 6587	90 5-2-G	2K2B	E	†13/8"	.94	.80	.75

125 SERIES

Stock No.	Mfr's Type	MIL Type	Fig.	Knob Dia.	EACH 1-99	100-199	200-499
47 D 6589	125-1-2G	3N2B	A	117/64"	.85	.72	.68
47 D 6590	125-2-2	.....	B	117/64"	.88	.75	.70
47 D 6591	125-2-2G	3D2B	B	117/64"	.94	.80	.65
47 D 6594	125-3-2	.....	C	*117/64"	.96	.82	.77
47 D 6595	125-3-2G	3F2B	C	*117/64"	1.02	.87	.82
47 D 6596	125-6-2	.....	F	†123/64"	2.32	1.97	1.86
47 D 6597	125-6-2G	3S2B	F	†123/32"	2.35	1.99	1.88

175 SERIES

Stock No.	Mfr's Type	MIL Type	Fig.	Knob Dia.	EACH 1-99	100-199	200-499
47 D 6598	175-1-2	.....	A	149/64"	1.12	.95	.90
47 D 6602	175-3-2	.....	C	*149/64"	1.34	1.14	1.07
47 D 6603	175-3-2G	4F2B	C	*149/64"	1.41	1.20	1.13
47 D 6604	175-6-2	.....	F	†225/64"	2.51	2.14	2.01
47 D 6610	175-6-2G	4S2B	F	†225/64"	2.58	2.19	2.06

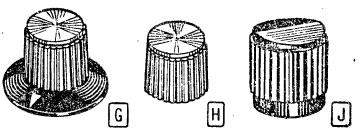


PLASTIC BAR KNOBS

Suffix "G" explained above. For heavy detent switches. Fitted with aluminum insert that accepts standard 1/4" control shaft. Two set-screws hold shaft securely. 2 1/2" long, 3/4" wide, 7/8" deep. Shpg. wt., 3 oz.

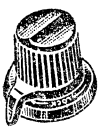
Stock No.	Mfr's Type	MIL Type	Finish	EACH 1-99	100-199	200-499
47 D 6537	125-7-2G	3R2B	Matte	1.32	1.12	1.06
47 D 6540	125-7-2	.....	Mirror	1.31	1.11	1.05

DESIGNER SERIES KNOBS



Molded black plastic knobs with spun aluminum cap inserts. "BD" in Type No. indicates knob has black dot as indicator. Meet MIL specs. Wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Shaft Size	O.D.	EACH 1-99	100-199	200-499
47 D 4101	DS70-1-2	H	.252"	.708"	.78	.72	.68
47 D 4102	DS70-1-3	H	.190"	.708"	.88	.81	.77
47 D 4103	DS70-1BD-2	H	.252"	.708"	.88	.81	.77
47 D 4105	DS70-2BD-2	J	.252"	.708"	1.08	.99	.94
47 D 4106	DS70-3-2	G	.252"	.708"	.96	.88	.84
47 D 4113	DS90-3-2	G	.252"	.911"	1.05	.97	.91
47 D 4116	DS125-3-2	G	.252"	1.225"	1.25	1.15	1.09



KNOB-LOCK POINTER KNOBS

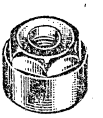
Especially designed for easy legibility—feature pointer that curves over knob towards panel to increase accuracy in reading. Match standard series knobs at left. Constructed of sturdy, durable polycarbonate resin. In mirror finish, or non-reflective "matte," conforming to military specs. (See left.) Order knob lock below. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fits Lock Type	Finish	EACH 1-99	100-199	200-499
47 D 6520	70-1LK-2	KL-701	Mirror	.93	.79	.74
47 D 6522	70-1LK-2G	KL-701G	Matte	.99	.84	.79
47 D 6524	90-1LK-2	KL-901	Mirror	1.03	.88	.82
47 D 6527	125-1LK-2G	KL-1251G	Matte	1.24	1.05	.99

STANDARD KNOB LOCKS

Fit standard 3/8"-32 threaded shanks. Outer skirts are fabricated of tough, durable polycarbonate resin. For Series 70, 90 and 125, Fig. E and F knobs above left, and for pointer knobs listed above. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Fit Knob Series	Finish	EACH 1-99	100-199	200-499
47 D 6528	KL-701	70	Mirror	.87	.74	.70
47 D 6529	KL-701G	70	Matte	.93	.79	.74
47 D 6530	KL-901	90	Mirror	1.02	.87	.82
47 D 6531	KL-901G	90	Matte	1.07	.91	.86
47 D 6536	KL-1251G	125	Matte	1.09	.93	.87

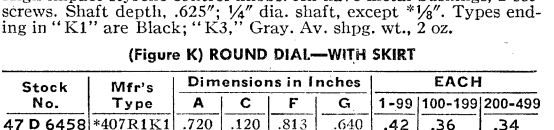


MOLDED-NYLON SHAFT LOCKS

Reliable means of maintaining control settings under conditions of shock and/or vibration. Mount on control bushing, in place of the usual nut and washer. Molded nylon with nickel-plated brass insert. Threaded for 1/4" or 3/8" bushings. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Thread Size	For Shaft	Color	EACH 1-99	100-199	200-499
47 D 6541	SL-100B	3/8-32	1/4"	Black	.33	.28	.26
47 D 6542	SL-101R	3/8-32	1/4"	Red	.35	.30	.28
47 D 6544	SL-105B	1/4-32	1/8"	Black	.25	.22	.20
47 D 6543	SL-110B	3/8-32	1/4"	Black	.22	.19	.18

DESIGNER 400 SERIES KNOBS



High-impact styrene control knobs. All have metal bushings, 2 setscrews. Shaft depth, .625"; 1/4" dia. shaft, except *1/8". Types ending in "K1" are Black; "K3," Gray. Av. shpg. wt., 2 oz.

(Figure K) ROUND DIAL—WITH SKIRT

Stock No.	Mfr's Type	Dimensions in Inches A	C	F	G	EACH 1-99	100-199	200-499
47 D 6458	*407R1K1	.720	.120	.813	.640	.42	.36	.34
47 D 6459	*407R1K3	.720	.120	.813	.640	.42	.36	.34
47 D 6460	407R2K1	.720	.120	.813	.640	.39	.33	.31
47 D 6461	407R2K3	.720	.120	.813	.640	.39	.33	.31
47 D 6462	*409R1K1	.875	.120	.813	.800	.44	.37	.35

(Figure L) ROUND, DIAL SKIRTED (†Dimension M)

47 D 6470	*407D1K1	.720	.120	.813	†1.050	.52	.44	.42
47 D 6471	*407D1K3	.720	.120	.813	†1.050	.52	.44	.42
47 D 6472	407D2K1	.720	.120	.813	†1.050	.48	.41	.38
47 D 6473	407D2K3	.720	.120	.813	†1.050	.48	.41	.38
47 D 6474	409D2K1	.875	.120	.813	†1.270	.51	.43	.41

Knobs, Shaft Fittings and Chassis Kits

RAYTHEON SELF-LOCKING KNOBS

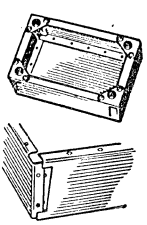
Reduce possibility of accidental setting change. Knob must be fully depressed before movement is possible. Design same as Raytheon's military line. Meet MS90528C, MIL-K-2936B. Infinite resolution. Zero backlash. Polycarbonate plastic. Stainless-steel mechanism. "Push-to-Turn" on face. Sizes: ring-skirted types, 1.030x1.050"; dial-skirted types, 1.030x1.080". "G" at end of Type No., matte finish, others mirror finish. NP, arrow is omitted on knob skirt. *Ring-skirted knob. Av. shpg. wt., 5 oz.

Dial-Skirted Knob Ring-Skirted Knob

Stock No.	Mfr's Type	Color	Shaft Hole Dia.	EACH 1-24	25-49	50-249
47 D 6625	PT70-2-1*	Black	1/8"	12.10	10.90	9.70
47 D 6626	PT70-2-1G*	Black	1/8"	12.00	10.80	9.60
47 D 6627	PT70-2-2*	Black	1/4"	12.20	11.00	9.75
47 D 6633	PTG70-2-2*	Gray	1/4"	12.30	11.10	9.85
47 D 6628	PT70-2-2G*	Black	1/4"	12.10	10.90	9.70
47 D 6629	PT70-2-3*	Black	3/16"	12.25	11.00	9.80
47 D 6630	PT70-2-3G*	Black	3/16"	12.15	10.95	9.75
47 D 6637	PT70-3NP-1	Black	1/8"	12.55	11.30	10.05
47 D 6638	PT70-3NP-1G	Black	1/8"	12.45	11.20	9.95
47 D 6639	PT70-3NP-2	Black	1/4"	12.65	11.40	10.10
47 D 6640	PT70-3NP-2G	Black	1/4"	12.55	11.30	10.05
47 D 6641	PT70-3NP-3	Black	3/16"	12.70	11.45	10.15
47 D 6642	PT70-3NP-3G	Black	3/16"	12.60	11.35	10.10
47 D 6643	PT70-3-1	Black	1/8"	12.60	11.35	10.10
47 D 6644	PT70-3-1G	Black	1/8"	12.50	11.25	10.00
47 D 6645	PT70-3-2	Black	1/4"	12.70	11.45	10.15
47 D 6646	PT70-3-2G	Black	1/4"	12.60	11.35	10.10
47 D 6647	PT70-3-3	Black	3/16"	12.75	11.50	10.20
47 D 6648	PT70-3-3G	Black	3/16"	12.65	11.40	10.10

ARACON—SEEZAK ALUMINUM CHASSIS KITS

Designed for prototype and short-run use in development of new equipment. Patented interlocking construction technique saves storage space. Heavy-gauge aluminum panels, reinforced corners, screw-down top and bottom panels. All parts are easily interchangeable. More versatile than conventional welded chassis, allows easy hole punching, drilling and fabricating of top panel. Pre-punched mounting holes for easy installation. With all mounting hardware. †indicates chassis sizes that can be made from LA50 chassis assortment below. Av. wt., 1½ lbs.



Stock No.	Mfr's Type	Size (WxLxH)	EA.	Stock No.	Mfr's Type	Size (WxLxH)	EA.
47 D 2965	44-2†	4x4x2"	1.64	47 D 3002	711-2†	7x11x2"	2.76
47 D 2966	45-2†	4x5x2"	1.77	47 D 3003	712-3	7x12x3"	3.39
47 D 2972	46-2†	4x6x2"	1.87	47 D 3004	713-2	7x13x2"	2.99
47 D 2974	46-3†	4x6x3"	2.13	47 D 3005	715-2	7x15x2"	3.27
47 D 2962	47-2	4x7x2"	1.93	47 D 3006	717-3	7x17x3"	4.14
47 D 2976	48-2†	4x8x2"	2.03	47 D 3007	812-3†	8x12x3"	3.78
47 D 3027	412-2	4x12x2"	2.43	47 D 3008	817-2†	8x17x2"	3.91
47 D 2979	417-3	4x17x3"	3.58	47 D 3009	817-3†	8x17x3"	4.53
47 D 2981	57-2†	5x7x2"	2.07	47 D 3010	1012-3	10x12x3"	4.25
47 D 2983	57-3†	5x7x3"	2.33	47 D 3011	1014-3	10x14x3"	4.58
47 D 2985	510-3†	5x10x3"	2.76	47 D 3012	1017-2†	10x17x2"	4.42
47 D 3028	512-3	5x12x3"	3.06	47 D 3015	1017-3†	10x17x3"	5.07
47 D 2986	513-3	5x13x3"	3.18	47 D 3016	1017-4†	10x17x4"	5.76
47 D 3034	517-2	5x17x2"	3.21	47 D 3025	1212-3	12x12x3"	4.78
47 D 2987	68-2†	6x8x2"	2.30	47 D 3029	1317-2	13x17x2"	5.40
47 D 2992	614-3	6x14x3"	3.46	47 D 3033	1317-3	13x17x3"	6.15
47 D 2994	617-3	6x17x3"	3.81	47 D 2961	1317-4	13x17x4"	6.85
47 D 2996	77-2	7x7x2"	2.40	47 D 2963	1717-3	17x17x3"	7.21
47 D 2998	79-2	7x9x2"	2.60	47 D 2964	1717-4	17x17x4"	8.07

LA50 LAB CHASSIS ASSORTMENT

Constructs these chassis sizes: 4x5x3", 4x7x2", 4x7x3", 4x8x3", 5x10x2", 6x8x3", plus those with †above. Includes mathing selection of terminal boards and terminals. Shpg. wt., 10 lbs.

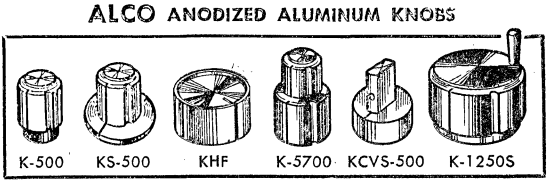
47 D 3037 ..... Each 44.90

H. H. SMITH FLEXIBLE SHAFTS

Sturdy, flexible 1/8" shafts with 1/4" hubs 1½" long. Non-rusting, non-magnetic, phosphor bronze construction. Ideal for connecting out-of-line shafts. Permits up to 90° angular control with no backlash. Av. wt., 2 oz.

Stock No.	Mfr's Type	Lght.	EACH 1-9	10-49	50-99	100-499
47 D 4088	151	3"	.60	.54	.51	.48
47 D 4089	152	6"	.65	.61	.57	.52

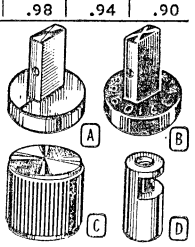
ALCO ANODIZED ALUMINUM KNOBS



K-series knobs are of one-piece construction with indicating pointer. K-1250S has a built-in spinner, ideal for multi-rotation controls. KS-, similar to K-but with aluminum skirt. KSP- series have acrylic plastic skirts. KHF- series have high-fidelity component styling with notched pointers, from Japan. K-5700 has dual-concentric design. KCVS-500 type is an adjustable stop knob. Lets you set a predetermined stop on a rotary switch or potentiometer where less than a complete rotation is desired. Pointer color is black on aluminum finish knobs, white in black finish knobs, red on gold finish knobs. All knobs listed are available in aluminum, black, or gold finish except types indicated by *aluminum or black only; †aluminum or gold only. Specify color choice when ordering. Av. shpg. wt., 1 oz.

Stock No.	Mfr's Type	Diameter	Shaft Size	EACH 1-99	100-249	250-499	500-999
47 D 6792 C	K-500	1/2"	1/4"	.45	.39	.37	.35
47 D 6716 C	K-700	3/4"	1/4"	.50	.44	.41	.38
47 D 6717 C	K-900	15/16"	1/4"	.55	.49	.47	.45
47 D 6718 C	K-1250	1 1/4"	1/4"	.65	.59	.56	.53
47 D 6719 C	K-1250S*	1 1/4"	1/4"	1.55	1.37	1.31	1.25
47 D 6793 C	KS-500*	1/2"	1/4"	.60	.55	.51	.49
47 D 6794 C	KS-700*	3/4"	1/4"	.65	.59	.56	.53
47 D 6720 C	KS-900*	15/16"	1/4"	.85	.75	.65	.62
47 D 6795 C	KSP-700*	3/4"	1/4"	.60	.55	.51	.49
47 D 6721 C	KSP-900*	15/16"	1/4"	.65	.59	.56	.53
47 D 6780 C	KHF-500†	1/2"	1/4"	.45	.39	.37	.35
47 D 6782 C	KHF-700†	3/4"	1/4"	.50	.44	.41	.38
47 D 6784 C	KHF-900†	15/16"	1/2"	.55	.49	.47	.45
47 D 6786 C	KHF-1250†	1 1/4"	1/4"	.65	.69	.56	.53
47 D 6722 C	K-5700*	1/2",3/4"	1/8",1/4"	1.10	.98	.94	.90
47 D 6723 C	KCVS-500*	....	1/8"	1.10	.98	.94	.90

ANODIZED ALUMINUM KNOBS



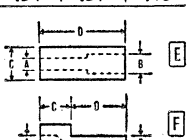
KC Series. Fig. A, available in natural aluminum or black anodized finish. 1/8" dia. Type KC500B10, Fig. B, black knob with 0-9 numerals. KN Series. Fig. C, straight knurled knobs with hairline indicators with precision serrations. Have #6-32 set screws in two places. Available in black anodized or natural finish, specify. Shaft Reducer, Fig. D, reduces knob shafts from 1/4" to 1/8". Shpg. wt., 1 oz. Sold in Pkgs. of 25 only.

Stock No.	Mfr's Type	Description	EACH 1-99	100-249	250-499	500-999
47 D 2168	KC-500A	Natural Alum.	.55	.49	.47	.45
47 D 2169	KC-500B	Black Anodized	.55	.49	.47	.45
47 D 2170	KC-500B10	Black, 0-9 Num.	.65	.59	.56	.53
47 D 2172	KR-1 Shaft Reducer. Per Pkg. 1-3.. Ea. 1.50 4-8 EA. 1.13					

Stock No.	Mfr's Type	Diameter	Shaft Size	EACH 1-99	100-249	250-499	500-999
47 D 6675 C	KN-500	1/2"	1/4"	.55	.50	.47	.44
47 D 6676 C	KN-700	3/4"	1/4"	.60	.54	.51	.48

H. H. SMITH SHAFT FITTINGS

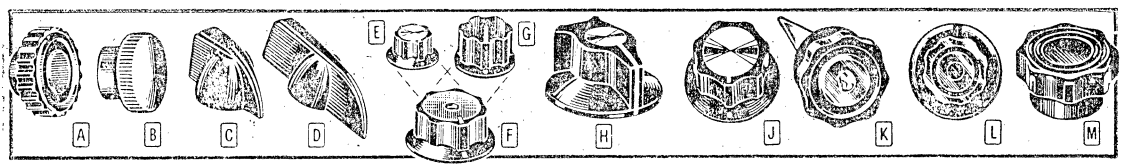
Couplings are designed for extending shafts of volume controls, switches, tone controls, etc., or for ganging units. Extenders are primarily for decreasing or increasing shaft diameter and length. *Indicates insulated fiber; †Brass, nickel-plated. Av. shpg. wt., 1 oz.



Stock No.	Mfr's Type	Fig.	Dimensions A	B	C	D	EACH 1-9	10-49	50-99	100-499
47 D 1121	180†	E	1/8"	1/8"	9/32"	3/8"	.40	.36	.34	.30
47 D 1105	120†	E	1/4"	1/4"	7/16"	3/4"	.22	.20	.19	.17
47 D 1111	140*	E	1/4"	1/4"	7/16"	3/4"	.22	.20	.19	.17
47 D 1110	131†	E	3/8"	1/4"	1/2"	3/4"	.25	.23	.21	.20
47 D 1115	141*	E	3/8"	1/4"	1/2"	3/4"	.25	.23	.21	.20
47 D 1124	189†	F	1/8"	1/8"	1/4"	3/8"	.35	.32	.30	.27
47 D 1122	150†	F	1/4"	1/4"	1/2"	1 1/4"	.35	.32	.30	.27
47 D 1113	130*	F	1/4"	1/4"	1/2"	1 1/4"	.35	.32	.30	.27
47 D 1108	160†	F	1/4"	1/4"	1/2"	5/8"	.30	.27	.26	.23
47 D 1125	161*	F	1/4"	1/4"	1/2"	5/8"	.30	.27	.20	.23
47 D 1109	132†	F	3/8"	1/4"	1/2"	1 1/4"	.35	.32	.36	.27
47 D 1123	162†	F	3/8"	1/4"	1/2"	5/8"	.30	.27	.26	.23

Knobs and Dial Plates

KURZ-KASCH INSTRUMENT KNOBS



Key to suffixes —1: Molded hole to fit standard ¼" shaft, with one setscrew. —3: Flush-type brass insert for standard ¼" shaft, with one setscrew. —L: indicator line filled. PTR: pointer.

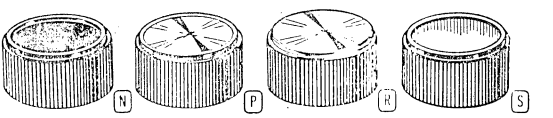
*Pointer, bar Knobs. †Knobs with aluminum inlay. §Heavy-duty knob with inlay. ††Flanged terminal nuts for 8-32 shaft. 310 has 1¼" pointer. **Black base, red top, for concentric shafts.

Stock No.	Mfr's Type S-	Fig.	Color	Size O.D.	Ht. Inch	EACH 1-99	100-499	500-999	1000-2499
47 D 3413	68-3	A	Black	1¾"	7/8"	.44	.33	.29	.22
47 D 3422	76-18††	B	Black	¾"	9/16"	.18	.14	.13	.091
47 D 3398	292-1L*	C	Black	1¼"	5/8"	.12	.09	.081	.058
47 D 3399	292-1L*	C	Red	1¼"	5/8"	.12	.09	.082	.059
47 D 3400	292-3L*	C	Black	1¼"	5/8"	.18	.13	.123	.088
47 D 3401	292-1L*	D	Black	2¼"	5/8"	.19	.15	.136	.097
47 D 3402	293-1L*	D	Red	2¼"	5/8"	.31	.23	.218	.156
47 D 3403	293-3L*	D	Black	2¼"	5/8"	.30	.22	.208	.149
47 D 3410	1657-1L*	H	Black	1⅛"	7/16"	.48	.36	.314	.242
47 D 3415	309PTR	K	Black	1⅝"	¾"	.52	.39	.338	.097
47 D 3416	310PTR	K	Black	2⅜"	7/8"	.71	.53	.463	.356
47 D 3420	380-3L	L	Black	1⅛"	13/16"	.68	.51	.445	.342
47 D 3421	311-3L	L	Black	1⅝"	7/8"	.71	.57	.494	.38

Stock No.	Mfr's Type S-	Fig.	Color	Size O.D.	Ht. Inch	EACH 1-99	100-499	500-999	1000-2499
47 D 3418	309-3	M	Black	1⅝"	¾"	.34	.25	.237	.169
47 D 3419	310-3	M	Black	2⅜"	7/8"	.52	.39	.336	.258
47 D 3417	308-3	M	Black	2⅜"	7/8"	.25	.19	.178	.127
47 D 3414	1308-3§	M	Black	1⅛"	5/8"	.48	.36	.309	.238
47 D 3405	1645/648**	EF	Red/Bl.	1¼"	13/32"	.58	.44	.372	.291
47 D 3529	645/648**	GF	Red/Bl.	1¼"	13/32"	.38	.28	.194	.189
47 D 3406	645-1L	J	Black	¾"	7/16"	.18	.14	.126	.090
47 D 3409	1747-1L†	G	Black	13/16"	19/32"	.44	.34	.287	.223
47 D 3423	647-1L	J	Black	13/16"	19/32"	.18	.14	.127	.091
47 D 3404	648-1L	J	Black	1¼"	21/32"	.19	.14	.132	.094
47 D 3408	747-1L†	G	Black	13/16"	19/32"	.26	.19	.181	.130
47 D 3407	1645-1L†	J	Black	5/8"	7/16"	.38	.28	.263	.188
47 D 3411	1648-1L†	J	Black	1¼"	¾"	.40	.30	.263	.202

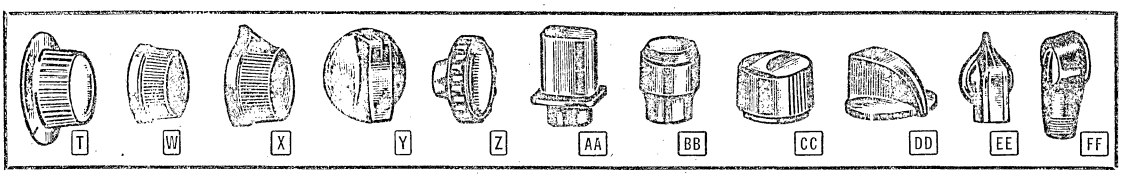
"SNOB" KNOBS

Specially designed knobs add a professional appearance to all types of equipment. Molded hole fits standard ¼" shaft. 900 Series has plain top, slotted set screw. 1900 Series, spun aluminum inlay on top. 2900 Series, spun aluminum cap on top. *3900 Series has metallic aluminum or gold ring on top, Specify. Av. shpg. wt., 1 oz.



47 D 2640	903-1	N	Plain	¾"	5/8"	.23	.17	.162	.116
47 D 2641	905-1	N	Plain	1⅛"	11/16"	.27	.21	.192	.137
47 D 2642	1903-1	P	Plain	¾"	5/8"	.38	.29	.267	.191
47 D 2644	1905-1	P	Plain	1⅛"	11/16"	.42	.32	.276	.212
47 D 2646	1906-1	P	Plain	1⅜"	¾"	.45	.34	.293	.225
47 D 2647	2902-1	R	Plain	½"	5/8"	.36	.27	.252	.180
47 D 2648	2903-1	R	Plain	¾"	5/8"	.39	.29	.274	.196
47 D 2650	2905-1	R	Plain	1⅛"	11/16"	.45	.34	.295	.227
47 D 2656	2906-1	R	Plain	1⅜"	¾"	.48	.36	.312	.240
47 D2657C	3903-1	S	*	¾"	5/8"	.31	.23	.218	.156
47 D2671C	3905-1	S	*	1⅛"	11/16"	.35	.27	.248	.177
47 D2631C	3907-1	S	*	1¾"	13/16"	.45	.34	.293	.225

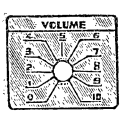
HARRY DAVIES CONTROL, POINTER AND UTILITY KNOBS



For use as tone and volume control knobs for radios, television receivers, high-fidelity systems and other electronic equipment. Type 1770-F screws on 6-32 threaded shaft; all others have set screws for mounting round or flatted shafts. Type 5149-A has self-locating friction fit for flat wire shafts. *Indicates for use with knurled shafts. Figure W is for small radios. Wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Dia.	Color	EACH 1-24	25-99	100-499	500-999	1000-Up
47 D 4127	1600	T	1½"	Black	.16	.14	.122	.113	.108
47 D 4129	1610	T	29/32"	Black	.17	.13	.113	.104	.099
47 D 4134	1450	W	1 1/16"	Black	.10	.08	.068	.062	.057
47 D 4136	1450-D	*W	1 1/16"	Black	.06	.05	.04	.035	.033
47 D 4137	1475	W	1"	Black	.14	.11	.092	.085	.082
47 D 4138	1400	X	1 1/16"	Black	.10	.08	.068	.060	.057
47 D 4140	1470	X	1"	Black	.15	.13	.115	.105	.10
47 D 4141	1500	Y	1⅛"	Black	.13	.11	.095	.088	.084
47 D 4142	1500	Y	1⅛"	Red	.13	.12	.099	.092	.088
47 D 4144	2965	Z	7/8"	Black	.14	.12	.104	.097	.092
47 D 4166	5149-A	AA	½"	Black	.08	.06	.054	.048	.045
47 D 4168	1770-F	BB	31/64"	Black	.07	.05	.046	.04	.039
47 D 4170	1700	CC	¾"	Black	.13	.11	.095	.088	.084
47 D 4171	1550	DD	1 3/16"	Black	.12	.11	.092	.085	.082
47 D 4175	2150	EE	1¼"	Black	.13	.11	.096	.09	.087
47 D 4184	2110	FF	1⅝"	Black	.22	.19	.165	.154	.147

WALDOM ACCESSORIES



SQUARE DIAL PLATES

Lithographed aluminum plates for amps and PA equipment. Black figures and letters dyed into the hard aluminum oxide surface. For 1¼" bar knob. 2 3/16x2 5/8". 13/32" ctr. hole. 2 oz.

Stock No.	Type	Description
47 D 3121	426	Volume, 0-10
47 D 3130	410	No title, 0-10

1-99.....Each .41 100-Up.....Each .30

ROUND DIAL PLATE

Attractive, easy-to-read etched aluminum scale with highly polished black background. 1¾" diameter. For 1¼" bar knobs. 13/32" center hole. Shpg. wt., 2 oz.

Stock No.	Type	Description
47 D 3131	25	Volume (Arrow)
47 D 3135	569	0-100 (180°)
47 D 3136	905	0-100 (270°)

1-99.....Each .34 100-Up.....Each .25

"ON-OFF" SWITCH PLATE

Economy priced high quality anodized aluminum switch plate. Etched aluminum with black background. Has polished aluminum letters and border. For use with standard toggle switches. Mounted for horizontal operation of toggle. Aluminum oxide surface assures long-lasting service. 1 1/16x1 1/16". Wt., 2 oz.

47 D 3139. Type 278. 1-99.....Each .20
100-Up.....Each .15

Make Allied Your Headquarters for Industrial Electronics

National, Millen, H. H. Smith Components

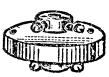
COMPONENTS BY NATIONAL

TYPE MCN VERNIER DIAL FOR INDIVIDUAL CALIBRATION

A deluxe, compact, 3-scale vernier dial. Ideal for limited space applications in mobile equipment, small receivers, tuners, test instruments, etc. Offers three blank calibrating scales and 0-100 logging scale. Utilizes "Velvet Vernier" drive for smooth, backlash-free tuning. Drive ratio is 5:1. Size: 2¾x3⅞". With extra scales, hardware, hub for ¼" shafts. Shpg. wt., 2 oz.

47 D 2171 ..... 7.20

TYPE TX-9 SHAFT COUPLING

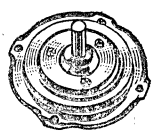


Compact coupling for joining two shafts together. Ruggedly constructed of rigid steatite; won't stretch or twist. Performance-proved in industrial, commercial and Amateur installations. Fully insulated. Has hubs and spiders of solid, nickel-plated brass. Includes two set-screws on each hub for firm, positive grip on shaft. Size, 1⅝" diameter. Fits all ¼" shafts. Shpg. wt., 1 oz.

47 D 2008. 1-49 ..... Each 1.80
50-99 ..... Each 1.71 100-199 .. Each 1.62
200-499 .... Each 1.44 500-999 .. Each 1.35

RUGGED PLANETARY DIAL-DRIVE MECHANISMS

Type AN-250



Type AVD-250

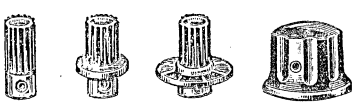
Type AN-250. Planetary vernier tuning mechanism. The output shaft coupling is fully insulated. Drive ratio is 5:1—five turns of the knob for each revolution of the drive. Output torque is rated at 1-3 inch-pounds. Drive shaft is ¼". Output coupling fits a ¼" shaft, which is secured by means of two set-screws 90° apart on the coupling hub. Overall diameter, 2 15/32"; overall length, 1 19/32"; length, front of drive shaft to back of mounting plate, 1 1/16". Unit quickly and easily mounts front of panel—includes three ⅛" mounting holes. Shpg. wt., 2 oz.

47 D 2023 ..... 3.75

Type AVD-250. Same as above, but output shaft coupling is non-insulated. Overall diameter, 2 9/16"; overall length, 1 15/32"; length from front of drive shaft to back of mounting plate, 1". Mounts easily on front of equipment panel by means of four 5/32" mounting holes. Shpg. wt., 2 oz.

47 D 2025 ..... 2.63

MILLEN MINIATURE PLASTIC KNOBS

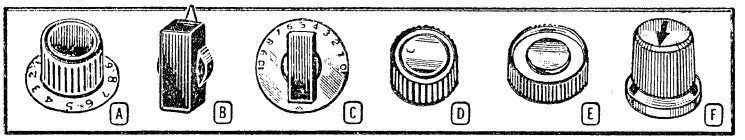


L M N P

Black, plastic knobs offering excellent appearance and miniature size. Easy to grip—ideal for compact equipment. Fitted with brass insert that will accommodate a ⅛" dia. shaft. All have slotted top for screwdriver blade except A006. 4 oz.

Stock No.	Type	Fig.	Height	Dia.	EACH
47 D 3253	A019	L	9/16"	¼"	.46
47 D 3254	A018	M	9/16"	7/16"	.49
47 D 3255	A007	N	9/16"	5/8"	.53
47 D 3256	A006	P	½"	¾"	.61

ALL-PURPOSE KNOBS FOR ¼" SHAFTS



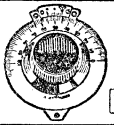
A B C D E F

Deeply knurled for sure grip, except Types HRP and R, smooth knobs. Made of Tenite, except Types HRP-P and R, bakelite; HRM, satin-chromed brass. HRS Types have 7/16" chrome dial. Type R has 1⅝" aluminum dial. Type HRT-M is miniature version of HRT, face-to-back size, 27/32". *Black. †gray. Av. wt., 1 oz.

Stock No.	Mfr's Type	Fig.	Description	Knob Dia.	EACH 1-49	50-99	100-199	200-499	500-999
47 D 2106	HRS-3*	A	300° 0-10 scale	1 7/16"	.66	.62	.59	.528	.495
47 D 2107	HRS-3†	A	300° 0-10 scale	1 7/16"	.66	.62	.59	.528	.495
47 D 2125	HRS-4*	A	1-line scale	1 7/16"	.66	.62	.59	.528	.495
47 D 2126	HRS-4†	A	1-line scale	1 7/16"	.66	.62	.59	.528	.495
47 D 2128	HRS-5*	A	0-10 180° scale	1 7/16"	.66	.62	.59	.528	.495
47 D 2135	HRP-P*	B	Pointer	1¼x½"	.44	.41	.40	.352	.33
47 D 2136	R*	C	180° 0-10 scale	1⅝"	.69	.65	.62	.552	.518
47 D 2176	HR*	D	White dot	15/16"	.39	.37	.35	.312	.293
47 D 2177	HR†	D	White dot	15/16"	.39	.37	.35	.312	.293
47 D 2178	HRT*	E	Chrome insert	2⅛"	1.04	.98	.94	.832	.78
47 D 2185	HRT-M	E	Chrome circle	1½"	.58	.55	.52	.464	.435
47 D 2180	HRM*	F	Arrow	⅝"	.96	.91	.86	.768	.72

CALIBRATED PLANETARY DRIVE DIALS

G



H

Recommended for all types of equipment. Knobs are black bakelite, with dials of nickel-plated brass. Type N dial has a vernier scale. Type AM dials have dial pointer. Type N is 1⅜" deep; Type AM, 1 7/16" deep. For ¼" shafts. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Ratio	Scale	Dia.	EACH 1-49	50-99	100-199	200-499	500-999
47 D 2113	AM-2	G	5:1	0-100; 180°	3"	5.25	4.99	4.73	4.20	3.94
47 D 2150	AM-5	G	5:1	200-0; 360°	3"	5.25	4.99	4.73	4.20	3.94
47 D 2151	AM-6	G	5:1	0-150; 270°	3"	5.25	4.99	4.73	4.20	3.94
47 D 2000	N-2	H	5:1	0-100; 180°	4"	12.68	12.05	11.41	10.14	9.51

EQUIPMENT-DESIGN COMPONENTS

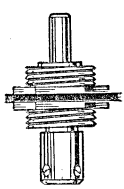
J

K

Type SB bushing is made of nickel-plated brass. SL shaft lock is popular component for use with variable potentiometers, capacitors, etc. in a wide variety of electronic equipment. Av. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Description	EACH 1-49	50-99	100-199	200-499
47 D 2017	SB	J	Panel Bushing for ¼" Shafts	.27	.26	.243	.216
47 D 2018	SL	K	Shaft Lock for ¼" Shafts	.40	.38	.36	.32

TYPE NBD BALL REDUCTION DRIVES



Precise, smooth tuning with max. backlash of only 1°. 1 in-oz. input transmits 35-40 in.-oz. output torque. Hardened balls, nickel/silver housings. Reduction ratio: *5:1, †10:1. Mounting hole: *49/64", †1 9/64". Length: *2", †2 7/32". Overall shaft length, ½". *¾-32UN, †1⅛"-27UN bushing. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	EACH 1-49	50-99	100-199
47 D 2026	*NBD-1-1	3.89	3.70	3.50
47 D 2027	†NBD-2-1	4.48	4.26	4.03

RIGHT-ANGLE DRIVES

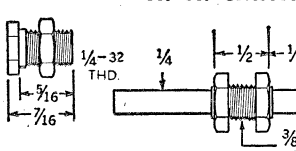
Type RAD. Precision right-angle drive for positive control of variable potentiometers and capacitors at right angles to front panel. Compact unit saves space. Drives up to two units. Rugged aluminum housing and gears for long-life performance and dependability. Overall shaft length, 2½"; shaft diameter, ¼". Shpg. wt., 3 oz.

47 D 2173 ..... 4.31

Type PRAD. As left but with durable brass gears. Backlash under 1½%. Overall shaft length, 2½". Shaft diameter, ¼". Wt., 1 oz.

47 D 2174 ..... 23.15

H. H. SMITH PANEL BEARING ASSEMBLY



No. 184 No. 148-149

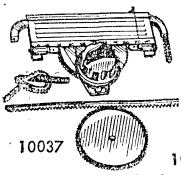
For use on panels up to ⅜" thick. Nickel-plated brass bearing ½" long, ⅜"-32 threaded. The ¼" drive shaft extends through both ends of coupling. Overall shaft length: Type 148—3", Type 149—6". Panel bearing only: Type 119 for ¼" shafts, 184 for ⅛" shafts. 2 oz.

Stock No.	Mfr's Type	PER PKG. OF 2 1-4	5-24	25-49	50-249
47 D 4090	148	.70	.58	.55	.50
47 D 4091	149	1.00	.93	.86	.77

Stock No.	Mfr's Type	PER PKG. OF 5 1-19	20-49	50-99
47 D 4092	119	.75	.64	.57
47 D 4093	184	.75	.64	.57

Electronic and Mechanical Components

MILLEN COMPONENTS FOR PROTOTYPE, REPLACEMENT AND ORIGINAL EQUIPMENT

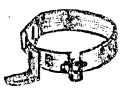


Type 10037 No-String Illuminated Dial. Pointer is driven by non-slip flexible gear. Friction drive; ¼" shaft rotates 180°. Teflon bearings. Dial calibrated 0-100 plus four blank scales. Adjustable zero-set, anti-parallex pointer. Scale has front panel bezel. Behind-the-panel space required, 9x5¾x3⅛". Bezel, 7⅝x2⅝". Shpg. wt., 6 oz.
47 D 3236.....13.05

Type 10035 Illuminated Multi-Scale Dial. For transmitters, receivers, and other equipment. 12:1 drive-ratio. Has four blank scales for calibration and one 0-100 logging scale. Black. 8⅜6x6⅞2". **47 D 3241**. Shpg. wt., 6 oz.....10.54

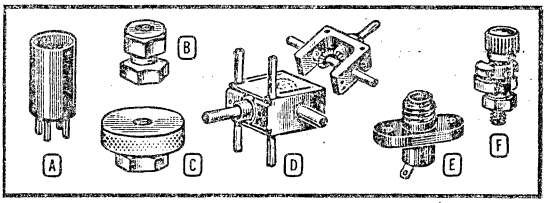
Type 10039 Midget Panel Dial. Economy model. Excellent for use in small transmitters, receivers and measurement equipment. Drive ratio is 7½ to 1. Totally self-contained mechanism eliminates back-of-panel interference; permits quick, easy installation. Has 5 blank scales for calibration and one 0-100 logging scale. Black. 4x3⅝". **47 D 3242**. Shpg. wt., 4 oz.....7.75

33087 TUBE BASE CLAMPS



Sturdily constructed, special spring-steel tube base clamps. Hold tubes firmly in sockets and protect them against jarring and shock damage. 2 oz.

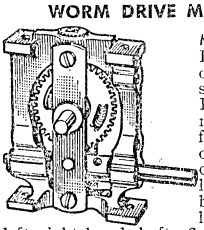
Stock No.	Type	Dia.	Stock No.	Type	Dia.	EACH
47 D 3247	33087A	1⅛"	47 D 3251	33087E	1⅜"	.46
47 D 3249	33087C	1¼"	.....	.....	.....	.46



Form dimensions indicate diameters and winding lengths. 45004 and 45005 low-loss mica-filled coil forms, phenolic base. Series 10061, 10062, and A061 shaft locks convert any control to locking-shaft type. Type 80073 cathode-ray bezel has satin-black finish, and green filter. *Not illustrated. Av. shpg. wt., 4 oz.

Stock No.	Type	Fig.	Description	EA.
47 D 3217	45004	A	4-Pin Coil Form, 1x1 13/32"	.58
47 D 3218	45005	A	5-Pin Coil Form, 1x1 13/32"	.58
47 D 3222	10061	B	Shaft Lock, for ⅜" Bushing; ¼" shafts	.46
47 D 3223	A061	B	Shaft Lock for ¼" Bushing; ⅛" shafts	.46
47 D 3224	10062	C	Shaft Lock with Knurled Nut, for ¼" shafts	.66
47 D 3220	10012	D	Right Angle Drive	10.00
47 D 3225	37001	E	High Voltage Terminal and Thru-Bushing, Black	.56
47 D 3226	37001	E	High Voltage Terminal and Thru-Bushing, Red	.59
47 D 3221	10050	F	Dial Lock	.67
47 D 3239	80073	*	Bezel, Cushion and Filter for 3" CR Tube	5.42

WORM DRIVE MECHANISMS



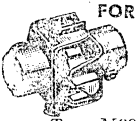
Model 10000-A. Drive mechanism offering a 16-to-1 step-down ratio. Rugged cast aluminum frame is drilled for secure mounting on either panel or chassis base. Spring-loaded nickel-plated brass gears. Stainless-steel worm. ¼" left, right-hand shafts. 3x2⅜x¾".
47 D 3216. Shpg. wt., 2 lbs.....15.40
10000-B Worm Drive 48:1 ratio.
47 D 3232. Shpg. wt., 2 lbs.....15.40

FLEXIBLE SHAFT COUPLINGS

39001 is an insulated, universal joint. 39006, "slide-action" coupling for longitudinal and eccentric shaft motion, out-of-line operation, and angular drive without backlash. 39005 (high torque) similar to 39001 but not insulated. 39016 (illus.). All resist mechanical shock. For ¼" shafts. Wt., 2 oz.

Stock No.	Type	Description	EACH
47 D 3208	39001	Universal joint	.75
47 D 3209	39002	Fixed joint	.75
47 D 3212	39005	Universal joint	.75
47 D 3213	39006	Slide action	.75
47 D 3214	39016	Barrier	.75

MINIATURIZED COUPLINGS FOR ⅛" AND ¼" SHAFTS



Type M006 (illustrated) is universal joint style, sturdily constructed of nickel-plated brass with steatite insulation and spring fingers. Type M008 is an insulated coupling with brass inserts; completely isolates shaft from panel. Type 39003 is a solid brass coupling for all ¼" shafts; Type M006 and Type M008 are for use with ⅛" shafts. 4 oz.

Stock No.	Type	Description	EACH
47 D 3205	M006	Univ. joint coupling	1.05
47 D 3206	M008	Insulated coupling	.69
47 D 3207	39003	Solid brass coupling	.30

ACCURATE ELEC. COUPLING

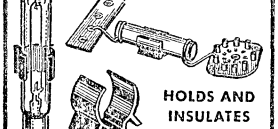
For coupling drive shafts to capacitors, gang switches, controls, etc. Hubs drilled to fit standard ¼" shafts. Electrically insulates shaft from extension and chassis.
47 D 2405. Shpg. wt., 2 oz.....53

HAMMARLUND SLIP-PROOF COUPLINGS

Type FC-46-S. Sturdy, slip-proof. Eliminates backlash. High resistance to mechanical shock. Has 4 set-screws (2 on each side). For standard ¼" dia. shafts. Shaft clearance, 5/32". Steatite insulation; flash voltage rating, 5000 volts. Size, 1¼" dia. x 1 13/16".
47 D 2403. Shpg. wt., 2 oz.....1.50

Type FNC-46-S. As left, but non-insulated. Heavy-duty. Maintains firm, slip-proof grip. Flexible arms handle out-of-line or eccentric shaft motion. For ¼" dia. shafts. 1¼" dia. by 2 3/32".
47 D 2404. Shpg. wt., 2 oz.....1.20

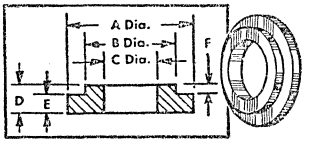
RICHCO PLASTIC COMPONENT CLIPS



High-dielectric, vinyl clips designed to hold and provide insulation for capacitors, resistors, batteries, fuses. Available in 12 sizes for parts with diameters from ¼" to 1⅜". V-1000 to V-1006 have one 3/32" mtg. hole; V-1008 has one 5/32" mounting hole; V-1010 and V-1011 have two 5/32" holes, ¾" apart. All are ½" long, except V-1010 and V-1011 which are 1⅛" long. *In table heading below, D indicates diameter of part to be held. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	D*	PKG. OF 10		
			1-9	10-49	50-99
47 D 5223	V-1000	¼"	.29	.26	.24
47 D 5224	V-1001	5/16"	.29	.26	.24
47 D 5225	V-1002	⅜"	.30	.27	.25
47 D 5226	V-1003	7/16"	.30	.27	.25
47 D 5227	V-1004	½"	.31	.28	.26
47 D 5228	V-1005	9/16"	.31	.29	.26
47 D 5229	V-1006	⅝"	.32	.29	.27
47 D 5231	V-1008	¾"	.36	.33	.31
47 D 5233	V-1010	1"	.43	.39	.36
47 D 5235	V-1011	1⅜"	.49	.44	.41

GRAYHILL MOLDED INSULATING WASHERS



Molded insulating washers carefully manufactured from rugged, black electrical-grade phenolic. Highly resistant to moisture absorption and do not support fungus growth. All have high dielectric strength and are ideally suited for any equipment destined for humid environmental conditions and other demanding applications. Available in a variety of commonly used sizes. Hole diameter is shown under "Dia. C" Heading in table below; shoulder diameter is shown under "Dia. B"; Dimension D is .094" thick, Dimension E, .063", Dimension F, .031". Av. shpg. wt. per pkg., 3 oz.

Stock No.	Mfr's Types	Screw Size	Dia. A	Dia. B	Dia. C	PKG. OF 10	
						1-49	50-99
47 D 5239	21B1001-2	#6	.500"	.375"	.145"	1.00	.80
47 D 5240	21B1002-2	#8	.500"	.375"	.171"	1.00	.80
47 D 5241	21B1003-2	#10	.500"	.375"	.198"	1.00	.80
47 D 5242	21B1004-2	¼"	.500"	.375"	.258"	1.00	.80
47 D 5243	21B1005-2	5/16"	.500"	.375"	.319"	1.00	.80
47 D 5244	21B1006-2	⅜"	.625"	.500"	.384"	1.00	.80
47 D 5245	21B1021-2	#6	.375"	.250"	.145"	1.00	.80
47 D 5246	21B1022-2	#4	.375"	.250"	.250"	1.00	.80

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Transformers and Power Supplies

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(OEM Prices Apply to Any Quantity Ordered)
Allied Electronics is your exclusive distributor for Knight transformers. Built to Allied's own rigid standards of quality, stability and performance, they carry a one-full-year warranty against defects in workmanship.

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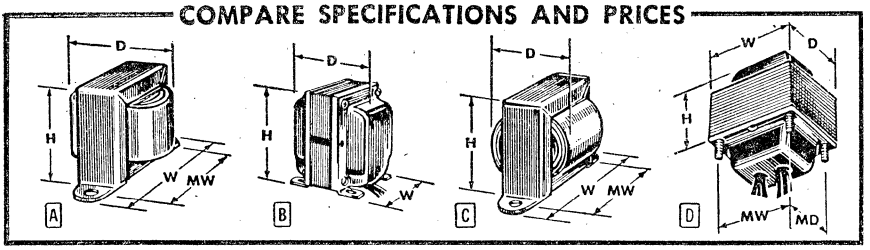
Allied supplies the complete line of every power supply, transformer and coil manufacturer listed in this section. Phone, wire or write the Allied facility nearest you for full information, price and delivery on types not shown.

Allied's Own *knight*® Transformers

COMPARE SPECIFICATIONS AND PRICES



Knight transformers are specially built to Allied's high standards for quality, stability and performance. Quantities of 100 and up are shipped bulk-packed. F.O.B. factory either Chicago or Mount Carmel, Illinois. Phone, wire or write Allied Electronics for OEM pricing on quantities of 500 and up.

POWER TRANSFORMERS

Quality power transformers designed for use in new equipment or for replacement applications. All types listed are shielded except those indicated by #. Have 8" flexible color-coded leads for easy installation. Plate windings are center-tapped except *half-wave type. 6.3-volt windings are center-tapped except †not center-tapped. ‡Electrostatic shield. **25.2 volts at 0.5 amp winding. All have primaries for operation from 110-120 volt, 50-60 Hz AC, except §for 60 Hz AC only.

Stock No.	Fig.	Plate		Filaments		Case Size HxWxD	Mtg. Size MWxMD	Wt., Lbs.	EACH			Bulk Packed	
		VCT	mA	5 V (Amps)	6.3 V (Amps)				1-9	10-49	50-99	100-249	250-499
54 D 3710	A‡	115*	15	.....	0.6†	1 11/16 x 21 3/16 x 1 3/4"	2 3/8"	1	5.30	4.30	4.05	3.15	2.84
54 D 1410	C#§	125*	15	.....	0.6†	2x2 3/8 x 1 5/8"	2"	1/2	2.52	2.05	1.93	1.49	1.34
54 D 1411	A#	125*	50	.....	2.0†	2 5/16 x 3 11/16 x 2 1/4"	3 1/8"	1 1/2	4.07	3.30	3.11	2.32	2.09
54 D 3708	D‡§	135*	200	.....	5.5	2 1/8 x 3 3/8 x 2 13/16"	2 13/16 x 2 1/4"	3 1/2	9.21	7.45	7.00	5.48	4.93
54 D 4720	B‡	230	40	.....	1.5	2 3/4 x 2 9/32 x 2 1/2"	1 3/4 x 1 5/8"	1 1/2	5.57	4.50	4.25	3.73	3.36
54 D 2008	C#§	250	25	.....	1.0†	2 3/8 x 2 7/8 x 1 7/8"	2 3/8"	1	3.02	2.45	2.31	1.84	1.66
54 D 2318	C#	380*	20	.....	.....	2 3/8 x 2 7/8 x 2 1/16"	2 3/8"	1 1/2	3.90	3.15	2.97	2.29	2.06
54 D 3706	B**	440	50	.....	0.6†	3 1/8 x 2 5/8 x 2 11/16"	2x1 11/16"	2 3/4	7.47	6.05	5.69	4.20	3.78
54 D 2502	D	460	50	.....	2.5†	1 3/4 x 3 x 2 1/2"	2 1/2 x 2"	2 3/4	5.44	4.42	4.17	3.20	2.88
54 D 1461	B	460	50	.....	2.5†	3 3/16 x 2 5/8 x 2 11/16"	2x1 3/4"	2 3/4	5.44	4.42	4.17	2.99	2.68
54 D 2034	D	480	40	2	2.0	1 13/16 x 3 x 2 1/2"	2 1/2 x 2"	3	5.89	4.77	4.45	3.51	3.16
54 D 1427	B	480	40	2	2.0	3 3/16 x 2 5/8 x 2 3/4"	2x1 11/16"	3	5.89	4.77	4.45	3.51	3.16
54 D 2503	D	480	55	2	2.0	1 3/4 x 3 x 2 1/2"	2 1/2 x 2"	3	5.66	4.59	4.32	3.56	3.20
54 D 1462	B	480	55	2	2.0	3 3/16 x 2 5/8 x 2 11/16"	2x1 3/4"	3	6.21	5.02	4.65	3.56	3.20
54 D 2504	D	480	70	.....	3.0†	1 7/8 x 3 x 2 1/2"	2 1/2 x 2"	3	6.23	5.05	4.75	3.59	3.23
54 D 1463	B	480	70	.....	3.0†	3 3/16 x 2 5/8 x 2 15/16"	2x1 7/8"	3	6.23	5.05	4.75	3.49	3.14
54 D 2551	B	500	40	.....	2.0	2 3/4 x 2 1/4 x 2 3/4"	1 25/32 x 1 7/8"	2 1/4	6.00	4.85	4.50	3.56	3.20
54 D 2506	D	500	70	2	2.5	2 1/8 x 3 x 2 1/2"	2 1/2 x 2"	3 1/2	7.18	5.82	5.47	4.15	3.73
54 D 1464	B	500	70	2	2.5	3 3/16 x 2 5/8 x 3 1/8"	2x2 1/8"	3 1/2	7.18	5.82	5.47	4.00	3.60
54 D 1465	B	520	90	.....	4.0†	3 9/16 x 2 15/16 x 3 9/16"	2 1/4 x 2 1/16"	3 3/4	7.26	5.87	5.57	3.91	3.52
54 D 1444	D	520	90	2	3.0	2 3/8 x 3 3/8 x 2 13/16"	2 13/16 x 2 1/4"	4	7.47	6.05	5.69	4.44	4.00
54 D 1412	B	520	90	2	3.0	3 5/8 x 3 x 3 1/2"	2 1/4 x 2 1/4"	4	7.47	6.05	5.69	4.44	4.00
54 D 1466	B	540	120	3	3.5	3 15/16 x 3 1/4 x 3 1/2"	2 1/2 x 2 1/4"	5	10.47	8.48	7.99	5.89	5.30
54 D 3704	B‡§	600	60	.....	2.7	3 1/8 x 2 5/8 x 2 11/16"	2x1 11/16"	2 3/4	6.78	5.50	5.17	4.95	4.51
54 D 1468	D	600	70	2	3.0	2 1/4 x 3 x 2 1/2"	2 1/2 x 2"	3 3/4	8.94	7.25	6.81	5.28	4.75
54 D 4725	B	600	70	2	3.0	3 3/16 x 2 5/8 x 3 1/4"	2x2 3/16"	3 3/4	8.94	7.25	6.81	5.28	4.75
54 D 1469	D	600	120	3	5.0	2 5/8 x 3 3/4 x 3 1/8"	3 1/8 x 2 1/2"	6	10.97	8.90	8.37	6.53	5.88
54 D 2526	B	600	120	3	5.0	3 15/16 x 3 1/4 x 3 7/8"	2 1/2 x 2 9/16"	6	10.97	8.90	8.37	6.53	5.88
54 D 1413	B	650	40	2	2.0	3 3/16 x 2 5/8 x 2 11/16"	2x1 11/16"	2 1/2	6.12	4.95	4.65	3.88	3.49
54 D 2042	D	650	70	3	3.5	2 7/8 x 3 x 2 1/2"	2 1/2 x 2"	4 1/4	6.00	4.85	4.57	3.56	3.20
54 D 1428	B	650	70	3	3.5	3 13/16 x 2 5/8 x 3 3/4"	2x2 3/4"	4 1/4	6.00	4.85	4.57	3.56	3.20
54 D 1471	D	650	150	3	5.0	3x3 3/4 x 3 1/8"	3 1/8 x 2 1/2"	7 1/2	11.08	8.99	8.45	6.59	5.93
54 D 4730	B	650	150	3	5.0	3 15/16 x 3 1/4 x 4 1/4"	2 1/2 x 3"	7 1/2	11.08	8.99	8.45	6.22	5.60
54 D 3703	B	650	150	3	5.0	3 7/8 x 3 1/4 x 3 13/16"	2 1/2 x 2 9/16"	6	11.08	8.99	8.45	6.22	5.60
54 D 1472	B	680	70	2	2.5	3 9/16 x 2 15/16 x 3 5/16"	2 1/4 x 2 3/16"	4	8.45	6.85	6.45	5.04	4.54
54 D 2043	D	700	90	3	3.5	2 1/2 x 3 3/8 x 2 13/16"	2 13/16 x 2 1/4"	4 1/4	8.45	6.85	6.45	5.04	4.54
54 D 2044	D	700	120	3	4.7	2 3/4 x 3 3/4 x 3 1/8"	3 1/8 x 2 1/2"	5 3/4	9.92	8.05	7.55	5.90	5.41
54 D 1430	B	700	120	3	4.7	3 15/16 x 3 1/4 x 3 15/16"	2 1/2 x 2 11/16"	5 3/4	9.92	8.05	7.55	5.90	5.41
54 D 2535	B	700	200	3	6.0	4 5/8 x 3 7/8 x 4"	3x2 13/16"	8	14.92	12.09	11.39	8.89	8.00
54 D 2045	D	750	150	3	5.0	3 1/16 x 3 1/4 x 3 1/8"	3 1/8 x 2 1/2"	6 1/2	12.12	9.63	9.02	7.48	6.73
54 D 1431	B	750	150	3	5.0	3 15/16 x 3 1/4 x 4 3/8"	2 1/2 x 3 1/16"	6 1/2	12.56	10.15	9.55	7.57	6.81
54 D 2553	B	750	175	3	8.0	4 1/4 x 3 1/2 x 4 3/8"	2 3/4 x 3 5/16"	9 1/2	15.56	12.60	11.85	9.20	8.28
54 D 3702	B‡	800	30	2	1.2†, 1.2†	3 1/8 x 2 5/8 x 3 3/16"	2x2 9/16"	3 1/2	11.09	9.00	8.46	6.60	5.94
54 D 2033	D	800	200	3	5.0	2 7/8 x 4 1/2 x 3 3/4"	3 3/4 x 3"	8	13.36	10.82	10.20	7.91	7.12
54 D 1414	B	800	200	3	5.0	4 5/8 x 3 7/8 x 4 1/16"	3x2 13/16"	8	13.36	10.82	10.20	7.91	7.12
54 D 2548	B	800	250	4	5.0	4 5/8 x 3 7/8 x 4 3/8"	3x3 5/16"	10 1/4	15.76	12.75	12.00	8.84	7.96
54 D 3701	B‡§	900	250	4	2, 4†	4 5/8 x 3 7/8 x 4 11/16"	3x3 9/16"	12	19.87	16.10	15.15	11.84	10.66
54 D 1473	B	1200	200	3	3†, 3†	4 5/8 x 3 7/8 x 4 1/4"	3x3 1/16"	9 1/2	16.61	13.50	12.70	9.76	8.78
54 D 2549	D	1200	200	3	3†, 3†	2 15/16 x 4 1/2 x 3 3/4"	3 3/4 x 3"	9 1/2	16.61	13.50	12.70	9.76	8.78
54 D 3700	B§	1840	250 ind. 200 cap.			4 5/8 x 3 7/8 x 5 1/16"	3x3 15/16"	13	18.46	15.00	14.10	10.74	9.67

TRANSISTOR POWER TRANSFORMERS

Primaries for 117 V, 60 Hz AC. *For bridge rectifier—identical dual plate supplies.

Stock No.	Fig.	Plate Supply		Size	Mtg. Ctrs.	Wt., Lbs.	EACH			Bulk Packed	
		AC V	DC mA	H x W x D			1-9	10-49	50-99	100-249	250-499
54 D 3987	B*	13 or 18	900	3 1/8 x 2 5/8 x 2 15/16"	2x1 15/16"	2 3/4	5.72	4.63	4.35	3.19	2.90
54 D 3988	B	80 CT	1200	3 1/2 x 2 15/16 x 3 9/16"	2 1/4 x 2 3/8"	4	7.82	6.35	5.96	4.36	3.95

TUBE CHECKER TRANSFORMER

Multiple-secondary type for use in tube testers. Primary: 60 Hz. 7.0/7.5/12/20/25/30/35/50/70/85/110/117. Mounting centers Secondary output volts: 1.1/1.4/1.5/2.0/2.5/3.0/3.3/4.0/5.0/6.3/ 3 9/16". With data sheet.

Stock No.	Fig.	Primary Input Volts	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH			Bulk Packed	
						1-9	10-49	50-99	100-249	250-499
54 D 2083	A	125/115/105	2 5/8 x 4 x 3 1/16"	3 9/16"	2.5	11.94	9.67	9.10	6.80	6.18

Ask for Prices on Knight Transformers in Lots of 500 or More

Transistor and Line Transformers

Knight

TRANSISTOR TRANSFORMERS

INPUT TRANSFORMERS

Stock No.	Fig.	Impedance, Ohms Pri.	Impedance, Ohms Sec.	Res., Ohms Pri.	Res., Ohms Sec.	Watts	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 4146	B	600 CT	10	42	.8	.050	13/16x15/8x3/4"	1 3/8"	.2	2.36	1.92	1.80	1.41	1.28
54 D 2355	A	30 CT	50K	14.7	4060	.150	21/32x13/16x9/16"	25/32"	.1	4.03	3.27	3.07	2.23	2.03
54 D 2356	B	1K CT	200K CT	123	1815	.300	13/16x15/8x3/4"	1 3/8"	.2	4.03	3.27	3.07	2.18	1.98
54 D 4713	B	500K	200 CT	7000	8.5	.300	13/16x15/8x3/4"	1 3/8"	.2	4.63	3.74	3.52	2.51	2.29

OUTPUT TRANSFORMERS

54 D 2357	A	350 CT	4, 12	38	1.45	.150	21/32x13/16x9/16"	25/32"	.1	3.90	3.15	2.96	2.40	2.18
54 D 2358	A	500 CT	4, 8, 16	75.3	3.55	.150	21/32x13/16x9/16"	25/32"	.1	4.03	3.27	3.07	2.18	1.98
54 D 2359	A	600 CT	4, 8, 16	73.2	3.2	.150	21/32x13/16x9/16"	25/32"	.1	4.24	3.44	3.24	2.40	2.18
54 D 2360	A	825 CT	4, 8, 16	75	2.7	.150	21/32x13/16x9/16"	25/32"	.1	4.03	3.27	3.07	2.18	1.98
54 D 2361	A	1250	4, 12	132.5	1.4	.150	21/32x13/16x9/16"	25/32"	.1	3.84	3.11	2.93	2.13	1.94
54 D 2363	A	10K CT	4, 8, 16	1174	2.6	.150	21/32x13/16x9/16"	25/32"	.1	4.15	3.36	3.16	2.26	2.06
54 D 4714	B	1000	4, 8, 16	180	3.5	.200	13/16x15/8x3/4"	1 3/8"	.2	5.76	4.67	4.40	3.15	2.87
54 D 4150	B	2000 CT	4, 8, 16	250	4	.200	13/16x15/8x3/4"	1 3/8"	.2	6.11	4.95	4.65	3.30	3.00
54 D 2365	B	100 CT	4, 8, 16	10.9	1.45	.300	13/16x15/8x3/4"	1 3/8"	.2	4.16	3.36	3.16	2.30	2.09
54 D 2366	B	160	4, 8, 16	18.7	1.4	.300	13/16x15/8x3/4"	1 3/8"	.2	4.24	3.45	3.24	2.40	2.18
54 D 2367	B	400 CT	4, 8, 16	34	1.5	.300	13/16x15/8x3/4"	1 3/8"	.2	4.07	3.30	3.10	2.18	1.98
54 D 2368	B	500 CT	4, 8, 16	47	.85	.300	13/16x15/8x3/4"	1 3/8"	.2	4.07	3.30	3.10	2.18	1.98
54 D 2370	B	2500	4, 8, 16	172	1.15	.300	13/16x15/8x3/4"	1 3/8"	.2	4.07	3.30	3.10	2.18	1.98
54 D 2371	B	3000	4, 8, 16	192	1.2	.300	13/16x15/8x3/4"	1 3/8"	.2	4.07	3.30	3.10	2.18	1.98
54 D 2336	B	48 CT	8, 16	5	1.5	5	2x35/16x1 3/4"	2 13/16"	1.0	4.50	3.65	3.43	2.50	2.27
54 D 2337	B	20 CT	8	.55	.35	10	17/16x23/8x1 3/4"	2"	.25	2.28	1.85	1.74	1.32	1.20
54 D 4147	B	48 CT	3.2, 8, 16	3.6	1.4	10	25/16x27/8x2"	2 3/8"	1.0	3.70	2.99	2.81	2.00	1.82
54 D 4149	B	100 CT	3.2, 8, 16	6.6	1.5	10	25/16x27/8x2"	2 3/8"	1.0	3.70	2.99	2.81	2.00	1.82

INTERSTAGE TRANSFORMERS

54 D 2340	B	500 CT	5K CT	37	250	1.0	17/16x23/8x1 3/8"	2"	.25	3.11	2.52	2.37	1.80	1.64
54 D 2373	A	500 CT	50	59.7	7.9	.150	21/32x13/16x9/16"	25/32"	.1	3.99	3.23	3.04	2.25	2.05
54 D 2374	A	500 CT	50K	76.8	5135	.150	21/32x13/16x9/16"	25/32"	.1	4.07	3.30	3.10	2.18	1.98
54 D 2376	A	1500	500 CT	104	46.5	.150	21/32x13/16x9/16"	25/32"	.1	3.80	3.08	2.89	2.10	1.91
54 D 2377	A	5K CT	7500 CT	650	790	.150	21/32x13/16x9/16"	25/32"	.1	4.02	3.25	3.06	2.18	1.98
54 D 2378	A	5K CT	10K CT	635	1100	.150	21/32x13/16x9/16"	25/32"	.1	3.97	3.22	3.03	2.13	1.94
54 D 2381	A	5K CT	80K CT	573	5740	.150	21/32x13/16x9/16"	25/32"	.1	4.10	3.32	3.12	2.21	2.01
54 D 2387	A	10K	2K CT	1200	257	.150	21/32x13/16x9/16"	25/32"	.1	3.97	3.21	3.01	2.14	1.95
54 D 2389	A	10K	3K CT	1200	385	.150	21/32x13/16x9/16"	25/32"	.1	3.97	3.21	3.01	2.14	1.95
54 D 2390	A	500 CT	150 CT	62	21.2	.150	21/32x13/16x9/16"	25/32"	.1	3.90	3.15	2.96	2.25	2.05
54 D 4180	A	20K	800 CT	1350	95	.150	21/32x13/16x5/8"	25/32"	.1	3.29	2.67	2.50	1.79	1.63
54 D 2338	B	100 CT	10 CT	4.3	.8	.250	1 1/4x21/16x13/8"	1 3/4"	.25	2.29	1.85	1.74	1.28	1.17
54 D 2339	B	100	1K CT	5.8	45	.250	17/16x23/8x13/8"	2"	.25	2.29	1.85	1.74	1.28	1.17
54 D 2391	B	100K	1500 CT	3250	143	.300	13/16x15/8x3/4"	1 3/8"	.2	4.05	3.29	3.09	2.20	2.01
54 D 4174	B	500 CT	500 CT	40	55	.300	13/16x15/8x3/4"	1 3/8"	.2	3.78	3.06	2.88	2.02	1.84

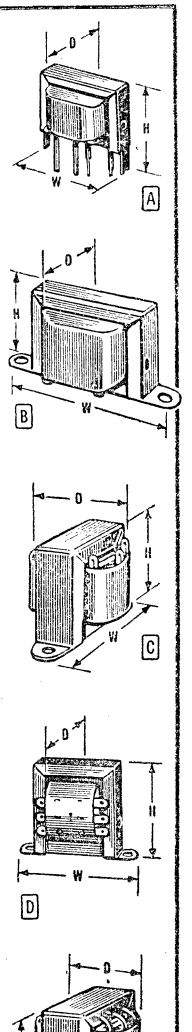
DRIVER TRANSFORMERS

54 D 4717	B	2000	200 CT	720	115	.050	5/8x11/4x1/2"	1 1/16"	.1	5.57	4.50	4.23	3.01	2.75
54 D 3985	E	2000 CT	200 CT	748	120	.100	5/8x11/4x1/2"	1 1/16"	.1	6.36	5.14	4.85	3.62	3.29
54 D 4153	B	100	200 CT	6.5	15.5	.500	1 1/4x21/16x1 1/4"	1 3/4"	.25	2.55	2.07	1.94	1.47	1.34
54 D 4165	B	500 CT	200 CT	36.5	15.5	.500	1 1/4x21/16x1 1/4"	1 3/4"	.25	2.51	2.03	1.92	1.50	1.36
54 D 4166	B	100	100 CT	9	10.8	.500	111/16x213/16x13/8"	2 3/8"	.5	2.26	1.83	1.72	1.28	1.16
54 D 4152	B	20	36 CT	2	4	1.0	1 1/4x21/16x1 1/4"	1 3/4"	.25	2.21	1.78	1.68	1.30	1.18

STANDARD LINE-TO-VOICE-COIL TRANSFORMERS

‡Autoformer for connecting one or more speakers across 500-ohm line. *Pri/sec. imp. 500/.06 to 8, 1000/.12 to 16, 1500/.18 to 24, 2000/.24 to 32, 2500/.30 to 40, 3000/.36 to 48. Av. shpg. wt., 1¼ lbs.

Stock No.	Fig.	Primary Impedance	Sec. Imp.	Audio Watts	Size HxWxD	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 1423	C	500	4, 8	5	13/8x23/8x11/2"	2.00	1.62	1.52	1.18	1.07
54 D 1424	D	500	4, 6, 8, 15	25	23/8x27/8x17/8"	3.66	2.97	2.80	2.12	1.93
54 D 1425	C	2000/1500/1000/500	4, 8	8	15/8x213/16x15/8"	3.10	2.51	2.36	1.87	1.70
54 D 1442	C	2000/1500/1000/500	4, 8	4	13/8x23/8x11/2"	2.50	2.03	1.91	1.42	1.29
54 D 1443	C	2000/1500/1000/500	4, 8	12	2x31/4x17/8"	3.38	2.74	2.57	2.12	1.93
54 D 1451	D	3000/2000/1500/1000/500	4, 8, 16	10	23/8x27/8x17/8"	4.18	3.38	3.17	2.61	2.37
54 D 3978	D‡	*See impedance ranges above.		15	23/8x27/8x2"	4.74	3.83	3.60	2.75	2.50



CONSTANT-VOLTAGE LINE TRANSFORMERS

70.7-VOLT LINE-TO-VOICE-COIL TRANSFORMERS

Stock No.	Fig.	Watt Taps	Sec. Imp. Ohms	Max. Watts	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2081	C	5, 2.5, 1.25, .62, .31	4, 8	5	13/8x23/8x11/2"	2"	3/4	2.82	2.29	2.16	1.68	1.53
54 D 1422	D	8, 4, 2, 1, 0.5	4, 8, 16	8	2x23/8x15/8"	2"	3/4	3.73	3.02	2.84	2.17	1.98
54 D 2077	C	10, 5, 2.5, 1.25, .62	4, 8, 16	10	15/8x213/16x15/8"	23/8"	3/4	3.54	2.87	2.69	2.10	1.91
54 D 2078	D	18, 9, 4.5, 2.25, 1.12, .56	4, 8, 16	18	23/8x27/8x17/8"	23/8"	1 3/4	4.36	3.53	3.32	2.46	2.24
54 D 2079	C	24, 12, 6, 3, 1.5, .75	4, 8, 16	24	21/4x311/16x21/4"	31/8"	1 3/4	5.30	4.29	4.03	2.96	2.69
54 D 1440	C	2, 1, .5	4, 8	2	13/16x21/16x11/4"	1 3/4"	1/4	2.87	2.32	2.19	1.61	1.47
54 D 1450	D	16, 8, 4, 2, 1, 0.5	4, 8, 16	16	23/4x31/8x21/4"	213/16"	2	5.58	4.50	4.24	3.10	2.82

HIGH-FIDELITY 70.7-VOLT LINE-TO-VOICE-COIL TRANSFORMER

54 D 1441	C	5, 2.5, 1.25, .625, .31	4, 8, 16	5	15/8x213/16x15/8"	23/8"	3/4	3.74	3.02	2.84	2.13	1.94

25-VOLT LINE-TO-VOICE-COIL TRANSFORMERS

54 D 1436	C	2, 1, 0.5	4, 8	2	13/16x21/16x11/4"	1 3/4"	1/4	2.81	2.28	2.14	1.78	1.62
54 D 1437	C	5, 2.5, 1.25, 0.625, 0.31	4, 8	5	15/8x213/16x15/8"	23/8"	3/4	2.99	2.42	2.28	1.75	1.59
54 D 1438	C	10, 5, 2.5, 1.25, 0.625	4, 8, 16	10	21/4x311/16x2"	31/8"	1 3/4	4.61	3.74	3.52	2.61	2.38
54 D 1439	C	18, 9, 4.5, 2.25, 1.12	4, 8, 16	18	25/8x4x21/4"	39/16"	2 1/2	4.46	3.62	3.41	3.13	2.85

knight Filament, Control, Output Transformers

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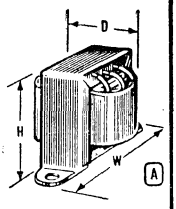

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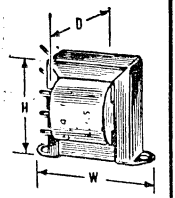

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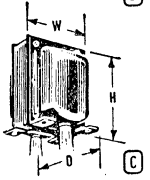

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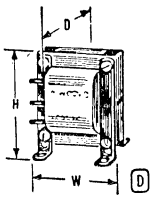

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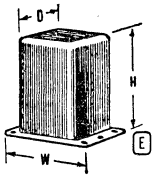

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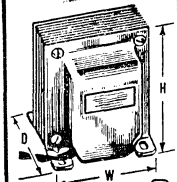

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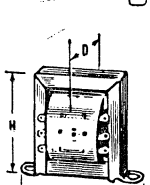

G

FILAMENT TRANSFORMERS

Quality transformers for continuous duty operation. Primaries for 115-125 volts 50-60 Hz (except §6.3 V). Type with ** has tapped primary to produce lower voltages. Types with * have primary tap for 107-volt operation. Types with ‡ have an electrostatic shield. † multiple secondary—one winding center-tapped.

Stock No.	Fig.	Volts	Amps	Insul., rms V	Size HxWxD	Mtg. Ctrs.	Wt. Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3712	A	2.5	1.5	2500	1 11/16x2 13/16x1 9/16"	2 3/8"	.7	3.36	2.72	2.56	1.82	1.64
54 D 4132	A	2.5 CT	3.0	1500	1 11/16x2 13/16x1 7/8"	2 3/8"	.7	3.11	2.52	2.37	1.86	1.67
54 D 1478	B	2.5 CT	5.0	5000	2 3/4x3 1/8x2 1/8"	2 13/16"	1.75	4.25	3.45	3.25	2.55	2.29
54 D 3711	B*	2.5 CT	10.0	7500	3 1/8x3 9/16x3"	3 1/8"	2.5	4.70	3.82	3.59	2.66	2.39
54 D 1474	C	2.5 CT	10.0	2500	3 3/16x2 5/8x2 11/16"	2x1 11/16"	2.75	5.74	4.65	4.37	3.19	2.87
54 D 4133	A	2.5 CT	10.0	3000	2 3/8x3 3/4x2 3/8"	3 1/8"	1.75	5.16	4.17	3.93	3.07	2.76
54 D 2319	D	2.5 CT	10.0	10,000	3 3/8x2 7/8x2 1/2"	2 1/4x1 7/8"	2.75	7.89	6.39	6.00	4.39	3.95
54 D 1475	A	5.0 CT	3.0	2500	2x3 1/4x2"	2 13/16"	1.5	3.70	3.00	2.82	2.00	1.82
54 D 2028	A	5.0 CT	6.0	2500	2 3/8x3 5/8x2 1/4"	3 1/8"	1.6	4.45	3.60	3.38	3.06	2.75
54 D 2320	D	5.0 CT	10.0	2500	3 1/8x2 1/2x3"	2x3 3/8"	3.25	6.13	4.98	4.68	3.55	3.19
54 D 3714	D	5.0 CT	15.0	2500	3x2 1/2x3"	2x2 1/4"	2.75	8.44	6.85	6.45	4.79	4.31
54 D 2321	D	5.0 CT	21.0	2500	3 3/4x3 1/8x3 1/4"	2 1/2x2 1/4"	5.0	10.01	8.12	7.65	5.41	4.87
54 D 2322	C	5.0 CT	30.0	2500	4 5/8x3 3/4x4"	3x2 7/8"	7.5	13.77	11.19	10.50	7.89	7.10
54 D 1416	A	6.3 CT	0.6	1500	1 3/8x2 3/8x1 5/8"	2"	.5	1.91	1.55	1.46	1.08	.98
54 D 2030	A	6.3 CT	1.0	1500	1 5/8x2 13/16x1 3/4"	2 3/8"	.7	2.31	1.87	1.76	1.27	1.16
54 D 1419	A	6.3 CT	1.2	3000	1 5/8x2 13/16x1 7/8"	2 3/8"	.75	2.10	1.70	1.60	1.37	1.24
54 D 2323	A	6.3	1.2	5000	2x3 1/4x1 7/8"	2 13/16"	1.0	3.10	2.51	2.36	2.12	1.93
54 D 3715	A§	6.3	1.2	5000	2x3 1/4x1 15/16"	2 13/16"	1.0	3.49	2.82	2.65	1.85	1.69
54 D 3719	C	(4) 6.3†	1.75	1500	3 1/8x2 5/8x3 1/16"	2x2 1/8"	3.1	8.54	6.90	6.48	5.07	4.61
54 D 2031	A	6.3 CT	3.0	2500	2x3 1/4x2 3/8"	2 13/16"	1.4	3.15	2.55	2.40	1.83	1.62
54 D 2324	D‡	6.3 CT	3.0	2500	3 1/8x2 1/2x2 3/8"	2x1 3/4"	2.0	5.10	4.12	3.87	2.96	2.61
54 D 3716	B*	6.3	3.0	7000	3 1/8x3 9/16x2 3/4"	3 1/8"	2.3	6.31	5.10	4.80	3.44	3.14
54 D 1477	C‡*	6.3 CT	4.0	2500	3 3/16x2 5/8x2 11/16"	2x1 11/16"	2.75	6.00	4.85	4.55	3.34	3.04
54 D 4134	C	6.3 CT	6.0	1500	3 1/8x2 5/8x2 3/4"	2x1 3/4"	2.5	7.31	5.90	5.55	4.30	3.91
54 D 2325	B	6.3 CT	6.0	2000	3 1/8x3 9/16x2 1/2"	3 1/8"	2.5	4.34	3.57	3.36	2.45	2.23
54 D 1417	D	6.3 CT	6.0	2500	3x2 1/2x2 1/4"	2x2"	2.6	5.89	4.77	4.49	3.31	3.02
54 D 1418	D*	6.3 CT	10.0	2500	3 3/8x2 13/16x2 7/8"	2 1/4x2 1/8"	3.3	7.57	6.13	5.78	4.43	4.04
54 D 4135	C	6.3 CT	20.0	2000	3 7/8x3 5/16x4 1/8"	2 1/2x3"	7.0	11.63	9.42	8.89	7.08	6.45
54 D 2326	D‡*	6.3 CT	20.0	2500	4 5/8x3 3/4x2 7/8"	3x2 3/8"	7.25	11.35	9.20	8.65	6.37	5.80
54 D 2327	D‡	7.5 CT	4.0	2500	3 1/8x2 1/2x2 11/16"	2x2 1/8"	2.75	5.41	4.38	4.11	3.10	2.82
54 D 2328	D‡	7.5 CT	8.0	2500	3 3/4x3 1/8x2 7/8"	2 1/2x2 1/4"	4.25	8.79	7.13	6.70	4.90	4.47
54 D 2329	D‡	10.0 CT	4.0	2500	3 3/8x2 13/16x2 3/4"	2 1/4x2 1/8"	3.5	6.90	5.61	5.27	3.84	3.50
54 D 3720	D‡*	10.0 CT	5.0	2000	3x2 1/2x4 3/4"	2x2 1/4"	2.6	5.57	4.50	4.23	3.01	2.74
54 D 2330	D‡	10.0 CT	8.0	2500	3 3/4x3 1/8x3"	2 1/2x2 3/8"	5.0	8.79	7.13	6.70	4.90	4.45
54 D 3721	C	10.0 CT	10.0	2000	3 7/8x3 1/4x3 3/4"	2 1/2x2 1/2"	5.7	10.06	8.15	7.67	5.70	5.19
54 D 3722	C‡*	11.0 CT	10.0	2500	4 5/8x3 7/8x3 11/16"	3x2 7/16"	6.2	11.76	9.54	8.97	6.57	6.00
54 D 3723	D**	12-11-10 CT	11.0	3000	4 1/8x3 7/16x3 1/8"	2 3/4x2 1/2"	6.5	15.13	12.25	11.51	8.62	7.85
54 D 4136	A	12.6 CT	1.5	1500	2x3 1/4x2"	2 13/16"	1.3	4.07	3.30	3.10	2.20	2.01
54 D 1420	A	12.6 CT	2.0	1500	2x3 1/4x2 1/4"	2 13/16"	1.4	3.68	2.97	2.80	2.17	1.97
54 D 4137	A	12.6 CT	2.5	1500	2 1/4x3 5/8x2 1/4"	3 1/8"	1.6	5.02	4.06	3.82	3.13	2.85
54 D 4709	A	12.6 CT	3.0	1500	2 5/16x3 1/16x2 3/8"	3 1/8"	1.7	5.07	4.12	3.87	2.74	2.50
54 D 4710	A	24.0 CT	1.0	1500	2x3 1/4x2"	2 13/16"	1.4	4.49	3.64	3.43	2.67	2.43
54 D 1421	A	25.2	1.0	1500	2x3 1/4x2 1/8"	2 13/16"	1.4	3.63	2.94	2.76	2.01	1.83
54 D 4140	A	25.2 CT	2.0	1500	2 5/8x4x2 3/8"	3 9/16"	2.3	6.26	5.06	4.75	3.39	3.08
54 D 1476	A	26.5 CT	0.6	3000	2x3 1/4x2"	2 13/16"	1.5	3.33	2.69	2.53	1.89	1.72
54 D 4145	A	26.8 CT	1.0	1500	2x3 1/4x2 1/8"	2 13/16"	1.4	4.05	3.27	3.08	2.31	2.10

CONTROL TRANSFORMERS

Automation types for high-speed automatic equipment. Adapted to relays, pilot lamps, solenoids, small motors, etc. Also use in high current, low voltage power supplies.

Secondaries have two identical windings for series or parallel operation. Primaries operate from either 115 or 230 V, 50-60 Hz AC.

Stock No.	Fig.	Parallel Sec. Volts	Parallel Sec. Amps	Series Sec. Volts	Series Sec. Amps	Size H x W x D	Mtg. Ctrs.	Wt. Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2351	G	6	2	12	1	2 3/8x2 7/8x1 3/4"	2 3/8"	1	3.70	3.00	2.82	2.02	1.84
54 D 2352	G	6	4	12	2	2 3/4x3 1/8x2"	2 13/16"	1 3/4	4.50	3.65	3.43	2.46	2.24
54 D 2353	G	12	4	24	2	3 1/8x3 5/8x2 1/4"	3 1/8"	2 1/2	5.44	4.41	4.14	3.05	2.77
54 D 2354	D	12	8	24	4	3 3/8x2 7/8x3"	2 1/4x2 3/8"	4 1/2	8.87	7.20	6.76	4.95	4.50
54 D 3729	D	12	16	24	8	4 1/8x3 7/16x3 7/8"	2 3/4x3"	7 3/4	14.82	12.00	11.30	8.01	7.30

OSCILLOSCOPE POWER TRANSFORMERS

For use with 2X2A rectifiers in half-wave power supplies. All require primary input voltage of 117 volts, 60 Hz AC, except *117 volts, 50-60 Hz AC. Units are multi-output types; have 2, 3 or 4 secondaries; secondary outputs are shown in table below. Shpg. wts., lbs.: †1.8; §5; ‡6.4.

Stock No.	Fig.	Plate Supply AC Volts	Plate Supply DC mA	Rect. Volts	Rect. Amps	Other Secondary Outputs	Size HxWxD	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3726	E†	1550	1.5	2.5	1.75	.....	3 1/16x2 1/2x3"	10.29	8.34	7.84	5.86	5.33
54 D 3727	F§	1800*	2.0	2.5	1.8	2.5v @ 2.2A; 6.3v @ .6A	3 7/8x3 1/4x3 9/16"	11.09	8.97	8.45	6.43	5.85
54 D 3728	F‡	2400	5.0	2.5	2.0	2.5v @ 2.0A	4 1/4x3 9/16x3 13/16"	14.40	11.70	11.00	8.41	7.65

FIXED-IMPEDANCE OUTPUT TRANSFORMERS

Push-pull plates to voice coil. Av. shpg. wt., 2 lbs.

Stock No.	Fig.	Impedance, Ohms Primary	Impedance, Ohms Secondary	Audio Watts	Size H x W x D	Mtg. Ctrs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 1457	A	4000 CT	32, 16, 8	7 1/2	2 1/4x3 11/16x2 1/4"	3 1/8"	4.48	3.64	3.43	2.80	2.54
54 D 1455	C	6600 CT	500,250,16,8,4	35	3 15/16x3 1/4x3 1/2"	2 1/2x2 1/4"	10.11	8.33	7.89	5.62	5.06
54 D 3999	A	10,000 CT	8, 4, 2	5	1 11/16x2 13/16x1 3/4"	2 3/8"	3.17	2.57	2.42	1.81	1.63
54 D 4115	C	10,000/7000 CT	500, 15, 8, 4	25	3 1/8x2 5/8x2 5/8"	2x1 11/16"	7.49	6.07	5.72	4.02	3.66
54 D 1456	A	25,000 CT	4	5	1 3/8x2 3/8x1 3/8"	2"	2.55	2.07	1.94	1.53	1.39

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General-Purpose Transformers

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VARIABLE-VOLTAGE AND ISOLATION TRANSFORMERS

Isolate equipment from power line. Primaries operate from various 50-60 Hz input voltages (see table below); secondaries deliver 115 VAC output, except *105-115-125 VAC. With 6-ft. cord and plug.

Stock No.	Fig.	Input Volts	Output Volts	VA Output	Size H x W x D	Mtg. Ctrs. W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2080	A	90-100-120-200-230-250	115	150	4⅝x3⅞x5½"	3x3⅛"	9¼	19.36	15.70	14.70	11.00	9.90
54 D 1490	A	105-115-125	115	100	4⅝x3⅞x4¾"	3x2⅜16"	7½	16.84	13.65	12.80	9.69	8.84
54 D 2563	B	117	*105-115-125	350	5½x4⅝x5¾"	3½x3⅞"	16	28.19	22.70	21.40	16.27	14.75

ISOLATION TRANSFORMERS

Reduce shock hazard, protect equipment. With 6-ft. power cord, plug and receptacle, except Fig. C type.

Stock No.	Fig.	Input Volts	Output Volts	VA Output	Size H x W x D	Mtg. Ctrs. W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 4719	C	115	115	35	2⅝16x3 1⅛16x2¼"	3⅛"	1¼	5.30	4.35	4.08	3.10	2.82
54 D 3982	C	115/230	115	50	2⅝16x3 1⅛16x2⅛"	3⅛"	2	7.41	6.00	5.65	4.21	3.81
54 D 1426	B	115	115	50	3⅝x3x3⅜"	2¼x1⅞"	3¾	8.36	6.74	6.35	4.79	4.35
54 D 2086	B	115	115	100	4⅜x3⅝x4"	2¾x2¾"	6½	14.76	11.95	11.22	8.39	7.65
54 D 3981	B	115	115	150	4⅞x3¼x4 7⁄16"	2½x2 15⁄16"	7¼	16.66	13.45	12.60	9.48	8.62
54 D 2087	B	115	115	250	4⅝x3⅞x4⅝"	3x3⅜"	10	25.84	21.00	19.70	15.00	13 70

230-TO-115 VOLT STEP-DOWN AUTOTRANSFORMERS

Well-built units to reduce 220-250 volts, 50-60 Hz AC to 110-125 volts. Black enamel finish. With 8-ft. cord and plug, except Fig. C types. Female outlet on case, except Fig. C types.

Stock No.	Fig.	Input Volts	Output Volts	VA Output	Size H x W x D	Mtg. Ctrs. W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2555	C	230	115	20	2x3¼x2"	2 13⁄16"	1¼	3.49	2.83	2.66	1.98	1.80
54 D 2556	C	230	115	40	2⅝16x3⅝x2⅛"	3⅛"	1¾	3.90	3.15	2.75	2.58	2.35
54 D 2510	B	230	115	80	3⅝x3x3¼"	2¼x1⅞"	3¼	8.41	6.79	6.39	5.02	4.57
54 D 2557	B	230	115	100	3½x27⁄8x3⅜"	2¼x2"	4	8.94	7.90	6.70	5.51	5.01
54 D 2511	B	230	115	150	4x3⅜x3⅝"	2½x2¼"	4¾	10.70	8.69	8.15	6.29	5.73
54 D 2512	B	230	115	250	4⅝x3⅞x4¼"	3x2 13⁄16"	7¾	13.94	11.30	10.61	8.29	7.55
54 D 2513	B	230	115	500	4⅝x3⅞x4¾"	3x3⅝16"	10	19.15	15.50	14.59	11.52	10.50
54 D 1434	B	230	115	750	5½x4⅝x5"	3½x3¼"	13¾	24.12	19.60	18.40	13.70	12.49
54 D 1432	B	230	115	1000	5½x4⅝x5¼"	3½x3½"	14¾	31.66	25.65	24.15	17.12	15.59
54 D 1435	B	230	115	1500	6x4½x5⅜"	3 7⁄16x3 9⁄16"	19	35.41	28.62	26.90	20.10	18.30
54 D 1433	B	230	115	2000	6x4½x6⅜"	3 7⁄16x4⅜"	25	40.07	32.40	30.40	22.84	20.80

115-TO-230 VOLT STEP-UP AUTOTRANSFORMERS

For operation of 230-V appliances from 110-125 V 50-60 Hz AC. With 8-ft. cord and AC outlet.

Stock No.	Fig.	Input Volts	Output Volts	VA Output	Size H x W x D	Mtg. Ctrs. W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2558	B	115	230	80	3⅝x3x3¼"	2¼x1⅞"	3¼	8.41	6.81	6.38	4.78	4.35
54 D 2559	B	115	230	150	4x3⅜x3⅝"	2½x2¼"	4¾	10.38	8.42	7.93	6.03	5.49
54 D 2560	B	115	230	500	4⅝x3⅞x4¾"	3x3⅝16"	10¼	19.13	15.50	14.59	10.84	9.89

MINIATURE INTERCOM AND TRANSCEIVER TRANSFORMERS

Direct replacements for original manufacturer's units in many intercoms and transceivers. *Transceiver input, mike or plate to grid. †Intercom input voice coil to grid. §Matches low-impedance line to voice coil. All are standard single plate to voice coil outputs. Av. shpg. wt., ½ lb.

Stock No.	Fig.	Impedance, Ohms Primary	Impedance, Ohms Secondary	Audio Watts	Size H x W x D	Mtg. Ctrs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 1491	C	*200/5000	60,000	5	1⅝x27⁄8x1⅝"	2⅜"	3.08	2.49	2.34	1.74	1.58
54 D 1492	C	†4	25,000	.....	1⅜x2⅜x1½"	2"	2.39	1.94	1.82	1.33	1.21
54 D 1493	E	§45/50	3-4, 6-8	3	1⅜x2⅜x1⅜"	2"	2.13	1.73	1.64	1.26	1.15

C AUDIO INPUT TRANSFORMER FOR LINE OR MIKE TO GRID

Stock No.	Imped., Ohms Prl.	Imped., Ohms Sec.	Watts	Response (±3dB) Hz	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3979	400 CT	195K	1	200-10,000	1¼x2 1⁄16x1¼"	½	3.44	2.79	2.62	1.94	1.77

UNIVERSAL AUDIO OUTPUT TRANSFORMERS

For replacement or production use in audio output circuits. Six secondary taps match plates to speaker voice coil. Center-tapped primary for push-pull, except *for single-ended output.

Stock No.	Fig.	Primary Ohms	Watts	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2023	E	2000-14,000	4	1⅜x2⅜x1½"	2"	½	2.69	2.18	2.05	1.73	1.58
54 D 2021	E	2000-14,000	8	1⅝x27⁄8x1⅝"	2⅜"	¾	3.02	2.45	2.30	1.80	1.64
54 D 2022	D	2000-14,000	18	2⅜x27⁄8x2"	2⅜"	1¼	4.21	3.41	3.20	2.48	2.26
54 D 1453	E	6000-10,000	8	2x3¼x2 3⁄16"	2 13⁄16"	1¼	3.78	3.06	2.88	2.10	1.91
54 D 1404	E	*7000-10,000	4	1⅜x2⅜x1⅜"	2"	½	1.97	1.60	1.51	1.20	1.09

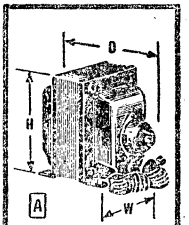
C INTERSTAGE AUDIO TRANSFORMERS

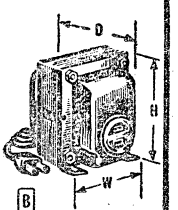
Maximum DC permissible in primary is 10 mA except ‡30 mA. Single plate to P-P grid except Type marked with *, single plate to single grid, †single or push-pull plate to push-pull grids. #To ½-secondary.

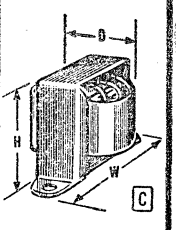
Stock No.	Impedance, Ohms Primary	Impedance, Ohms Secondary	Turns Ratio	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2062	*7000-20K	.....	1:3	1⅜x2⅜x1⅜"	2"	⅓	2.21	1.79	1.68	1.34	1.22
54 D 1458	10,000	40,000 CT	1:2	1⅜x2⅜x1½"	2"	⅓	2.56	2.07	1.95	1.48	1.35
54 D 1460	†10,000 CT	90,000 CT	1:3	1⅝x27⁄8x1½"	2⅜"	¾	3.21	2.60	2.44	2.07	1.88
54 D 4711	‡10,000	10,000 CT	1:1	1⅝x27⁄8x1⅝"	2⅜"	⅔	2.56	2.07	1.95	1.43	1.30
54 D 4712	‡10,000	.....	#3:1	1⅝x27⁄8x1⅝"	2⅜"	⅔	2.56	2.07	1.95	1.43	1.30

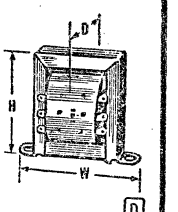
NOTE

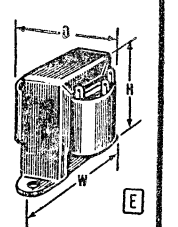
Knight transformers are specially built to Allied's high standards for quality, stability and performance. Quantities of 100 and up are shipped bulk-packed F.O.B. factory, either Chicago or Mount Carmel, Ill. Phone, write or wire Allied Electronics for OEM pricing on quantities of 500 or more.











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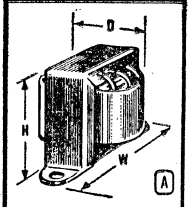
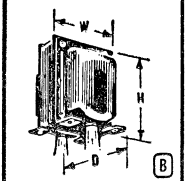
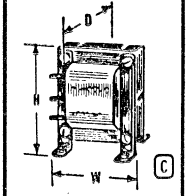
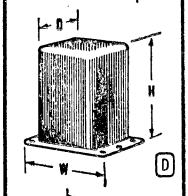
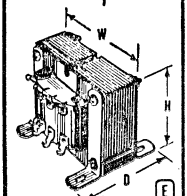
Transformers and Chokes











FILTER CHOKES

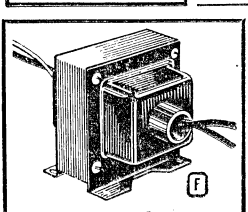
Rated at 10V, 60 Hz with max. DC in winding. All V, *3000 V. ‡Amperes. §Tapped for 8 H @ 150 mA or 4 H @ 200 mA. #Tapped for 150 H @ 15 mA. —15%, +50% tol. 1500-V rms insulation, except †2000

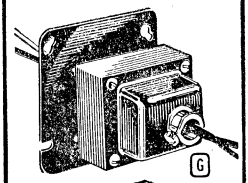
Stock No.	Fig.	Henrlcs	mA	Ohms	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3997	E	.005	22.5‡	.03	3¾x4½x4 13/16"	3¾x3½"	12	15.49	12.60	11.85	8.80	8.00
54 D 3996	E	.01	8.0‡	.15	3⅛x3¾x3⅛"	3⅛x2¼"	5½	9.26	7.47	7.00	5.00	4.55
54 D 2341	E	.01	12.5‡	.11	3⅛x4⅛x3"	3⅜x2⅜"	6¼	10.74	8.71	8.20	7.22	6.50
54 D 2342	E	.025	4‡	.425	2⅞x3⅜x2¾"	2¾x2⅛"	3½	7.06	5.72	5.36	3.83	3.49
54 D 2343	E	.035	2‡	.75	2⅜x2⅝x2½"	2⅛x2"	2¾	4.03	3.27	3.07	2.33	2.13
54 D 4700	C	.08/.02	2.5/5.0‡	.61/.155	3 13/16x3¾x3 11/16"	2½x3 1/16"	6¾	12.17	9.90	9.31	6.80	6.20
54 D 4701	C	.3/.075	1.0/2.0‡	3/.75	3½x2⅞x3 3/16"	2¼x2 1/16"	4¾	8.77	7.10	6.67	4.74	4.32
54 D 4702	A	.32	600	10	2x3¼x2¼"	2 13/16"	1½	3.33	2.70	2.54	1.94	1.77
54 D 4703	A	.70	290	30	1 11/16x2 13/16x1½"	2⅜"	¾	1.86	1.52	1.43	1.03	.94
54 D 1479	A	1.0†	300	40	2¼x3 1/16x2"	3⅛"	¾	3.35	2.71	2.54	1.88	1.71
54 D 1480	A	1.5*	10	95	1 13/16x2⅛x1¼"	1¾"	¼	1.40	1.13	1.06	.83	.75
54 D 1406	A	1.5	200	60	1⅝x2 1/16x1⅝"	2⅜"	¾	1.91	1.55	1.46	1.21	1.10
54 D 3990	A	2.0	15	70	1¼x2 3/16x1¼"	1¾"	¼	1.76	1.43	1.34	.95	.87
54 D 1481	A	2.0	200	65	2¼x3 1/16x2"	3⅛"	1⅝	3.26	2.64	2.48	1.88	1.71
54 D 1482	A	2.3	150	60	2x3¼x1¾"	2 13/16"	1	2.66	2.15	2.02	1.44	1.31
54 D 2344	A	2.5†	130	100	2x3¼x1¾"	2 13/16"	1¼	2.58	2.10	1.97	1.40	1.28
54 D 1483	A	3†	150	97	2¼x3 1/16x2"	3⅛"	1⅝	4.38	3.55	3.34	2.47	2.25
54 D 1407	A	3.5	50	200	1⅝x2 1/16x1½"	2⅜"	¾	1.85	1.50	1.41	1.04	.95
54 D 2348	D	5.0	100	300	2⅝x2¼x2¾"	1½x2⅜"	2½	3.97	3.22	3.02	2.30	2.09
54 D 3992	A	5.0	65	330	1⅝x2 1/16x1 7/16"	2⅜"	5/16	2.65	2.14	2.02	1.51	1.38
54 D 2135	A	5.5	50	330	1⅜x2⅜x1¼"	2"	5/16	1.53	1.24	1.17	.83	.75
54 D 4704	A	6.0	200	150	2⅝x4x2¼"	3 9/16"	2½	4.38	3.55	3.34	2.47	2.25
54 D 1408	A	7.0	50	550	1⅜x2⅜x1⅜"	2"	5/16	1.53	1.24	1.17	.99	.90
54 D 1485	A	8.0	85	260	2x3¼x2"	2 13/16"	1 5/16	2.74	2.22	2.09	1.56	1.42
54 D 2136	A	8.5	50	400	1⅝x2 1/16x1⅜"	2⅜"	⅝	1.66	1.35	1.27	.96	.87
54 D 3993	A	9.0	125	250	2 5/16x3 1/16x1 15/16"	3⅛"	2	3.63	2.94	2.76	2.06	1.87
54 D 4706	B	10.0†	200	150	3½x2 1/16x3½"	2¼x2⅜"	4½	8.64	7.00	6.58	4.68	4.26
54 D 4707	A	10.0	90	270	2x3¼x2"	2 13/16"	1½	3.10	2.50	2.35	1.75	1.59
54 D 2139	A	10.5	110	220	2⅝x4x2⅛"	3 9/16"	2¼	3.79	3.07	2.89	2.30	2.09
54 D 1486	B	12.0*§	100	145	3x2 5/16x2 1/16"	2x1¾"	2¾	5.30	4.30	4.04	3.00	2.73
54 D 2137	A	16.0	50	550	2x3¼x1⅝"	2 13/16"	1	2.29	1.86	1.75	1.40	1.27
54 D 1489	A	20.0	15	900	1⅝x2 1/16x1½"	2⅜"	¾	2.39	1.94	1.82	1.45	1.32
54 D 2349	A	35.0	15	1600	1⅜x2⅜x1¼"	2"	5/16	1.93	1.56	1.47	1.16	1.05
54 D 2350	A	350.0*#	5	5500	2x3¼x1¾"	2 13/16"	1	4.02	3.25	3.06	2.18	1.98

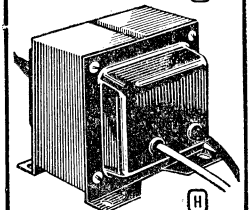
STANDARD OUTPUT TRANSFORMERS

Audio output transformers for coupling single output tube to speaker. Av. shpg. wt., ¾ lb.

Stock No.	Fig.	Primary Impedance	Sec. Imp.	Audio Watts	Size HxWxD	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2064	A	5000 @ 40 mA	3.2	3	1¼x2⅛x1⅜"	1.97	1.60	1.50	1.10	1.00
54 D 2063	A	2500 @ 50 mA	3.2	3	1¼x2⅛x1⅜"	1.97	1.60	1.50	1.10	1.00
54 D 2065	A	2000 @ 50 mA	3.2	5	1⅜x2⅜x1⅜"	1.58	1.28	1.20	.96	.87
54 D 1401	A	2000 @ 50 mA	3.2	3	1¼x2⅛x1¼"	1.58	1.28	1.20	.91	.83
54 D 1402	A	2000 @ 60 mA	4	5	1⅜x2⅜x1⅜"	1.89	1.53	1.44	1.20	1.09
54 D 1403	A	5000 @ 40 mA	4	5	1⅜x2⅜x1⅜"	1.68	1.36	1.28	.99	.90
54 D 1446	C	5000 @ 40 mA	6-8	10	2⅜x2⅞x1⅞"	2.64	2.13	2.00	1.53	1.39
54 D 1447	A	7000 @ 30 mA	4	5	1⅜x2⅜x1⅜"	1.79	1.45	1.36	.99	.90
54 D 1448	A	10000 @ 30 mA	4	5	1⅜x2⅜x1⅜"	1.74	1.41	1.32	.98	.89
54 D 1449	A	25000 @ 5 mA	4	5	1⅜x2⅜x1⅜"	2.08	1.68	1.58	1.23	1.12







U. L. RECOGNIZED■ CONTROL TRANSFORMERS

For 120-volt or low-voltage 24-volt line. 50/60 Hz operation. 240/480-volt primaries must be series connected for 480-volt operation; parallel connected for 240-volt operation. 277-volt primaries for use with 480-volt, 3-phase, 4-wire source with 1 primary lead to source and other to neutral wire. *Mounts to standard conduit box. Contact Allied for larger quantity prices.

PRIMARY, 120 V—SECONDARY, 24 V

Stock No.	Fig.	VA Rating	Size, H x W x D	Mtg. Ctr's W x D	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2275	G	50	4 5/32x4 5/32x4	*	3¼	6.70	5.87	5.42	5.05	4.60
54 D 2276	F	100	3½x3¾x4¼	3¼x1 13/16	5	9.00	7.88	7.30	6.82	6.21
54 D 2277	F	150	3½x3¾x5	3¼x2⅜	6⅞	9.30	8.16	7.56	7.07	6.38
54 D 2278	H	250	4x4½x4⅞	3¾x3 3/16	10¼	13.90	12.21	11.30	10.65	9.71

PRIMARY, 277 V—SECONDARY, 24 V

54 D 2279	G	50	4 5/32x4 5/32x4	*	3¼	6.73	5.92	5.48	5.05	4.60
54 D 2280	F	100	3½x3¾x4¼	3¼x1 13/16	5	9.07	7.95	7.36	6.93	6.27
54 D 2281	F	150	3½x3¾x5	3¼x2⅜	6⅞	9.36	8.22	7.61	7.11	6.43
54 D 2282	H	250	4x4½x4⅞	3¾x3 3/16	10¼	14.14	12.41	11.50	10.85	9.88

PRIMARY, 480/240 V—SECONDARY, 24 V

54 D 2283	G	50	4 5/32x4 5/32x4	*	3¼	7.06	6.21	5.75	5.36	4.88
54 D 2284	F	100	3½x3¾x4¼	3¼x1 13/16	5	9.52	8.47	7.74	7.18	6.54
54 D 2285	F	150	3½x3¾x5	3¼x2⅜	6⅞	9.90	8.70	8.05	7.53	6.88
54 D 2286	H	250	4x4½x4⅞	3¾x3 3/16	10¼	14.81	13.00	12.08	11.38	10.38

PRIMARY, 277 V—SECONDARY, 120 V

54 D 2287	G	50	4 5/32x4 5/32x4	*	3¼	6.79	5.96	5.52	5.15	4.69
54 D 2288	F	100	3½x3¾x4¼	3¼x1 13/16	5	9.14	8.02	7.43	7.00	6.37
54 D 2289	F	150	3½x3¾x5	3¼x2⅜	6⅞	9.45	8.31	7.68	7.18	6.54
54 D 2290	H	250	4x4½x4⅞	3¾x3 3/16	10¼	14.21	12.50	11.58	10.90	9.95

■ Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Rectifier, Pulse and Output Transformers

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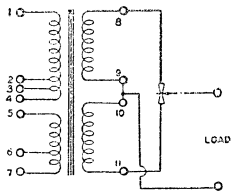
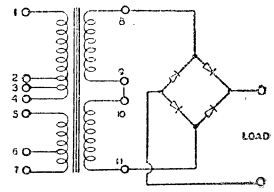
MULTI-TAP SELENIUM RECTIFIER TRANSFORMERS



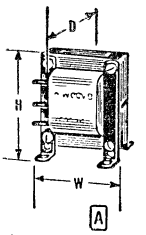
Full Wave Center-Tapped

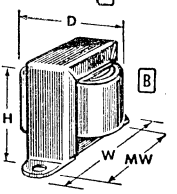


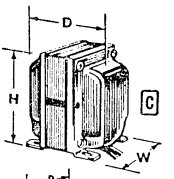
Full Wave Bridge-Type

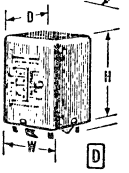
A Well-built transformers designed for full wave center-tapped or bridge-type circuits with standard rectifiers. Allow a variety of combinations using taps on both windings, plus "aiding" or "bucking" action of extra winding. Permit numerous output voltages in addition to those shown in the table below. Ideal for experimental design engineering. 117 V, 50-60 Hz primaries. Supplied complete with winding arrangement and terminal numbering diagrams for easy wiring. †Resistive or inductive load. *Capacitive load.

Stock No.	Rect. Ckt.	Range of AC Volts	Max. DC Output† V	Max. DC Output† A	Max. DC Output* V	Max. DC Output* A	Size HxWxD	Mtg. Centers WxD	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2331	CT	11.5-29.5	11	2	13.6	2	3x2½							
	Bridge	11.0-28.5	23	1.25	30.0	1.25	x2¾"	2x2⅛"	2¾	5.89	4.77	4.50	3.27	2.98
54 D 2332	CT	12.0-29.6	11	4	14.5	4	3⅜x							
	Bridge	12.0-29.6	24	2	33.0	2	2⅞x3"	2¼x2⅜"	4½	8.16	6.63	6.23	4.54	4.17
54 D 2333	CT	11.5-29.0	12	8	14.5	8	3¾x							
	Bridge	11.5-29.0	24	4	32.2	4	3⅛x3½"	2½x2⅞"	6¼	10.24	8.30	7.80	5.87	5.35
54 D 2334	CT	12.0-29.5	11.5	12	14.2	12	4⅛x3½							
	Bridge	12.0-29.5	24	6	32.0	6	x3⅞"	2¾x3¼"	9	14.56	11.80	11.10	8.39	7.65
54 D 2335	CT	12.0-29.0	11	15	14.5	15	4⅝x							
	Bridge	12.0-29.0	23	8	32.0	8	3¾x5"	3x3¾"	13	18.56	15.00	14.10	10.57	9.63









LOW-VOLTAGE RECTIFIER TRANSFORMERS

Primary, 115 V, except †110-120. *Tapped primary for lower voltages.

Stock No.	Fig.	Secondary Volts	Secondary Amps	Case Size HxWxD	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk-Packed 100-249	Bulk-Packed 250-499
54 D 4731	B*	10/20CT/40CT	.035	1⅞x2⅜x1⅜"	2"	½	3.97	3.21	3.02	2.26	2.06
54 D 4732	B*	10/20CT/40CT	.100	1¹¹⁄₁₆x2¹³⁄₁₆x1⅝"	2⅜"	¾	4.62	3.75	3.53	2.43	2.21
54 D 4733	B*	10/20CT/40CT	.300	2⅝x3¹¹⁄₁₆x2"	3⅛"	1½	5.39	4.37	4.10	3.26	2.97
54 D 4734	B*	10/20CT/40CT	.750	2⅝x4x2⅜"	3⁹⁄₁₆"	2½	6.85	5.55	5.21	3.91	3.55
54 D 4735	C*	10/20CT/40CT	1.0	3⅛x2⅝x3⅛"	2x2¼"	3¼	10.20	8.25	7.75	5.51	5.01
54 D 4736	A	0/17/18	3.0	3⅛x2⁹⁄₁₆x2⅞"	2x2⅜"	3⅛	7.53	6.10	5.74	3.92	3.57
54 D 4737	A	0/17/18	6.0	3¹³⁄₁₆x3³⁄₁₆x3¼"	2½x2⅝"	5¾	10.20	8.25	7.75	5.51	5.01
54 D 4738	A	0/6.5/13/19.5/26	3.0	3½x2⅞x2⅜"	2¼x2⅛"	3½	8.17	6.65	6.25	4.60	4.25
54 D 4739	A	0/24/27/30/33/36	3.0	3¹³⁄₁₆x3³⁄₁₆x3¼"	2½x2⅝"	5⅔	11.96	9.70	9.12	6.82	6.20
54 D 4740	A†	0/24/27/30/33/36	8.0	4⅝x3¹³⁄₁₆x3⅞"	3x3¼"	10¾	18.57	15.07	14.20	10.55	9.60

HIGH-FIDELITY OUTPUT TRANSFORMERS

Feature screen taps for ultra-linear operation over entire frequency range, except those with †. Response, 15-35,000 Hz, except *20-20,000 Hz. Rated watts are over full frequency range. All have 4 8, and 16-ohm outputs, except ‡8 and 16 ohms only.

Stock No.	Fig.	Watts	P-P Imp.	mA	Size HxWxD	Wt., Lbs.	EACH 1-9	EACH 10-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 2082	D	12	8000	60	3¾x3x3¼"	3½	11.69	9.47	8.87	5.68	5.17
54 D 2024	C	12	8000	60	3⅛x2⅝x2¾"	2½	9.96	8.07	7.60	5.67	5.16
54 D 2058	B	18*	8000†	65	2⅝x4x2½"	2¼	7.83	6.40	6.01	3.83	3.48
54 D 2054	C	24	6600	75	3⅞x3¼x3⅞"	6	16.76	13.56	12.76	9.54	8.70
54 D 2059	C	30*	6600	100	3⅞x3¼x4"	6	17.48	14.20	13.35	9.93	9.02
54 D 2395	C‡	50*	5000†	150	4¼x3½x4"	7	16.64	13.50	12.70	9.25	8.42
54 D 2397	C‡	50*	6600†	125	4¼x3½x4"	7¼	16.64	13.50	12.70	9.25	8.42

RIGID LEAD TYPES

Stock No.	Mfr's Type	Turns Ratio	Min. L_P µH	Max. L_L µH	Max. C_C pF	EACH 1-14	15-49	50-99	100-249	250-499	500-999
54 D 0344	11Z-2000	1:1	200	3	800	4.20	3.30	2.16	1.56	1.44	1.32
54 D 0345	11Z-2001	1:1	1000	12	2000	4.30	3.38	2.21	1.59	1.47	1.35
54 D 0346	11Z-2003	2:1	1000	10	1300	5.18	4.07	2.66	1.92	1.77	1.62
54 D 0347	11Z-2004	5:1	5000	1500	400	4.65	3.65	2.39	1.72	1.59	1.46
54 D 0348	11Z-2100	1:1:1	200	3	800	4.90	3.85	2.82	2.52	1.68	1.54
54 D 0349	11Z-2101	1:1:1	1000	12	1400	5.00	3.93	2.57	1.85	1.71	1.57
54 D 0350	11Z-2103	2:1:1	1000	15	1300	6.12	4.81	3.15	2.27	2.10	1.92
54 D 0351	11Z-2104	5:1:1	5000	1500	400	5.60	4.40	2.88	2.08	1.92	1.76

FLEXIBLE LEAD TYPES

Stock No.	Mfr's Type	Turns Ratio	Min. L_P µH	Max. L_L µH	Max. C_C pF	EACH 1-14	15-49	50-99	100-249	250-499	500-999
54 D 0300	11Z-12	1:1	200	3	800	2.45	1.92	1.26	.91	.84	.77
54 D 0301	11Z-13	1:1:1	200	3	800	2.73	2.14	1.40	1.01	.93	.85
54 D 0341	11Z-14	2:1	1000	10	1300	3.32	2.61	1.71	1.23	1.14	1.04
54 D 0342	11Z-15	2:1:1	1000	15	1300	3.67	2.88	1.87	1.36	1.26	1.15
54 D 0343	11Z-16	5:1	5000	1500	400	3.60	2.83	1.85	1.33	1.23	1.13

Make Allied your headquarters for all your transformer needs. Fast service, OEM prices, and one-order handling are just a few of the benefits you receive.

SPRAGUE

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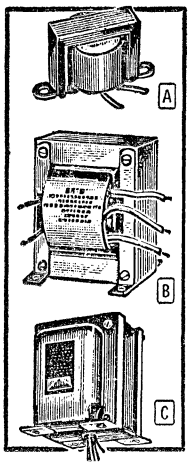
Rigid Leads .800x.968x.775"

TRIGATE PULSE TRANSFORMERS FOR SCR APPLICATIONS

Ultra-reliable pulse transformers designed for commercial and industrial applications where low cost and excellent performance are required. Feature balanced pulse characteristics, efficient energy transfer between windings, fast pulse rise-time and increased current capabilities to prevent SCR di/dt failure. Minimum saturation allows increased pulse widths. Temperature range: —40° to +105° C. Maximum line voltage: 1600 Vrms, 60 Hz AC. Available in rigid lead types for self-supporting mounting on printed circuit boards, or flexible lead types which are mounted by a plastic snap-on or bracket. Wt., 1 oz.

Triad Transformers

FILAMENT, ISOLATION, RECTIFIER POWER, AND STEP-DOWN TRANSFORMERS



SINGLE-SECONDARY FILAMENT TRANSFORMERS

All 115 volt, 50-60 Hz AC primary except *60 Hz operation only.

Stock No.	Mfr's Type	Fig.	Secondary Volts	Secondary Amps	Insul. rms V	Size HxWxD	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 1931	F-1X*	A	2.5CT	3	1500	1 11/16 x 2 13/16 x 1 7/8"	3/4	3.55	3.19	2.87	2.67	2.51
54 D 1932	F-3X*	A	2.5CT	10	3000	2 1/4 x 3 13/16 x 2 1/4"	1 3/4	4.98	4.48	4.03	3.75	3.53
54 D 1935	F-7X	A	5CT	3	1500	1 5/16 x 3 1/4 x 2"	1 1/4	4.00	3.60	3.24	3.01	2.83
54 D 2005	F-11U	B	5.2CT	24	1500	3 13/16 x 3 3/16 x 3 7/8"	6 3/4	12.07	10.86	9.77	9.09	8.54
54 D 4953	F-13X	A	6.3	.6	1500	1 3/8 x 2 3/8 x 1 3/8"	1/2	2.67	2.40	2.16	2.01	1.89
54 D 4954	F-14X*	A	6.3CT	1.2	2500	1 11/16 x 2 13/16 x 1 5/8"	3/4	3.17	2.85	2.57	2.39	2.25
54 D 4955	F-16X	A	6.3CT	3	2500	1 5/16 x 3 1/4 x 2"	1 1/4	3.98	3.58	3.22	2.99	2.81
54 D 4956	F-18A	C	6.3CT	6	1500	3 3/16 x 2 5/8 x 2 5/8"	2 1/2	7.05	6.35	5.72	5.32	5.00
54 D 2004	F-18X	A	6.3CT	6	1500	2 19/32 x 4 x 2 1/4"	2 1/4	5.88	5.29	4.76	4.43	4.16
54 D 4957	F-21A	C	6.3CT	10	1500	3 9/16 x 3 x 3 1/4"	3 1/2	9.00	8.10	7.29	6.78	6.37
54 D 4958	F-22A	C	6.3CT	20	2000	4 x 3 1/4 x 4 3/16"	7	12.50	11.25	10.13	9.42	8.85
54 D 4935	F-23U	B	10CT	7	1500	3 1/2 x 2 7/8 x 2 15/16"	4	8.89	8.00	7.20	6.70	6.30
54 D 4234	F-28U	B	7.5CT-6.3CT	25	3000	4 5/8 x 3 13/16 x 3 5/8"	7 1/2	19.84	17.86	16.07	14.95	14.05
54 D 4235	F-29U	B	12CT-11CT-10CT	11	3000	4 3/8 x 3 1/2 x 3 1/8"	6 1/2	14.24	12.82	11.54	10.73	10.09
54 D 4959	F-25X	A	12.6CT	1.5	1500	1 5/16 x 3 1/4 x 2"	1 1/4	3.75	3.38	3.04	2.83	2.66
54 D 1937	F-26X*	A	12.6CT	2.5	1500	2 9/32 x 3 1/16 x 2 3/8"	2 1/4	4.15	3.74	3.37	3.13	2.94
54 D 4974	F-40X*	A	26.8CT	1	1500	1 5/16 x 3 1/4 x 2"	1 1/4	3.38	3.04	2.74	2.55	2.40
54 D 1938	F-41X*	A	25.2CT	2	1500	2 5/8 x 4 1/16 x 2 1/2"	2 1/4	4.82	4.34	3.91	3.64	3.42
54 D 3661	F-45X*	A	24CT	1	1500	1 5/16 x 3 1/4 x 2"	1 1/4	3.77	3.39	3.05	2.84	2.67

MULTIPLE-SECONDARY FILAMENT TRANSFORMERS (115-Volt, 50-60 Hz AC Primary)

Windings may be connected in series to obtain their combined voltage—when properly phased, current will be equal to current of lowest winding—or connected in parallel to obtain combined current. F-83A has tapped primary, 105-115-125 volt, 60 Hz operation only.

Stock No.	Mfr's Type	Fig.	Secondaries Volts	Secondaries Amperes	Insul. rms V	Size HxWxD	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2007	F-34A	C	6.3CT/6.3/6.3/6.3	1.75/1.75/1.75/1.75	1500	3 3/16 x 2 2/1/32 x 3"	3 1/4	8.67	7.80	7.02	6.53	6.14
54 D 2010	F-36A	C	6.3CT/6.3/6.3/6.3	3.5/3.5/3.5/3.5	1500	3 7/8 x 3 9/32 x 3 1/2"	5	11.39	10.25	9.23	8.58	8.07
54 D 2011	F-42A	C	12.6CT/12.6	2.5/2.5	1500	3 1 5/32 x 2 2 1/32 x 3 1/8"	3 3/4	7.40	6.66	5.99	5.57	5.24
54 D 4247	F-83A	C	12.6CT/12.6	5/5	2500	3 7/8 x 3 9/32 x 3 3/4"	6	12.27	11.04	9.94	9.24	8.69

ISOLATION TRANSFORMERS

Types N-68X and N-471A have split primaries; N-73A and N-74A, split secondaries. For 50-60 Hz AC operation.

Stock No.	Mfr's Type	Fig.	Output VA	Primary Volts	Secondary V ±5%	Secondary A	Size HxWxD	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2149	N-51X	A	35	115	115	.3	2 9/32 x 3 11/16 x 2 1/8"	3 1/8"	1 3/4	4.73	4.26	3.83	3.56	3.35
54 D 2150	N-68X	A	50	115/230	115	.435	2 9/32 x 3 11/16 x 2 1/8"	3 1/8"	1 3/4	5.88	5.29	4.76	4.43	4.16
54 D 2151	N-53M	C	85	115	115	.74	3 19/32 x 2 31/32 x 3 5/8"	2 1/4 x 2 3/8"	4 1/2	12.83	11.55	10.40	9.67	9.09
54 D 2152	N-54M	C	150	115	115	1.3	3 7/8 x 3 9/32 x 4 1/4"	2 1/2 x 3"	6 3/4	14.83	13.35	12.02	11.18	10.51
54 D 4226X	N-59M	C	1000	115	115	8.7	5 5/16 x 4 1/2 x 8"	3 1/2 x 6 7/8"	34	60.35	54.32	48.89	45.47	42.74
54 D 4227	N-73A	C	150	115	115/230	.65	3 7/8 x 3 9/32 x 4"	2 1/2 x 3"	7	11.28	10.15	9.14	8.50	7.99
54 D 4228	N-74A	C	150	115	57.5/115	1.3	3 7/8 x 3 9/32 x 4"	2 1/2 x 3"	7	11.67	10.50	9.45	8.79	8.26
54 D 2153	N-471A	C	300	220/440	115	2.6	4 5/8 x 3 15/16 x 4 1/2"	3 x 3 3/8"	10 1/4	16.92	15.23	13.71	12.75	11.99

RECTIFIER POWER TRANSFORMERS

UNIVERSAL RECTIFIER POWER TRANSFORMER (115-Volt, 60-Hz Primary)

Type F-80U has two identical windings.

Stock No.	Mfr's Type	Fig.	Secondary Volts	Secondary Amps	Size HxWxD	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2012	F-47U	B	17/18	3	3 1/8 x 2 9/16 x 3"	3 1/4	9.10	8.19	7.37	6.85	6.44
54 D 2013	F-48U	B	17/18	6	3 13/16 x 3 3/16 x 3 3/16"	5 1/2	11.20	10.08	9.07	8.44	7.93
54 D 2014	F-49U	B	36/36	3/3	4 5/8 x 3 13/16 x 3 3/4"	9 3/4	18.20	16.38	14.74	13.71	12.89
54 D 2015	F-60U	B	6.5/13/19.5/26	3	3 1/2 x 2 7/8 x 2 1 1/16"	3 1/2	7.68	6.91	6.22	5.78	5.43
54 D 4811	F-61U	B	24/27/30/33/36	3	3 13/16 x 3 3/16 x 3 1/4"	6	11.64	10.48	9.43	8.77	8.24
54 D 4812	F-65U	B	140/150/160	.75	3 13/16 x 3 3/16 x 3 3/8"	6	11.39	10.25	9.23	8.58	8.07
54 D 2016	F-67U	B	24/27/30/33/36	8	4 5/8 x 3 13/16 x 4 3/8"	10 3/4	22.37	20.13	18.12	16.85	15.84
54 D 2025	F-79U	B	24/26/28/30	15	3 13/16 x 4 5/8 x 5 1/2"	18 1/2	31.26	28.13	25.32	23.55	22.14
54 D 4813X	F-80U	B	12/13.5/15/16.5/18	20	5 3/8 x 4 7/16 x 5 1/2"	26	53.28	47.95	43.16	40.14	37.73

LOW-VOLTAGE RECTIFIER TRANSFORMERS (Transistor Drive Voltage)

All types have 115 volt primaries, tapped to produce lower voltages.

Stock No.	Mfr's Type	Fig.	Secondary Volts	Secondary Amps	Size HxWxD	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2020	F-90X	A	10/20CT/40CT	.1	1 5/8 x 2 13/16 x 1 5/8"	3/4	3.77	3.39	3.05	2.84	2.67
54 D 2027	F-91X	A	10/20CT/40CT	.3	2 9/32 x 3 11/16 x 2"	1 1/2	4.45	4.01	3.61	3.36	3.16
54 D 2029	F-92A	C	10/20CT/40CT	1	3 3/32 x 2 31/32 x 3"	3 3/4	7.73	6.96	6.26	5.82	5.47
54 D 4249	F-93X	A	10/20CT/40CT	.75	2 19/32 x 4 x 2 1/4"	2 1/2	5.48	4.93	4.44	4.13	3.88
54 D 4250	F-94X	A	10/20CT/40CT	.035	1 3/8 x 2 3/8 x 1 3/8"	1/2	3.72	3.35	3.02	2.81	2.64

"N SERIES" STEP-DOWN AUTOFORMERS (50-60 Hz)

Stock No.	Mfr's Type	Fig.	Output VA	Primary Volts	Secondary V ±5%	Secondary A	Size HxWxD	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2154	N-1X	A	50	230	115	0.435	2 9/32 x 3 11/16 x 2"	1 1/2	4.10	3.69	3.32	3.09	2.90
54 D 4229	N-34X	A	150	0-95-105-115-125-135	115	1.3	2 19/32 x 4 x 2 1/4"	2 1/2	6.25	5.63	5.07	4.72	4.44

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Triad Transformers

AUDIO INPUT TRANSFORMERS (Line or Mike to Grid) Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Fig.	Application	Primary Impedance	Response Hz ±3dB	Mtg. Ctrs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2188	A-3X	A	Mike or line to grid	400 CT	200-10,000	1¾"	3.32	2.99	2.69	2.50	2.35
54 D 2189	A-4X	A	Line to single grid	500CT/333/200CT /125/67.5CT/50	100-20,000	1¾"	4.15	3.74	3.34	3.13	2.94

INTERSTAGE TRANSFORMERS (Plate to Grid) Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	Watts Out.	Application	Imp. (Ohms) Pri.	Sec.	Mtg. Ctrs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 4818	A-31X	A	3	Plate to sgl. or P-P grids	10K	90KCT	2"	3.90	3.51	3.16	2.94	2.76
54 D 4819	A-33X	A	6	Plate to sgl. or P-P grids	10K	90KCT	2 13/16"	4.85	4.36	3.92	3.65	3.43

LOW-POWER AUDIO TRANSFORMERS *40-15,000 Hz. †Static shields. ‡Split primary and secondary. 5 oz.

Stock No.	Mfr's Type	Fig.	mW Output	Application	Impedance (Ohms) Pri.	Sec.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2194	A-9J†	B	1	Line or mike to grid	600/250/50	85K	10.00	9.00	8.10	7.53	7.08
54 D 4800	A-10J†	B	1	Balanced line, mike to grid	600CT/150	60K	9.43	8.49	7.64	7.11	6.68
54 D 2195	A-12J†	B	10	Balanced line, mike to grid	600CT/150	60K	9.95	8.95	8.05	7.49	7.04
54 D 2200	A-66J*	B	100	Plate to line	15K	600/250/50	8.65	7.78	7.00	6.51	6.12
54 D 2201	A-67J‡†	B	50	Balanced line to balanced line	600CT/150	600CT/150	9.77	8.79	7.91	7.36	6.93

DRIVER TRANSFORMERS

*Transistor type, used in Delco 50- and 100-watt solid-state amplifiers; min. pri. inductance, 3.5 H. Av. wt., 2 lbs.

Stock No.	Mfr's Type	Fig.	mW Output	Application	Impedance (Ohms) Pri.	Sec.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 4803	A-89A	C	15	Univ. P-P plates to AB or B grids	4K/8K	4.4K/8.8K	8.55	7.70	6.93	6.44	6.06
54 D 3536	TY160X*	A	3-5	Class AB, P-P. Turns ratio, 6:1:1	45(DC Pri)	3.6, ea.(DC sec.)	5.47	4.92	4.43	4.12	3.87

HERMETICALLY SEALED LOW-LEVEL AUDIO OUTPUT (Mixing, Matching, Bridging) Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	mW Out.	Application	Impedance (Ohms) Primary	Secondary	EACH 1-9	10-24	25-49	50-99	100-249
54 D 4806	HS-52	D	400	P-P plates to line	20KCT/5K	600/250/150/62.5	26.27	23.64	21.28	19.79	18.60

HERMETICALLY SEALED MINIATURE AUDIO TRANSFORMER

Feature layer-wound coils of microscopically fine wire Static shield. Shpg wt., 2 oz.

54 D 4808	JAF-2	F	1	Line or mike to grid	600/250/50	250K	15.33	13.80	12.42	11.55	10.86

"R SERIES" COMBINED PLATE AND FILAMENT TRANSFORMERS

Fig. C except R-82B, Fig. E. Primary, 115 V, 60 Hz. †Transistor type used in Delco 100-W amplifier. §Amps.

Stock No.	Mfr's Type	Plate (CT) Volts	mA	Filaments (*CT) V	A	V	A	Size	Wt. Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 1900	R-6A	480	50	5	2	6.3*	2	3 1/8x2 5/8x2 5/8"	2.7	8.03	7.23	6.51	6.05	5.69
54 D 1902	R-8A	500	75	5	2	6.3*	2.5	3 1/8x2 5/8x3 1/8"	2.7	8.65	7.79	7.01	6.52	6.13
54 D 1903	R-10A	525	90	5	2	6.3*	5	3 1/2x3x3 5/8"	4.5	10.09	9.08	8.17	7.60	7.14
54 D 4976	R-4A	500	40	...	...	6.3*	2	2 3/4x2 3/8x2 3/4"	1.7	6.65	5.99	5.39	5.01	4.71
54 D 1904	R-12A	550	110	5	2	6.3*	5	3 7/8x3 1/4x3 7/8"	4.5	9.64	8.68	7.81	7.26	6.82
54 D 4978	R-7A	600	50	5	2	6.3*	2	3 3/16x2 5/8x2 5/8"	2.7	8.22	7.40	6.66	6.19	5.82
54 D 4977	R-5A	600	65	...	...	6.3*	2.7	3 1/8x2 5/8x2 5/8"	2.7	7.77	6.99	6.29	5.85	5.50
54 D 4979	R-9A	600	75	5	2	6.3*	3	3 9/16x 3x3 1/4"	3.5	10.15	9.13	8.22	7.64	7.18
54 D 4986	R-11A	700	90	5	3	6.3*	3.5	3 9/16 x3x3 7/8"	4.2	10.77	9.69	8.72	8.11	7.62
54 D 4987	R-14A	700	125	5	3	6.3*	4.5	4x3 1/4x3 15/16"	6.0	12.67	11.40	10.26	9.54	8.97
54 D 1907	R-20A	700	200	5	3	6.3*	8	4 1/4x3 5/8x4 3/8"	9.2	15.95	14.36	12.92	12.02	11.30
54 D 2047	R-72A	800	140	5	3	6.3*	4	4 1/4x3 19/32x3 5/8"	5.7	12.20	10.98	9.88	9.19	8.64
54 D 2038	R-24A	800	300	5	6	6.3*	6	4 5/8x3 15/16x4 1/2"	14.0	21.29	19.16	17.24	16.03	15.07
54 D 2039X	R-25A	800	500	5	6	6.3/6.3*	3/7	5 5/16x4 1/2x5 5/8"	19.0	33.14	29.83	26.85	24.97	23.47
54 D 1912	R-71A	900	250	5	4	6.3*/6.3	2/4	4 5/8x4x5"	12.0	21.12	19.01	17.11	15.91	14.96
54 D 3537	R-82B†	70	3.5§	...	...	.....	....	4 1/2x3 3/4x3 3/4"	8.3	15.25	13.73	12.36	11.49	10.80

"R SERIES" REGULATED POWER-SUPPLY TRANSFORMERS

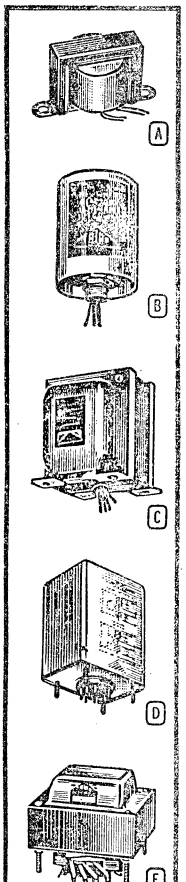
Primary, 115 volts, 60 Hz. †For CRT's. Shpg. wt. (lbs.): R-26A, 12; R-43C, 3.5.

Stock No.	Mfr's Type	Fig.	Plate (*CT) Volts	mA	Filaments (*CT) V	A	V	A	Size	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2049	R-26A	C	880/720*	157	5	3	6.3*/6.3/6.3	8/3/1	4 5/8x3 15/16x4 3/4"	24.00	21.60	19.44	18.08	17.00
54 D 2069	R-43C†	E	1600	3	2.5-5-6.3	1	2.5-5-6.3	3	2 3/8x3 1/16x2 9/16"	12.49	11.24	10.12	9.41	8.85

"R SERIES" TRANSFORMERS FOR PREAMPS, VTVM'S, ETC.

Primary, 115 V, 60 Hz. §Independent windings. Av. shpg. wt., 2 lbs.

54 D 2052	R-68A	C	800*	30	5	2	6.3§/6.3§	1.2/1.2	3 3/32x2 21/32x3 1/8"	9.77	8.79	7.91	7.36	6.92
54 D 1901	R-2C	E	135	15	.....	.....	6.3	0.9	1 3/4x1 7/8x1 9/16"	6.35	5.72	5.15	4.79	4.50
54 D 2053	R-23B	E	250*	22	.....	.....	6.3/15.5/12.6	.81/.6/.6	1 7/8x2 5/8x2 3/16"	6.45	5.80	5.22	4.85	4.56
54 D 4936	R-3A	C	500*	20	.....	.....	6.3*	2	2 25/32x2 11/32x2 1/2"	6.83	6.15	5.54	5.15	4.84
54 D 1909	R-29A	C	230*	40	.....	.....	6.3*	1.5	2 25/32x2 11/32x2 3/8"	5.92	5.33	4.80	4.46	4.19
54 D 1910	R-30X	A	135	50	.....	.....	6.3	1.5	2 9/32x3 3/4x2 1/4"	5.45	4.91	4.42	4.11	3.86
54 D 1911	R-54X	A	115	15	.....	.....	6.3	0.6	2 13/16x1 5/8x1 5/8"	2.72	2.45	2.21	2.06	1.94
54 D 2060	R-56A	C	130	20	.....	.....	15/22.5/30	.6/.6/.6	2 25/32x2 11/32x2 3/4"	6.55	5.89	5.30	4.93	4.63
54 D 2061	R-73B	E	135	200	.....	.....	6.3*	5.5	2 1/8x3 3/8x2 13/16"	8.64	7.78	7.00	6.51	6.12



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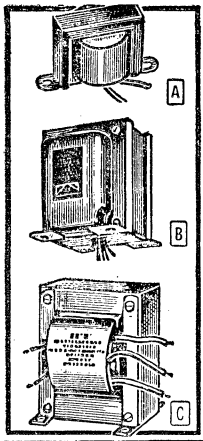
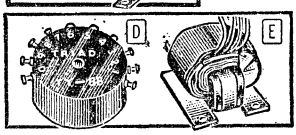
Triad Reactors, Transformers and Inductors



C SERIES SMOOTHING FILTER REACTORS

Smoothing filters with inductance tolerance of —20%, +50%. Transformer types C-47U and C-48U have split windings. High performance, longevity, and superior precision design techniques.

Stock No.	Mfr's Type	Fig.	DC mA	Ind. H	Res. (Ohms)	Test Volts	Size H x W x D	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 4814	C-2X	A	15	2	70	1500	1 3/16 x 2 1/16 x 1 1/4"	.21	2.07	1.86	1.67	1.55	1.46
54 D 2057	C-1X	A	20	15	1000	1000	1 3/16 x 2 1/16 x 1 1/4"	.21	2.35	2.12	1.91	1.78	1.67
54 D 2155	C-3X	A	50	10	500	1500	1 5/8 x 2 13/16 x 1 1/2"	.6	2.75	2.48	2.23	2.07	1.95
54 D 4815	C-6X	A	65	5	330	1500	1 5/8 x 2 13/16 x 1 1/2"	.6	2.73	2.46	2.21	2.06	1.94
54 D 2156	C-5X	A	75	12	390	1000	1 15/16 x 3 5/16 x 1 3/4"	1	3.28	2.95	2.66	2.47	2.32
54 D 2159	C-7X	A	90	10	270	1000	1 15/16 x 3 5/16 x 2"	1.3	3.48	3.13	2.82	2.62	2.46
54 D 2164	C-10X	A	125	9	250	1000	2 9/32 x 3 1/16 x 2"	1.6	4.13	3.72	3.35	3.12	2.93
54 D 2168	C-16A	B	200	10	150	2500	3 1/2 x 2 31/32 x 3 1/2"	4.5	8.25	7.43	6.69	6.22	5.85
54 D 2171	C-27X	A	290	0.7	30	1500	1 5/8 x 2 13/16 x 1 1/2"	.75	2.50	2.25	2.03	1.89	1.78
54 D 4816	C-17X	A	300	1.5	40	1500	2 9/32 x 3 1/16 x 2"	1.6	3.77	3.39	3.05	2.84	2.67
54 D 2174	C-19A	B	300	10	105	3000	4 1/4 x 3 19/32 x 4 1/8"	7.75	12.30	11.07	9.96	9.26	8.70
54 D 2175	C-20A	B	400	6	60	3000	4 5/8 x 3 15/16 x 4 1/2"	10.5	13.65	12.29	11.06	10.29	9.67
54 D 2178	C-40X	A	600	0.32	10	1500	1 15/16 x 3 5/16 x 2"	1.3	3.15	2.84	2.56	2.38	2.24
54 D 2182	C-47U	C	1A/2A	.3/.075	3/.75	1500	3 1/2 x 2 7/8 x 3 3/16"	4.6	7.60	6.84	6.16	5.73	5.39
54 D 2183	C-48U	C	2.5A/5A	.08/.02	.61/.155	1500	3 13/16 x 3 3/16 x 3 9/16"	6.75	9.55	8.60	7.74	7.20	6.77



EPOXY-MOLDED TOROIDAL TRANSISTOR DC TO DC SUPPLY TRANSFORMERS

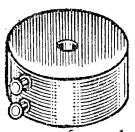
DC to DC transformers (Fig. D) are hermetically sealed, small in size, mount with a single bolt to permit ready stacking. Usable in common emitter or common collector circuits. Exceed MIL-T-27B, Grade 5, Class R. All transformers including DC to AC (Figs. C, E; see second table below), permit current conversion in small volume at high efficiency.

Stock No.	Mfr's Type	DC Input Volts	DC Output Volts	DC mA	Size (Dia. x Ht.)	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 3617	TY-78	12.6	250/125	100	1 3/4 x 1 1/16"	.35	14.72	13.25	11.93	11.09	10.42
54 D 3618	TY-79	12.6	300/150	200	1 3/4 x 1"	.35	14.72	13.25	11.93	11.09	10.42
54 D 3619	TY-80	12.6	325/162.5	150	1 3/4 x 1"	.35	15.94	14.35	12.92	12.02	11.30
54 D 3624	TY-81	12.6	375/187.5	200	2 x 1"	.50	15.19	13.67	12.30	11.44	10.75
54 D 3625	TY-82	12.6	450/225	150	2 x 1"	.50	14.72	13.25	11.93	11.09	10.42
54 D 2203	TY-83	12.6	500/250	250	2 3/4 x 1 3/8"	.85	21.17	19.05	17.15	15.95	14.99
54 D 3626	TY-84	12.6	600/300	200	2 3/4 x 1 3/8"	1.0	21.57	19.41	17.47	16.25	15.28
54 D 3627	TY-88	28.0	250/125	80	1 5/16 x 9/16"	.25	13.02	11.72	10.55	9.81	9.22
54 D 3628	TY-89	28.0	300/150	100	1 3/4 x 1 1/16"	.35	12.82	11.54	10.39	9.66	9.08
54 D 3638	TY-99	6.0	300/150	100	1 3/4 x 1"	.35	15.10	13.59	12.23	11.37	10.69

TRANSISTOR DC TO AC POWER SUPPLY TRANSFORMERS (See Description Above)

Stock No.	Mfr's Type	Fig.	DC Input Volts	AC Output Volts	Hz	Watts	Size H x W x D	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99	100-249
54 D 3647	TY-468	E	28	110/115/125	400	60	1 7/8 x 2 1/4 x 2"	.5	13.35	12.02	10.82	10.06	9.46
54 D 2204	TY-462	E	12	110/115/125	400	60	1 7/8 x 2 1/4 x 2"	.5	16.64	14.98	13.48	12.54	11.79
54 D 3648	TY-75A	C	12	110/115/125	60	115	3 7/8 x 3 9/32 x 3 1/2"	5.0	16.54	14.89	13.40	12.46	11.71
54 D 3649	TY-76A	C	12	110/115/125	60	60	3 3/32 x 2 21/32 x 2 5/8"	3.0	10.67	9.60	8.64	8.04	7.56

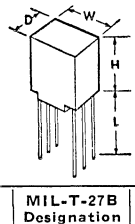
EC SERIES EPOXY-MOLDED TOROIDAL INDUCTORS



Encapsulated per MIL-T-27B. Gold-plated fixed terminals. Highly resistant to shock and vibration. High Q and high measure of stability with level and temperature variations. The cores, of powdered nickel-alloy, are wound with low distributed capacitance and resistance—each coil providing inductance tolerance of ±2%. Size, 2 3/32" high; 1 5/16" diameter. Av. wt., 2 oz.

Stock No.	Mfr's Type	L (mH)	Approx. Ohms	DC mA for 5% L Drop	EACH 1-9	10-24	25-49	50-99	100-249
54 D 2089	EC-020A	20	1.85	116	6.27	5.64	5.08	4.72	4.44
54 D 2090	EC-030A	30	2.85	95	5.92	5.33	4.80	4.46	4.19
54 D 2092	EC-050A	50	5.50	74	6.38	5.74	5.17	4.81	4.52
54 D 2095	EC-100A	100	13.00	52	6.92	6.23	5.61	5.22	4.91
54 D 2096	EC-200A	200	23.00	37	6.72	6.05	5.45	5.07	4.77
54 D 2098	EC-300A	300	35.00	30	6.95	6.26	5.63	5.24	4.93
54 D 2100	EC-500A	500	72.00	23	6.93	6.24	5.62	5.23	4.92
54 D 2110	EC-1000A	1000	134.00	16.5	7.25	6.53	5.88	5.47	5.14
54 D 2145	EC-10000A	10000	1100.00	5.2	9.60	8.64	7.78	7.24	6.81

SP SPECS
H = .485
W = .410
D = .310
L = .75



"RED SPEC" SP SERIES MIL-T-27B MINIATURE TRANSISTOR TRANSFORMERS

Engineered to MIL-T-27B. Specially designed for use in all transistorized and printed circuit applications. Each unit weighs only 1/10th of an ounce! All have solid epoxy-molded cases. Provide top performance from 100 Hz to 100 kHz. 105-volt DC operating voltage. High-strength nickel-alloy leads (.020" diameter) eliminate need for stripping or tinning. Spaced on standard 1/10" grid centers to fit printed circuit boards. Decals permanently affixed giving type, usage, lead numbers and connection data. When mounted on printed circuit board, separator plate leaves viewing area under transformer for lead inspection. *Dry hydrogen annealed Trialloy deep-drawn .020" case for 20-45 db magnetic shielding. Av. wt., .2 oz.

Stock No.	Mfr's Type	MIL-T-27B Designation	Primary Impedance	Secondary Impedance	mW	Application	EACH 1-9	10-24	25-49	50-99	100-249
54 D 3535	SP-4	TF5SX16ZZ	200,000 CT	1000 CT	10	Input	10.50	9.45	8.51	7.91	7.44
54 D 3539	SP-13	TF5SX13ZZ	25,000/20,000	1000/800CT	40	Interstage	9.07	8.16	7.34	6.83	6.42
54 D 3541	SP-20	TF5SX13ZZ	10,000 CT	1200 CT	50	Driver	8.72	7.85	7.07	6.58	6.19
54 D 3542	SP-21	TF5SX13ZZ	10,000 CT	2000 CT	50	Driver	8.77	7.89	7.10	6.60	6.20
54 D 3543	SP-29	TF5SX13ZZ	10,000 CT	500 CT	50	Driver	8.49	7.64	6.88	6.40	6.02
54 D 3561	SP-50	TF5SX17ZZ	500 CT	600	50	Output	7.62	6.86	6.17	5.74	5.40
54 D 3563	SP-52	TF5SX13ZZ	1500 CT	600	50	Output	7.98	7.18	6.46	6.01	5.65
54 D 3585	SP-65	TF5SX13ZZ	8000 CT	3.2	50	Output	7.50	6.75	6.08	5.65	5.31
54 D 3586	SP-66	TF5SX13ZZ	10,000 CT	10,000 CT	50	Output Isolation	8.48	7.63	6.87	6.39	6.00
54 D 2000	SP-67	TF5SX17ZZ	600 CT	600 CT	50	Output Isolation	7.55	6.80	6.12	5.69	5.35
54 D 3591	SP-310	.....	*Magnetic shielding case			.....	.84	.80	.76	.70	.67

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Filter Chokes and Transformers

CHICAGO STANCOR

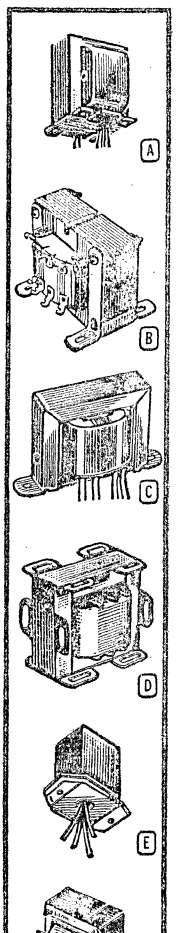
FILTER CHOKES

All ratings are with maximum DC in winding. Rated at 1500 volts rms, except *2000, ‡2500, †3000. Filter chokes listed in table below are designed for both input and smoothing use. C2690 and C2691 have dual windings; first rating is series operation and second rating parallel.

Stock No.	Mfr's Type	Fig.	H	mA	DC Res. Ohms	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4057	C1001†	C	10.5	110	225	2⅝x4x2⅛"	2¼	4.52	4.07	3.84	3.62	2.52	2.30
54 D 4056	C1002	C	15.0	75	400	2⅜x3¾x2¼"	1¼	3.64	3.29	3.09	2.91	2.01	1.83
54 D 4055	C1003	C	16.0	50	580	2x3¼x1⅝"	1	2.89	2.60	2.46	2.31	1.57	1.43
54 D 4067	C1355	D	8.0	75	290	2x2¾x1⅝"	1	3.30	2.97	2.81	2.64	1.76	1.60
54 D 4466	C1411†	A	4.5	200	80	3½x2 13/16x4½"	3½	7.84	7.07	6.66	6.57	4.51	4.10
54 D 4455	C1412†	A	4.0	250	60	3½x2 13/16x3⅝"	4½	9.64	8.67	8.19	7.71	4.74	4.33
54 D 4058	C1515	C	20.0	15	900	1⅝x2⅞x1¾"	1	3.02	2.72	2.57	2.42	1.57	1.43
54 D 4050	C1706	C	4.5	50	300	1⅞x2⅜x1¼"	¾	1.81	1.64	1.54	1.45	1.03	.95
54 D 4051	C1707	C	7.0	50	550	1⅝x2⅜x1¼"	¾	2.11	1.91	1.79	1.69	1.21	1.11
54 D 4052	C1708	C	13.0	65	500	2x3¼x1¼"	1	3.24	2.91	2.75	2.59	1.80	1.65
54 D 4053	C1709	C	8.0	85	250	2x3¼x1⅞"	1¾	2.97	2.69	2.52	2.38	1.63	1.49
54 D 4054	C1710	C	7.0	150	200	2⅝x4x2"	2¼	5.12	4.61	4.35	4.10	2.62	2.39
54 D 4069	C1721†	F	8.5	200	120	3 7/16x2 13/16x3⅛"	4½	9.43	8.49	8.02	7.54	5.43	4.94
54 D 4456	C1722†	F	8.0	300	80	4 9/16x3¾x3⅛"	7½	13.19	11.87	11.21	10.55	7.18	6.55
54 D 4059	C2303*	C	2.5	130	100	2x3¼x1⅝"	1	3.09	2.78	2.63	2.47	1.57	1.43
54 D 4060	C2304	C	2.3	150	60	2x3¼x1¾"	1	3.11	2.79	2.64	2.49	1.51	1.38
54 D 4061	C2305	E	5.0	100	300	2 11/16x2 11/16x2¼"	1½	5.01	4.52	4.26	4.01	2.37	2.16
54 D 2410	C2318	C	12.0	30	400	1⅜x2⅜x1⅜"	½	2.42	2.19	2.06	1.94	1.22	1.11
54 D 4505	C2325	C	2.0	200	60	2⅜x3¾x1⅞"	2	3.60	3.24	3.06	2.88	1.94	1.78
54 D 4520	C2326	C	1.0	300	43	2⅜x3¾x2"	2¾	3.98	3.59	3.38	3.18	1.94	1.78
54 D 4073	C2327	C	1.5	200	85	1⅝x2⅞x1½"	¾	2.66	2.40	2.26	2.13	1.26	1.15
54 D 4458	C2328	C	.8	375	25	2⅜x3¾x1⅞"	1½	5.00	4.50	4.25	4.00	2.46	2.24
54 D 4459	C2334	C	2.8	300	60	2⅝x4x2⅛"	2½	6.79	6.11	5.77	5.43	2.57	2.34
54 D 1238	C2685	B	.035	2A	.75	2 5/16x2⅛x2⅝"	2	4.79	4.31	4.07	3.83	2.59	2.36
54 D 1239	C2686	B	.025	4A	.425	2⅞x2⅝x3⅜"	3½	8.36	7.52	7.11	6.69	4.64	4.22
54 D 1240	C2687	B	.010	8A	.15	3 3/16x3x3¾"	5½	10.55	9.49	8.97	8.44	5.86	5.33
54 D 1241	C2688	B	.010	12½A	.11	3½x4⅛x2⅞"	6	11.55	10.40	9.82	9.24	6.41	5.83
54 D 1242	C2689	B	.005	22½A	.03	3 13/16x4½x4⅜"	12	19.06	17.15	16.20	15.25	10.88	9.91
54 D 1137	C2690	F	.3/.075	1.0/2.0	3/.75	3 7/16x2 13/16x3"	5	9.45	8.51	8.03	7.56	4.94	4.50
54 D 1138	C2691	F	08/.02	2.5/5A	.6/.15	3 13/16x3 1/8x3½"	7	13.15	11.84	11.18	10.52	7.56	6.89
54 D 1139	C2704	C	9.0	125	250	2⅜x3¾x1⅞"	1¾	4.40	3.96	3.74	3.52	2.52	2.30
54 D 1140	C2705‡	A	10.0	200	150	3½x2 13/16x3 9/16"	4½	9.32	8.39	7.92	7.46	5.16	4.70
54 D 2411	C2707	C	2.0	15	70	1¼x2⅛x1⅛"	¼	2.00	1.80	1.70	1.60	1.12	1.03
54 D 2413	C2708	C	0.32	600	10	2x3¼x1⅝"	1¼	3.84	3.46	3.27	3.07	2.14	1.95

ORDERING INFORMATION

Chokes and transformers in quantities of 100 to 499 are shipped bulk packed. Phone, write, or wire Allied Electronics for O.E.M. prices on quantities of 500 or more.



[A] HIGH-FIDELITY OUTPUT TRANSFORMERS

Quality construction for dependable long-term use. Convenient mounting size, just 4 5/16x3 9/16x4¼".

Stock No.	Mfr's Type	Pri. Ohms (P-P)	Sec. Ohms	Pri. mA	Max. Watts	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4563	A8053	5000	8, 16	150	50	6½	17.90	16.11	15.22	14.33	9.76	8.89
54 D 4570	A8056	6600	8, 16	125	50	6½	17.93	16.14	15.24	14.34	9.77	8.90

FIXED-IMPEDANCE OUTPUT TRANSFORMERS

Types A3311, A3800, and A3801 are Fig. A; the others are Fig. C, The single-ended transformers are matched to voice coil, while the push-pull transformers are matched to voice coil and/or line. All transformers are made from high-quality materials and provide excellent power handling capabilities and frequency response. See table below for complete specifications. *Push-pull transformers, while the others are singled-ended.

Stock No.	Mfr's Type	Primary Imp. (Ohms)	Secondary Impedance (Ohms)	Watts	Size (In.) H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4144	A3309	5000	3-4	3	1¼x2⅛x1⅜	½	2.66	2.40	2.26	2.13	1.31	1.20
54 D 4297	A3311*	10K CT	500/15/8/4	25	3½x2 13/16x3¼	3½	8.13	7.32	6.83	6.51	4.40	4.01
54 D 4244	A3328	4000	3.5	3	1¼x2⅛x1⅛	½	1.92	1.73	1.63	1.54	1.10	1.01
54 D 4243	A3332	2000	3.2	3	1¼x2⅛x1¼	½	1.91	1.71	1.62	1.53	.94	.86
54 D 4020	A3800*	5000 CT	500/250/15/8/4	30	3½x2 13/16x3¼	4	8.55	7.70	7.27	6.84	4.68	4.26
54 D 4021	A3801*	6600 CT	500/250/15/8/4	35	3⅞x3⅛x3½	4¾	10.88	9.80	9.25	8.70	6.25	5.69
54 D 4004	A3877	5000	4	5	1⅜x2⅜x1⅜	½	1.98	1.79	1.68	1.58	1.19	1.09
54 D 4010	A3879	10,000	4	5	1⅜x2⅜x1⅜	½	2.07	1.86	1.76	1.66	1.36	1.26

[G] RECTIFIER TRANSFORMERS

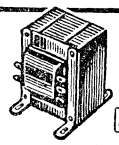
Multi-tap transformers for low-voltage, high-current power supplies with full-wave center-tapped or bridge rectifier circuits. Have tapped primary and additional tapped winding, permitting a wide range of output voltages. Primaries operate from 117 volts, 50-60 Hz AC. With wiring charts.

Stock No.	Type RT-	Range of AC Volts	Max. DC Output Load Resistive	Max. DC Output Load Capacitive	Size (In.) H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4372	201	11.7-29.4	12.2V @ 2.0A	13.8V @ 2.0A								
		11.1-28.5	23.0V @ 1.25A	30.0V @ 1.25A	3⅛x2½x2⅜	2½	7.40	6.66	6.29	5.92	3.63	3.32
54 D 4373	202	12.0-29.8	11.1V @ 4.0A	14.7V @ 4.0A								
		12.0-29.8	24.3V @ 2.0A	33.0V @ 2.0A	3 7/16x2 13/16x2¾	4	9.73	8.76	8.27	7.78	5.05	4.60
54 D 4374	204	11.7-29.2	12.0V @ 8.0A	14.5V @ 8.0A								
		11.6-29.2	24.0V @ 4.0A	32.4V @ 4.0A	3 13/16x3 1/8x3½	6¼	13.14	11.83	11.17	10.51	6.52	5.93
54 D 4375	206	12.0-29.7	11.5V @ 12.0A	14.4V @ 12.0A								
		12.0-29.7	24.0V @ 6.0A	32.0V @ 6.0A	4 3/16x3 7/16x4	9¼	17.22	15.50	14.64	13.78	9.32	8.49
54 D 4376	208	12.1-29.2	11.4V @ 15.0A	14.8V @ 15.0A								
		12.1-29.2	23.7V @ 8.0A	32.5V @ 8.0A	4 9/16x3¾x5	12½	23.38	21.04	19.87	18.70	12.91	11.76
54D4378X	2012	12.2-29.0	11.4V @ 22.5A	14.3V @ 22.5A								
		12.2-29.0	23.5V @ 12.0A	33.0V @ 12.0A	5 5/16x4 3/8x5 7/8	20½	39.70	35.73	33.75	31.76	19.51	17.73

Transformers

SINGLE-SECONDARY FILAMENT TRANSFORMERS

Filament transformers that provide voltages and currents for heating a wide variety of receiving and transmitting tubes. All are center-tapped, except Types P4026, P6469, P8190 and P6462, not tapped. All operate from 117 V, 50-60 Hz AC. *Indicates units with 107-V primary tap for low line voltage conditions.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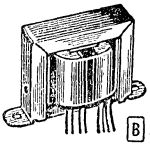
Stock No.	Mfr's Type	Fig.	Volts	Amps	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4197	P4026	B	2.5	1.5	1⅝x2⅞x1⅝"	1	3.85	3.47	3.11	2.93	1.87	1.71
54 D 4141	P6133	D	2.5	5.0	2¾x3⅛x2¼"	1½	6.03	5.43	5.13	4.82	2.68	2.44
54 D 3506	P6454*	D	2.5	10.0	3⅛x3⅝x2½"	2½	5.66	5.09	4.81	4.53	2.82	2.57
54 D 4301	P3060	A	2.5	10.0	3⅞6x2⅜6x2⅜"	2½	8.47	7.62	7.21	6.78	4.64	4.23
54 D 4262	P6467	B	5.0	3.0	2x3¼x2⅛"	1½	4.40	3.96	3.74	3.52	2.18	2.00
54 D 3508	P6455*	D	5.0	6.0	2¾x3⅛x2⅛"	2	5.72	5.15	4.86	4.57	3.11	2.83
54 D 3510	P6135	A	5.0	10.0	3⅛x2½x2¾"	2	7.29	6.56	6.20	5.83	3.74	3.41
54 D 4199	P6433	A	5.0	15.0	3⅛x2½x2¾"	3	9.23	8.31	7.85	7.38	5.04	4.59
54 D 3511	P6468*	H	5.0	30.0	4¼x3⅞6x3⅞"	6.3	17.66	15.89	15.01	14.13	9.63	8.77
54 D 4888	P6492	C	5.0	30.0	4¹¹⁄16x3¾x4"	7½	14.74	13.27	12.53	11.79	8.77	7.99
54 D 4887	P6465	B	6.3	.6	1⅜x2⅜x1½"	½	2.63	2.37	2.24	2.10	1.42	1.30
54 D 4308	P6134	B	6.3	1.2	1⅝x2⅞x1⅞"	1	2.63	2.37	2.24	2.10	1.52	1.39
54 D 4584	P8190	B	6.3	1.2	2x3¼x1⅞"	1	3.94	3.55	3.35	3.15	2.19	2.01
54 D 4263	P6466	B	6.3	3.0	2x3¼x2⅛"	1½	4.40	3.96	3.74	3.52	2.20	2.01
54 D 4309	P5014	A	6.3	3.0	3⅛x2½x2"	2	5.49	4.94	4.68	4.40	3.17	2.90
54 D 3512	P6462*	D	6.3	3.0	3⅛x3⅝x2⅜"	2	7.26	6.53	6.17	5.81	3.93	3.58
54 D 1200	P6456*	B	6.3	6.0	2⅜x3¾x2⅜"	2	5.66	5.09	4.81	4.53	2.72	2.48
54 D 4312	P3064	A	6.3	6.0	3⅛x2½x2⅜"	2½	6.51	5.86	5.53	5.21	3.68	3.35
54 D 4313	P6308*	A	6.3	10.0	3⅞6x2⅜6x2⅝"	3½	9.68	8.71	8.23	7.74	4.65	4.24
54 D 4265	P6309*	A	6.3	20.0	4⅝6x3¾x3⅜"	6¾	12.31	11.08	10.46	9.85	6.70	6.09
54 D 4314	P5015	A	7.5	4.0	3⅛x2½x2¼"	3	7.22	6.50	5.33	5.02	3.30	3.01
54 D 4257	P5016	A	10.0	4.0	3⅞6x2⅜6x2½"	3¼	8.53	7.68	7.25	6.82	4.27	3.90
54 D 3514	P6458*	A	10.0	5.0	3⅛x2½x2½"	3	7.03	6.33	5.98	5.62	3.27	2.99
54 D 4318	P6139	A	10.0	8.0	3⅜6x3⅛x3"	5	9.49	8.54	8.07	7.59	5.18	4.72
54 D 3530	P6461	C	10.0	10.0	3⅞x3¼x3⅝6"	5	11.91	10.72	10.12	9.53	7.09	6.46
54 D 4196	P3020*	C	11.0	10.0	4¹¹⁄16x3¾x3⅝"	7¾	12.70	11.43	10.80	10.16	7.30	6.65
54 D 4200	P8130	B	12.6	2.0	2x3¼x2⅛"	1½	4.35	3.92	3.70	3.48	2.41	2.20
54 D 3532	P8358	B	12.6	3.0	2⅜x3¾x2¼"	1¾	5.13	4.62	4.36	4.10	2.86	2.61
54 D 4143	P6469	B	25.2	1.0	2x3¼x2⅛"	1½	4.14	3.73	3.56	3.31	2.20	2.01
54 D 3531	P8357	B	25.2	2.0	2⅝x4x2¼"	2¼	6.55	5.90	5.57	5.24	3.63	3.32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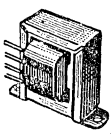
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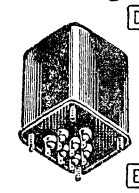
C POWER TRANSFORMERS FOR CAPACITOR-REACTOR INPUT FILTERS

Capacitor input rating is for intermittent duty: 200 mA; †160 mA. *For reactor input. All have primaries for 117 volts, 60 Hz AC.

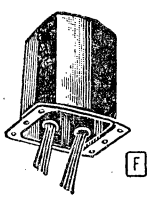
Stock No.	Mfr's Type	Plate VCT	Plate mA*	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3461	PC-8301†	830	200	3⅞6x3⅛x3½"	4¾	10.69	9.62	9.09	8.55	5.32	4.85
54 D 4193	PC-8304	1500	265	4¹¹⁄16x3¾x4⅞"	11½	20.46	18.41	17.39	16.37	11.17	11.08
54 D 4194	PC-8305	1840	250	4¹¹⁄16x3¾x5"	12	21.59	19.43	18.35	17.27	11.31	10.30


E

E FULL-FREQUENCY-RANGE AUDIO TRANSFORMER

Response: ±2 dB, 30-20,000 Hz. Maximum operating level: +7 dB. 2x1½x1½". Shpg. wt., 10 oz.

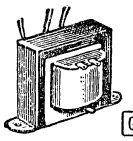
Stock No.	Mfr's Type	Appli-cation	Primary Impedance	Secondary Impedance	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3192	WF30	Mixing	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	22.42	20.18	19.06	17.94	12.88	11.72


F

F POWER TRANSFORMER FOR CHOKE INPUT FILTERS

Primary input, 117 volts, 50-60 Hz AC.

Stock No.	Mfr's Type	Plate VCT	Plate mA*	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3593	PCR-105	900	105	4⅝6x4⅞6x3¹¹⁄16"	6½	19.63	17.67	16.69	15.70	10.88	9.90


G

G TUBE CHECKER TRANSFORMER

Multiple-secondary type transformer for use in tube testers. Primary: 125/115/105 volts 60 Hz. Secondary output volts: 1.1/1.4/1.5/2.0/2.5/3.0/3.3/4.0/5.0/6.3/7.0/7.5/12/20/25/30/35/50/70/85/110/117. 3⅜6" mtg. ct.

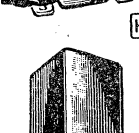
Stock No.	Mfr's Type	Size	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4139	P-1834-3	2⅝x4x2½"	2½	15.84	14.26	13.46	12.67	7.87	7.17

H

H OSCILLOSCOPE POWER TRANSFORMERS

For 2X2 rectifiers in conventional half-wave high-voltage supplies. Primary voltage 117 V 60 Hz, except (*) 50-60 Hz. P-8150 Secondaries (2): 1550 V AC at 1.5 mA; 2.5 V AC at 1.75 amps. P-8151 Secondaries (3): 2400 V AC at 5 mA; 2.5 V AC at 2 amps; 2.5 V AC at 2 amps. P-8178 Secondaries (4); 1800 V AC at 2 mA; 2.5 V AC at 1.8 amps; 2.5 V at 2.2 amps; 6.3 V at 0.6 amps. Type P-8150 not illustrated.

Stock No.	Mfr's Type	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3533	P-8150	3⅛6x3x2½"	2	10.99	9.89	9.34	8.79	5.94	5.42
54 D 3534	P-8151	4⅝6x3⅜6x3⅞"	6½	16.59	14.93	14.10	13.27	9.53	8.68
54 D 3274	*P-8178	3⅞x3¾x3¼"	5	14.77	12.75	12.04	11.34	6.78	6.17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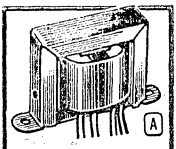
J POWER TRANSFORMER FOR CAPACITOR INPUT FILTERS

Compound-sealed construction.

Stock No.	Mfr's Type	Plate VCT	Plate mA*	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4617	PCC-105	690	105	4⅝6x4⅞6x3¹¹⁄16"	6½	17.85	16.07	15.17	14.28	9.89	9.01

Transformers

CHICAGO STANCOR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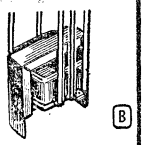
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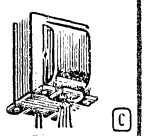
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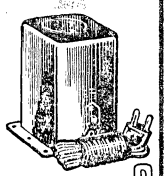
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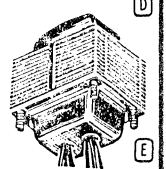
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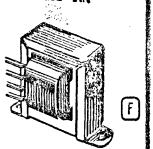
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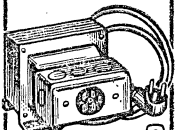
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TRANSISTOR TRANSFORMERS

Designed for transistor applications, but also excellent wherever low-power transformers are needed. †Maximum primary DC. *Watts. Shpg. wt., 3 oz., except: TA-11, 2¾ lbs.; TA-58, ½ lb.

A INPUT TRANSFORMERS

Stock No.	Mfr's Type	Pri. Imp.	Sec. Imp.	† mA	Pri. Res.	Sec. Res.	*W	Size H x W x D	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3889	TA-47	1K CT	200K CT	....	123	1815	.300	13/16x15/8x3/4"	4.83	4.35	4.11	3.86	2.24	2.04

OUTPUT TRANSFORMERS

All types are Fig. A except TA-21, which is Fig. B.

54 D 3962	TA-11	48 CT	8/16	275	5	1.5	5	2x3 1/4x1 7/8"	4.98	4.48	4.23	3.98	2.78	2.53
54 D 3963	TA-12	20 CT	8	500	.55	.35	10	1 3/8x2 3/4x1 5/8"	2.83	2.55	2.40	2.26	1.69	1.55
54 D 3863	TA-21	500 CT	4/8/16	....	75.3	3.55	.150	2 1/32x1 3/16x5/8"	4.61	4.15	3.92	3.69	2.35	2.14
54 D 3881	TA-39	100 CT	4/8/16	....	10.9	1.45	.300	1 3/16x15/8x3/4"	4.59	4.13	3.90	3.67	2.39	2.18
54 D 3884	TA-42	500 CT	4/8/16	....	47	.85	.300	1 3/16x15/8x3/4"	4.51	4.06	3.83	3.61	2.24	2.04
54 D 3885	TA-43	700 CT	4/8/16	....	77	1.15	.300	1 3/16x15/8x3/4"	5.05	4.55	4.29	4.04	2.56	2.34

A DRIVER TRANSFORMERS

54 D 3958	TA-7	100	100 CT	100	12	12	.5	1 5/8x2 7/8x1 5/8"	2.89	2.60	2.46	2.31	1.64	1.51
54 D 1131	TA-58	100	200 CT	200	6.5	15.5	.5	1 1/4x2 1/8x1 1/4"	3.44	3.10	2.92	2.75	1.54	1.41
54 D 3478	TA-59	500 CT	200 CT	50	36.5	15.5	.5	1 1/4x2 1/8x1 3/8"	3.53	3.18	3.00	2.82	1.70	1.56

B INTERSTAGE TRANSFORMERS

54 D 3873	TA-31	5K CT	10K CT	....	635	825	.150	2 1/32x1 3/16x5/8"	5.05	4.55	4.29	4.04	2.24	2.04
54 D 3876	TA-34	10K	200 CT	....	1200	33.4	.150	2 1/32x1 3/16x5/8"	5.12	4.61	4.35	4.10	2.77	2.53
54 D 3877	TA-35	10K	2K CT	....	1200	257	.150	2 1/32x1 3/16x5/8"	4.38	3.94	3.72	3.50	2.37	2.16
54 D 3880	TA-38	500 CT	150 CT	....	62	21.2	.150	2 1/32x1 3/16x5/8"	4.48	4.03	3.81	3.58	2.29	2.09

C POWER TRANSFORMERS

Small, efficient transformers for 117 volt, 60 Hz AC. All types are Fig. C except TP-2 and TP-3, which are Fig. A. Type TP-1 is for a bridge rectifier. All have identical dual-plate supplies. *Tapped primary.

Stock No.	Mfr's Type	Plate Supply AC V	Plate Supply DC mA	Wt., Lbs.	Size H x W x D	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 3966	TP-1	13 or 18	900	2¾	3 1/8x2 1/2x3"	6.77	6.09	5.75	5.42	3.91	3.56
54 D 2398	TP-2	10/10 CT/40 CT	100	¾	1 5/8x2 7/8x1 7/8"	4.98	4.48	4.23	3.98	2.70	2.46
54 D 2399	TP-3	10/20 CT/40 CT	300	1½	2 3/8x3 3/4x2 1/8"	6.68	6.01	5.68	5.34	3.62	3.30
54 D 2401	*TP-4	10/20 CT/40 CT	1000	3¼	3 1/8x2 1/2x3 1/8"	11.21	10.09	9.53	8.97	6.05	5.52

D ISOLATION TRANSFORMERS

Electrostatic shield for complete line isolation. Switch for 3 primary V—125, 115, 105. On 115 V line, secondaries are 105, 115 and 125 V. 8′ cord; standard receptacle on secondary. For 50-60 Hz.

Stock No.	Mfr's Type	Watts	Size H x W x D	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4726	IS-50	50	4 11/16x4 7/16x3 11/16"	2 3/4x3 7/8"	5	20.15	18.14	17.13	16.12	8.80	8.02
54 D 4727	IS-100	100	5 9/16x5 1/4x4 9/16"	2 1/2x4 3/4"	8½	27.62	24.86	23.48	22.10	15.31	13.95
54 D 4728	IS-150	150	6 1/16x5 7/8x5 5/16"	3 1/2x5 3/8"	12½	33.28	29.95	28.29	26.62	18.44	16.78
54 D 4729	IS-250	250	6 1/16x5 7/8x5 5/16"	3 1/2x5 3/8"	18¼	38.81	34.93	32.99	31.05	23.06	20.99

PLATE-FILAMENT POWER TRANSFORMERS

CT 6.3 volt filament windings except *for 6AX5, 6X4, 6X5 tubes or with selenium rectifiers.†½ wave. Primaries, 117 V 60 Hz. ‡For AC powered photoflash circuits, 105/115/125 V primary, no center tap.

Stock No.	Mfr's Type	Fig.	Plate VCT	Plate mA	Filaments V @ A	Filaments V @ A	Size H x W x D	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4162	*PS-8415	F	†125	15	.....	6.3 @ .6	2x2 3/8x1 3/8"	¾	2.97	2.67	2.52	2.38	1.76	1.61
54 D 4078	*PA-8421	A	†125	50	.....	6.3 @ 2	2 1/4x3 3/4x2 1/8"	1½	4.65	4.19	3.95	3.72	2.58	2.35
54 D 4216	*PS-8416	F	250	25	.....	6.3 @ 1	2 5/16x2 7/8x1 3/4"	1	3.90	3.51	3.32	3.12	2.04	1.86
54 D 4445	‡P-6425	F	380	20	.....	.....	2 5/16x2 15/16x2"	1½	4.59	4.13	3.90	3.67	2.54	2.32
54 D 4077	*PC-8418	C	460	50	.....	6.3 @ 2.5	3 1/8x2 1/2x2 5/8"	2¼	6.75	6.08	5.74	5.40	3.20	2.91
54 D 4176	PC-8401	C	470	40	5 @ 2	6.3 @ 2	3 1/8x2 1/2x2 5/8"	2¼	7.79	7.01	6.62	6.23	3.90	3.56
54 D 4177	PC-8402	C	480	55	5 @ 2	6.3 @ 2	3 1/8x2 1/2x2 3/4"	2½	7.77	6.99	6.60	6.22	4.46	4.07
54 D 2402	*PC-8417	C	440	50	6.3 @ 0.6	25.2 @ 0.5	3 1/8x2 1/2x2 5/8"	2¼	8.94	8.05	7.60	7.15	4.44	4.04
54 D 4215	*PC-8419	C	480	70	.....	6.3 @ 3	3 1/8x2 1/2x2 7/8"	2¾	7.73	6.96	6.57	6.18	3.74	3.41
54 D 4179	PC-8404	C	520	90	5 @ 2	6.3 @ 3	3 1/2x2 13/16x3 1/8"	4	9.73	8.76	8.27	7.78	4.74	4.33
54 D 4183	PC-8405	C	540	120	5 @ 3	6.3 @ 3.5	3 7/8x3 1/8x3 1/2"	5	11.33	10.20	9.63	9.06	5.93	5.40
54 D 1133	*P-6358	C	600	65	.....	6.3 @ 2.7	3 1/8x2 1/2x2 1/2"	3	7.90	7.11	6.72	6.32	4.39	3.99
54 D 4184	PC-8407	C	650	55	5 @ 2	6.3 @ 2	3 1/8x2 1/2x3 1/8"	3¼	8.75	7.88	7.44	7.00	4.13	3.76
54 D 4185	PC-8409	C	700	90	5 @ 2	6.3 @ 3	3 1/2x2 13/16x3 5/8"	4½	11.06	9.95	9.40	8.85	6.37	5.80
54 D 4186	PC-8410	C	720	120	5 @ 3	6.3 @ 3.5	3 7/8x3 1/8x3 3/4"	5½	12.71	11.44	10.80	10.17	6.00	5.47
54 D 2406	PC-8422	C	650	150	5 @ 3	6.3 @ 5	3 7/8x3 1/8x3 7/8"	6	13.23	11.91	11.24	10.58	7.60	6.93
54 D 1237	PM-8423	E	650	90	5 @ 2	6.3 @ 3.5	3x2 3/8x2 13/16"	4	10.20	9.18	8.67	8.16	5.32	4.84

G AIR CONDITIONER TRANSFORMERS

Type PSU-2000. For ½ to 1-hp motors (½ to 1-ton units). 2.3 kVA. Converts 208-volt unit to 230-volt line; 230-volt unit to 208-volt line. With line cord, polarized plug, receptacle. 3½x6½x3¾". 54 D 3967. Shpg. wt., 9 lbs. 1-9.....Each 21.82 10-24..Each 19.64 25-49..Each 18.55 50-99.....Each 17.46 Bulk Packed. 100-249.....Each 13.12 250-499.....Each 11.94

Type PSU-3000. Similar to above, but for 1- to 2-hp motors (1 to 2-ton units). 3 kVA. 4x6x4½". Shpg. wt., 10 lbs. 54 D 3968. 1-9.....Each 27.60 10-24.....Each 24.84 25-49.....Each 23.46 50-99.....Each 22.08 Bulk Packed. 100-249.....Each 14.40 250-499.....Each 13.11

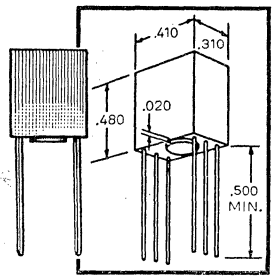
A INTERSTAGE TRANSFORMERS

For use in a wide variety of circuits requiring dependable performance and stable operation. Single plate to single grid. Has maximum primary DC rating of 10 mA. Turns ratio, 1:3 for primary to secondary. For 7000 to 20,000 ohm plate impedances. Not center tapped. Core size, ½x½". 2-inch mounting centers. Overall size, 1 3/8x2 3/8x1 1/2". Shpg. wt., ½ lb.

Stock No.	Mfr's Type	Pri. Imp.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54 D 4090	A-53	7-20K	2.83	2.55	2.41	2.26	1.64	1.50

CHICAGO STANCOR

Control Transformers

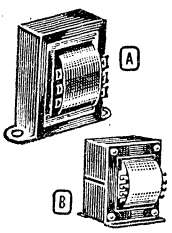


POLYCHROMATRAN TRANSFORMERS AND CHOKES

- Color-Coded According to Application • Fatigue-Resistant Gold-Plated Leads
- Extended Low-Frequency Response • Reduced Distortion Levels
- Minimum Size and Weight • Test Rating of 500 Volts rms

Wide selection of miniature audio polychromatran transformers specially designed and engineered for use with printed circuit boards. All units have gold-plated leads of fatigue-resistant nickel-iron alloy, .020" diameter, 9/16" long. Leads are spaced in multiples of 0.1" grid spacing for convenient installation on PC boards. Incorporating the latest advances in transformer design, these units offer reductions in audio distortion up to 50%, plus substantially improved lower end frequency response. Each unit is clearly color-coded according to application, greatly reducing chances of error in handling and selection during production. Extremely lightweight and compact, average size is only .460x.405x.305". Rectangular shape allows utmost utilization of space and stacking in limited area. Protective stand-off prevents solder flow-back and allows maximum lead exit protection. All have rms test voltage rating of 500 volts. Actual wt. per unit, approx., ¾ oz.

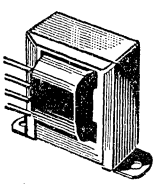
Stock No.	Mfr's Type	Cap., mW	Applica-tion	Impedance Primary	Impedance Secon-dary	Unbal. DC mA In Pri.	DC Resistance Ohms		EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk-Packed 100-249	Bulk-Packed 250-499
54 D 3407	PCT-15	35	Input	50,000	1000 CT	0	4600	90	11.15	10.04	9.48	8.92	6.63	6.04
54 D 3413	PCT-31	75	Driver	10,000 CT	2000 CT	1	1250	400	11.09	9.98	9.43	8.87	6.74	6.14
54 D 3422	PCT-76	75	Output or Isolation	10,000 CT	10,000 CT	1	1100	1400	12.62	11.36	10.73	10.10	7.50	6.83
54 D 3423	PCT-77	75	Output or Isolation	600 CT	600 CT	3	85	110	12.32	11.09	10.47	9.86	7.49	6.82
54 D 3424	PCT-116	.....	Choke	6 H	.....	2	1800	.....	10.15	9.14	8.63	8.12	6.18	5.63
54 D 3418	PCT-118	.....	Choke	3.5H	.....	2	1200	.....	7.00	6.30	5.95	5.60	4.27	3.89



CONTROL TRANSFORMERS

Automation-type transformers provide trouble-free performance in high-speed automatic equipment. Typical applications include: relays, pilot lamps, solenoids, small motors, speed changers, pumps, electronic tubes, heating elements, elevators, door openers, automatic musical instruments, and many other mechanical and electric devices. For 115-230 volts, 50-60 Hz AC.

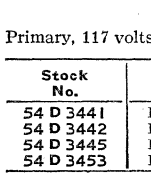
Stock No.	Mfr's Type	Fig.	Secondary Parallel	Secondary Series	Size HxWxD	Mtg. Ctrs.	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3276	P-6375	A	6V @ 2A	12V @ 1A	2⅜x2⅞x1⅝"	2⅜"	1	4.64	4.18	3.94	3.71	2.25	2.05
54 D 3277	P-6376	A	6V @ 4A	12V @ 2A	2¾x3⅛x1⅞"	2 1⅜6"	1½	5.44	4.90	4.62	4.35	3.14	2.86
54 D 3278	P-6377	A	12V @ 4A	24V @ 2A	3⅛x3⅝x2¼"	3⅛"	2½	6.49	5.84	5.52	5.19	3.39	3.10
54 D 3279	P-6378	B	12V @ 8A	24V @ 4A	3 7/16x2 13/16x2⅞"	2¼x2¼"	4¼	11.03	9.93	9.38	8.82	6.33	5.76
54 D 3280	P-6379	B	12V @ 16A	24V @ 8A	4 3/16x3 7/16x3 3/8"	3x2¾"	8	18.02	16.22	15.32	14.42	8.68	7.90



LOW-CURRENT CONTROL TRANSFORMERS

Versatile low-current transformers with many applications in design and engineering. All have three isolated secondaries (one with center tap) to provide many combinations of output voltages and currents. May be series or parallel connected for a wide variety of designs. Applications include: pilot light, miniature relays, low-current, low-voltage power supplies. Lead wire terminations for fast, easy connections to circuit. Color-coded (Two black leads for primary; brown and silver leads for 1st secondary; blue and red leads for 2nd secondary; green and yellow leads for 3rd secondary, with green/yellow center tap lead). 117 V, 60 Hz primary, 12-V secs.

Stock No.	Mfr's Type	Amps Each Sec.	Size HxWxD	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk-Packed 100-249	Bulk-Packed 250-499
54 D 3419	P-8361	.10	1¾x2x1½"	⅓	4.09	3.68	3.48	3.27	2.35	2.15
54 D 3420	P-8362	.15	2x2⅜x1¾"	⅔	4.24	3.82	3.60	3.39	2.45	2.23
54 D 3421	P-8363	.25	2⅜x2⅞x1¾"	1	4.85	4.37	4.12	3.88	2.81	2.56
54 D 3429	P-8364	.50	2⅜x2⅞x2⅛"	1¼	5.62	5.06	4.78	4.50	3.23	2.94



MINIATURIZED CONTROL TRANSFORMERS

Primary 117 volts, 60 Hz AC; secondary, 12 volts. Lead wire terminations.

Stock No.	Mfr's Type	Secondary Amps rms	Secondary Amps Bridge	Secondary Amps Half-Wave	Size HxWxD	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3432	P-8390	.150	.100 DC	.050 DC	1¼x2⅛x1¼"	¼	3.27	2.94	2.78	2.62	1.38	1.24
54 D 3433	P-8391	.350	.225 DC	.110 DC	1⅜x2⅜x1⅜"	⅓	3.39	3.05	2.88	2.71	1.47	1.33
54 D 3435	P-8392	.700	.450 DC	.225 DC	1⅝x2⅞x1⅝"	⅔	3.54	3.19	3.01	2.83	1.54	1.39
54 D 3436	P-8393	1.200	.750 DC	.375 DC	2x3¼x1⅝"	1	4.47	4.02	3.80	3.58	2.01	1.81

Primary, 117 volts, 60 Hz AC; secondary 24 volts, CT. Lead wire terminations.

Stock No.	Mfr's Type	Secondary Amps rms	Secondary Amps FW CT	Secondary Amps Bridge	Size HxWxD	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3441	P-8394	.085	.135 DC	.065 DC	1¼x2⅛x1¼"	¼	3.57	3.21	3.04	2.86	1.56	1.41
54 D 3442	P-8395	.200	.275 DC	.135 DC	1⅜x2⅜x1⅜"	⅓	3.72	3.35	3.16	2.98	1.64	1.47
54 D 3445	P-8396	.400	.550 DC	.270 DC	1⅝x2⅞x1½"	⅔	3.87	3.48	3.29	3.10	1.71	1.54
54 D 3453	P-8397	.700	.925 DC	.450 DC	2x3¼x1⅝"	1	4.80	4.32	4.08	3.84	2.17	1.96

ATTENTION BUYERS

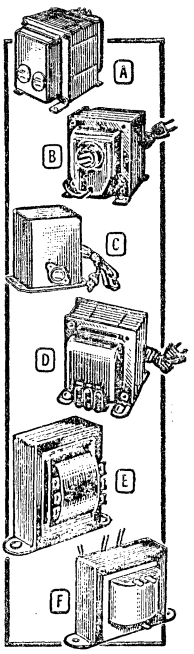
Allied can supply the entire line of Chicago/Stancor Transformers in production quantities at current OEM prices. Quantities of 100 or more are shipped bulk-packed. For complete price and delivery information on quantities larger than those shown, contact the Allied facility nearest you. See page 3 or back cover for addresses.

General-Purpose Transformers

CHICAGO STANCOR TRANSFORMERS

ISOLATION TRANSFORMERS

All have electrostatic shields grounded internally to core. Rms insulation test: 1500 V *Primary is tapped for 125, 115 and 105 V; 115-volt secondary, †Isolation testing transformer with 117 V primary; has tapped secondary with three standard receptacles for 105, 115 and 125 volts. ‡117 V primary and 117 V secondary. §Stepdown isolation transformers with primary tapped for 250, 230 and 210 V; 115-volt secondary.



Stock No.	Mfr's Type	Fig.	Size HxWxD	Watts	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99	Bulk Packed 100-249	Bulk Packed 250-499
54 D 3552 X	P-6125*	A	7⅛x5⅜x7¾"	1000	35	107.78	97.00	91.61	86.22	.....	.....
54 D 4443	P-6160*	B	4¹¹⁄₁₆x3¾x3¾"	100	7	20.96	18.86	17.82	16.77	10.22	9.31
54 D 3551	P-6161*	B	4¹¹⁄₁₆x3¾x5½"	250	14¼	26.27	23.64	22.33	21.02	1.431	13.02
54 D 4448 X	P-6298*	B	7⅝x5⅝x7⅛"	500	28	67.34	60.61	57.24	53.87	37.24	33.87
54 D 4475	P-6371‡	C	5⅝x4⅝x5¼"	175	9	26.73	24.06	22.75	21.38	15.36	13.98
54 D 3553	P-6385§	B	4¹¹⁄₁₆x3¾x5½"	250	14¼	29.49	26.54	26.07	23.59	17.55	15.98
54 D 4207 X	P-6387§	B	7¾x5⅝x7⅛"	500	29½	78.20	70.38	66.47	62.56	46.50	42.32
54 D 4449	P-6410‡	B	3½x2¹³⁄₁₆x3⅛"	50	4	9.34	8.41	7.94	7.47	5.13	4.67
54 D 4444	P-6415†	D	5⅞x4⅝x5¹¹⁄₁₆"	350	17	33.13	29.82	28.16	26.56	17.16	15.63

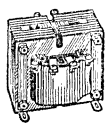
LINE-TO-VOICE-COIL TRANSFORMERS

*Type A3837 is an autotransformer for one or more speakers in parallel across 500-ohm line. †Constant-voltage PA, EIA 70.7-volt types. §25-volt types. Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Fig.	Primary Impedance	Secondary Impedance	Watts	Mtg. Ctrs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-99
54 D 4088	A3837*	E	500	.06 to 48	15"	2⅜"	5.86	5.28	4.98	4.69
54 D 4085	A7947	F	2000/1500/1000/500	6-8/3.2	8	2⅜"	3.96	3.57	3.37	3.17
54 D 4089	A8101	F	500	3.2/6-8	5	2"	2.44	2.21	2.07	1.95
54 D 4091	A8102†	E	625/1250/2500/5000/10000	4/8/16	8	2"	4.37	3.93	3.71	3.50
54 D 4092	A8103†	E	312/625/1250/ 2500/5000/10000	4/8/16	16	2¹³⁄₁₆"	5.99	5.39	5.09	4.79
54 D 4099	A8104	E	3000/2000/ 1500/1000/500	16/8/4	10	2⅜"	5.25	4.73	4.46	4.20
54 D 4889	A8105†	F	1000/2000/4000/ 8000/16000	4/8	5	2"	3.92	3.53	3.33	3.14
54 D 1296	A8080†	F	1000/1250/1667/2500/5000	8/16	5	2"	3.90	3.51	3.32	3.12
54 D 1298	A8082†	E	333/357/384/417/455	8/16	15	2⅜"	4.92	4.43	4.18	3.94
54 D 1202	A8096§	E	78/156/132/625/1250	4/8/16	8	2"	5.12	4.61	4.35	4.10
54 D 1203	A8097§	E	39/78/156/312/625/1250	4/8/16	16	2¹³⁄₁₆"	6.03	5.43	5.13	4.82

MILWAUKEE TRANSFORMER CO.

CONTROL TRANSFORMERS



3200 Series—Type CWI. Reliable industrial control transformers for applications where accurate voltage control is required. Interleaved windings are specially designed for minimum regulation even under conditions of high inrush. 60 Hz AC input. Dual primaries, 240/480 volt, parallel or series connected. Can operate at 220 or 230 volt combinations. Power factor of 95% minimum. Secondaries, 120 or 120/240 volts. Screw-type terminals for easy mounting. Open-frame core and coil construction for top performance and long life. All have four oblong mounting holes, see mounting centers in table.

PRIMARY, 240/480 V—SECONDARY, 120 V

Stock No.	Mfr's Type	kVA	Mtg. Ctrs.	Size HxWxD	Wt., Lbs.	EACH
54 D 2220	C1-13361	.050	2½x2¼"	2⅜x3x3½"	3	9.90
54 D 2221	C1-13362	.075	2½x2⅞"	2⅜x3x4⅛"	4¼	10.60
54 D 2222	C1-13363	.100	2¹³⁄₁₆x2¾"	2⅞x3⅜x4⅜"	5½	11.05
54 D 2223	C1-23166	.150	3½x3⅜"	3⅜x3¾x5¼"	8½	12.10
54 D 2224	C1-23167	.200	3¾x2⅞"	3⅜x4½x4⅞"	9½	14.45
54 D 2225	C1-23091	.250	4½x3⅝"	4½x5¼x5⅞"	12	15.75
54 D 2231	C1-33188	.300	3¾x3¹³⁄₁₆"	3¹³⁄₁₆x4½x5¹⁵⁄₁₆"	13½	17.15
54 D 2233 X	C1-33189	.350	4⅜x4"	4⅝x5¼x5⅞"	21	18.20
54 D 2244 X	C1-33112	.500	4½x5"	4½x5¼x7½"	26	19.75
54 D 2245 X	C1-43192	.750	4½x5¾"	4½x5¼x8¼"	32	24.05
54 D 2250 U	C1-43137	1.0	5¼x5¼"	5¾x6⅛x7½"	40	27.85
54 D 2251 Z	C1-53091	1.5	5⅞x6½"	6½x7¹⁄₁₆x8¾"	59	38.35
54 D 2252 Z	C1-53129	2.0	5⅞x8"	6½x7¹⁄₁₆x10¼"	72	47.00

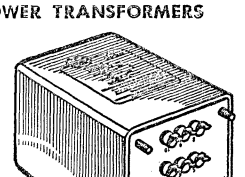
PRIMARY, 240/480 V—SECONDARY, 120/240 V

Stock No.	Mfr's Type	kVA	Mtg. Ctrs.	Size HxWxD	Wt., Lbs.	EACH
54 D 4251	C1-13381	.050	2½x2¼"	2⅜x3x3½"	3	10.15
54 D 4253	C1-13383	.100	2¹³⁄₁₆x2¾"	2⅞x3⅜x4⅜"	5½	11.30
54 D 4254	C1-23174	.150	3⅛x3⅜"	3⅜x3¾x5¼"	8½	12.40
54 D 4259	C1-23175	.200	3¾x2⅞"	3¹³⁄₁₆x4½x4⅞"	9½	14.80
54 D 4260	C1-23089	.250	4½x3⅝"	4½x5¼x5⅞"	12	16.15
54 D 4270	C1-33196	.300	3¾x3¹³⁄₁₆"	3¹³⁄₁₆x4½x5¹⁵⁄₁₆"	13½	17.55
54 D 4280 X	C1-33110	.500	4½x5"	4½x5¼x7½"	28	20.10
54 D 4300 X	C1-43044	.750	4½x5¾"	4½x5¼x8¼"	35	24.40
54 D 4282 U	C1-43135	1.0	5¼x5¼"	5¾x6½x7½"	40	28.35
54 D 4302 Z	C1-53089	1.5	5⅞x6½"	6½x7¹⁄₁₆x8¾"	53½	38.85
54 D 4303 Z	C1-53132	2.0	5⅞x8"	6½x7¹⁄₁₆x10¼"	78	47.70

UNITED TRANSFORMER CO.

UNIVERSAL TRANSISTOR POWER TRANSFORMERS

Excellent for use in low-voltage DC power supplies, battery chargers, plating rectifiers, and many other similar applications. Hermetically sealed cases. Meet MIL-T-27B specifications through full environmental testing. Primaries, 115 volts, 50-60 Hz AC. Nominal secondary voltage range 8.25 to 40.5. Primary taps can modify nominal AC voltages by −6%, +6%, and +12%. Secondary DC voltage range listed in table is industrial rating.



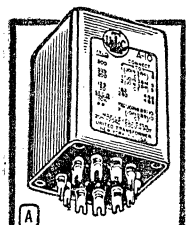
Stock No.	Mfr's Type	Secondary DC Range	Size, Inches LxWxH	Wt., Lbs.	EACH 1-24	EACH 25-99	EACH 100-249
54 D 1736	H-94	6V@3.8A to 53V@1.2A	3 1⁄16x2⅜x4¼	4½	22.50	19.13	18.00
54 D 1737	H-95	6V@9A to 53V@3A	3 1⁄16x3⅜x5¼	8½	30.00	25.50	24.00
54D1738X	H-96	6V@23A to 53V@7.5A	5½x4½x6¾	21	55.80	47.43	44.64
54 D 1739	H-915	6V@.085A to 53V@.025A	1⁵⁄₁₆x1⅝x1¼	⅜	13.50	11.48	10.80
54 D 1740	H-925	6V@.28A to 53V@085A	1⅝x1⅝x2⅜	2/3	14.10	11.99	11.28
54 D 1741	H-935	6V@1.52A to 53@A.48A	2⁵⁄₁₆x2 1⁄16x3⅛	1¼	18.00	15.30	14.40

TRANSISTOR AND VACUUM-TUBE TYPE MINIATURE MIL-T-27B AUDIO TRANSFORMERS

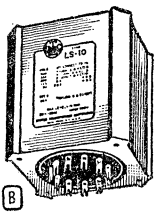
Performance-tested miniature transformers for use in either vacuum tube or transistor circuits. Meet MIL-T-27B specs. Bead terminals permit use in printed circuits. May be used in reverse, input to secondary. Impedance ratio is constant. Freq. response and max. level: H-1, 50-10,000 Hz, +5 dBm; H-8, 50-10,000 Hz, +8 dBm. Level ratings given are for low distortion at lowest frequency specified. Higher levels are permissible for higher frequencies. In drawn steel cases, occupying less than 2 cubic inches. Size (HxWxD): 1⁷⁄₁₆x1¹⁄₆₄x1¹³⁄₃₂". Requires ⅞" dia. cutout. *split primary. Av. wt., 3 oz.

Stock No.	Mfr's Type	Primary Impedance (Ohms)	Sec. Impedance (Ohms)	EACH 1-24	EACH 25-99	EACH 100-249
54 D 1700	H-1	50/200CT/500CT	50,000	9.00	7.65	7.20
54 D 1707	H-8	*600/150	600CT	9.00	7.65	7.20

UTC Transformers and Chokes



A TYPE A CASE



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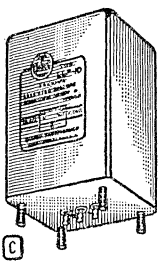

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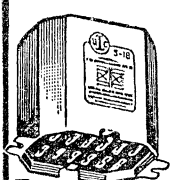

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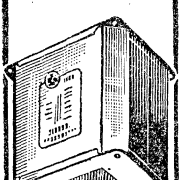


E

ALLIED CAN FURNISH THE ENTIRE LINE OF UTC TRANSFORMERS AND CHOKES. WRITE FOR INFORMATION AND OEM PRICES FOR ITEMS NOT LISTED

A ULTRACOMPACT TRANSISTOR AND TUBE-TYPE AUDIO HI-FI TRANSFORMERS

Meet broadcast standards. Response (Hz): ‡20-20,000; †40-20,000; A-27 and A-44, 30-20,000; A-20, 10-50,000; A-21, 30-30,000; A-26, 20-40,000; A-43, 20-30,000. All ±2 dB. *Multiple-alloy shield for extremely low hum pickup. §High electrostatic shielding. A-33 (hipermalloy shield) fits entire "A" series. Wt., ½ lb.

Stock No.	Mfr's Type	Application	Primary Imp. (ohms)	Secondary Imp. (ohms)	EACH 1-24	25-99	100-249
54 D 2820	A-10‡	Low imp. to grid	50, 125-150, 200-250, 333, 500-600	50K	16.50	14.03	13.20
54 D 2821	A-11*‡	Low imp. to 1, 2 grids	50, 200, 500	50K, P.P	12.90	10.97	10.32
54 D 2822	A-12‡	Low imp. to PP grids	Same as A-10	80K 2 sect	15.00	12.75	12.00
54 D 2864	A-15†	Transistor interstage	10K-2.5K	500-2K	11.10	9.44	8.88
54 D 2825	A-18†	1 or PP pl. to PP gr.	15K (Split)	80K P.P. 2.3:1	14.10	11.99	11.28
54 D 2826	A-19†	Plate to PP grids	15K—8 mA DC	80K P.P. 2.3:1	12.60	10.71	10.08
54 D 2827	A-20§	Mixing, matching	Same as A-10	Same as Pri.	15.90	13.52	12.72
54 D 2828	A-21*§	Mixing, matching	50, 200-250, 500-600	Same as Pri.	12.00	10.20	9.60
54 D 2868	A-22†	T. interstage or out.	500	125-250 (Split)	9.90	8.42	7.92
54 D 2873	A-23†	T. interstage or out.	500	4-16 (Split)	9.90	8.42	7.92
54 D 2779	A-26	1 or PP pl. to line	30K P. to P.	As A-10 pri.	16.50	14.03	13.20
54 D 2306	A-27	Xtal/hi. imp. to line	100K (Split)	As A-10 pri.	14.70	12.50	11.76
54 D 2307	A-28†	Transistor to V.C.	48 CT	16 (Split)/8/4	10.20	8.67	8.16
54 D 2843	A-34	Transistor interstage	25K-6.25K (Split)	500-125 (Split)	11.10	9.44	8.88
54 D 2844	A-35	Transistor interstage	10K-2.5K (Split)	500-125 (Split)	10.80	9.18	8.64
54 D 1799	A-39*‡	Line to transistor	600-150 (Split)	2000-500 (Split)	12.00	10.20	9.60
54 D 2562	A-43§	Mixing/matching line	600-150 (Split)	Two 600-125 (Split)	15.90	13.52	12.72
54 D 3943	A-44	T. interstage or out.	4K-1K (Split)	600-150 (Split)	12.00	10.20	9.60
54 D 1325	A-48	Hybrid circuit use	500-600	Two 500-600	18.00	15.30	14.40
54 D 2874	A-33	Mu-metal shield; for any of above. Size, 1 19/32x1 19/32x2 1/32"			3.90	3.32	3.12

B LS-33 HIGH-LEVEL MATCHING TRANSFORMER

High-level matching transformer designed to keep hum pickup extremely low. Built with hipermalloy core, multiple section, and inter-leaved windings. Response, ±1 dB at 10-40,000 Hz. Size, 4 3/16x3 1/2x4 7/16".

Stock No.	Mfr's Type	Max. Level	Primary Imp. (Ohms))	Secondary Imp. (Ohms)	Wt., Lbs.	EACH 1-24	25-99	100-249
54 D 2800	LS-33	20 W.	50, 125, 200, 250, 333, 500/600	1.2, 2.5, 5, 7.5, 10, 15, 30, 50, 125, 200, 250, 333, 500/600	7½	30.90	26.27	24.72

B TYPE LS HYBRID AND REPEAT COILS

Repeat and hybrid units with many applications. LS units are designed for uniform frequency response, low wave form distortion and high efficiency. *High electrostatic shielding. 3 1/8x2 5/8x3 1/4". Shpg. wt., 3 lbs.

Stock No.	Mfr's Type	Application	Primary Imp. (Ohms)	Secondary Imp. (Ohms)	EACH 1-24	25-99	100-249
54 D 3306	LS-68*	Mix, match lines and/or transistors	600/150 split	2 sec. each 600/150 split	27.00	22.95	21.60
54 D 3307	LS-140*	Isol. bal. and unbal. circuits	500/600 split	500/600 split	28.20	23.97	22.56
54 D 3940	LS-141	Hybrid Coil	3 bal. windings, each 500/600 CT		24.90	21.17	19.92

C LOW-FREQUENCY LOW PASS FILTERS

Have a loss of less than 3 dB at nominal frequency, with attenuation of more than 40 dB at twice nominal frequency. Housed in a hermetically sealed metal case to meet MIL-F-18327 B specs. Shpg. wt., 1½ lbs.

Stock No.	Mfr's Type	Nominal Frequency	Source and Load Impedance (Ohms)	Size HxWxD	EACH 1-24	25-99	100-249
54 D 3308	LLP-10	10 Hz	100 K	3 1/8x2 5/16x2 1/16"	60.00	51.00	48.00
54 D 3310	LLP-15	15 Hz	100 K	3 1/8x2 5/16x2 1/16"	60.00	51.00	48.00

FILTER, SWINGING AND AUDIO CHOKES

Stock No.	Mfr's Type	Fig.	Henrys (*mH)	mA (†A)	Ohms	Size HxWxD	Wt., Lbs.	EACH 1-24	25-99	100-249
54 D 2751	S-33	E	8	300	100	4 5/8x4 5/8x5 1/2"	8	13.20	11.22	10.56
54 D 2737	S-37	E	8	550	60	4 5/8x5 3/8x5 3/8"	12	19.80	16.83	15.84
54 D 2738	S-38	E	4/20	550	60	4 5/8x5 3/8x5 3/8"	12	19.80	16.83	15.84
54 D 2316	S-81	D	100/8*	2.5†	.6	2 windings	2	7.20	6.12	5.66
			25/2*	5†	.15	2 1/2x3 3/4x2 5/32"				

PLATE TRANSFORMERS (Primary 115 V, 50-60 Hz)

Stock No.	Mfr's Type	Fig.	Secondary	Size HxWxD	Wt., Lbs.	EACH 1-24	25-99	100-249
54 D 2744 X	S-44	E	575-525-0-525-575 @ 500 mA	5 7/8x5 3/8x6 3/4"	22½	34.50	29.33	27.60
54 D 2745	S-45	E	900-750-0-750-900 @ 200 mA	4 5/8x5 3/8x5 3/8"	12	26.70	22.70	21.36
54 D 2746 X	S-46	E	1000-750-0-750-1000 @ 300 mA	5 7/8x5 3/8x6 3/4"	20½	32.40	27.54	25.92
54 D 2748 X	S-47	E	1500-1250-1000-0-1000-1250-1500 @ 300 mA	5 7/8x6 1/8x6 5/8"	26¾	43.50	36.98	34.80
54 D 2749 X	S-48	E	1500-1250-1000-0-1000-1250-1500 @ 500 mA	5 7/8x6 19/32x7 3/8"	31	49.50	42.08	39.60
54 D 2750 X	S-49	E	2100-1800-1500-0-1500-1800-2100 @ 300 mA	5 7/8x6 19/32x7 3/8"	31	46.80	39.78	37.44
54 D 2700 Z	S-50	E	3000-2500-0-2500-3000 @ 300 mA	10¼x7 3/8x9¼"	52	84.00	71.40	67.20

SINGLE-SECONDARY FILAMENT TRANSFORMERS (Primary 105/115 V, 50-60 Hz)

54 D 2708	S-58	E	2.5V CT @ 20A	3 3/4x3 1/8x4 1/2"	4½	14.70	12.50	11.76
54 D 2709	S-59	E	5V CT @ 13A	3 3/4x3 1/8x4 1/2"	4½	13.50	11.48	10.80
54 D 2710	S-60	E	5V CT @ 22A	4 5/8x4 5/8x5 1/2"	8	19.50	16.58	15.60
54 D 2712	S-62	E	10V CT @ 10A	3 3/4x3 1/8x4 1/2"	4½	13.50	11.48	10.80
54 D 2713	S-63	E	14, 12, 11V CT @ 10A single wdg, tapped	4 5/8x4 5/8x5 1/2"	8	16.80	14.28	13.44

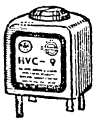
TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS (Primary, 115 V, 50-60 Hz)

54 D 2128	S-75	D	Two-6.3V @ .6A each	1 7/8x2 13/16x1 3/4"	1	7.80	6.63	6.24
54 D 2129	S-76	D	Two-12.6V @ 2.0A each	2 15/16x4 1/8x2 5/16"	3	10.80	9.18	8.64
54 D 2134	S-77	E	Two-17/21.5V @ 1.5A each Tapped	3 3/4x3 1/8x4 1/2"	4½	14.40	12.24	11.52
54 D 2317 X	S-78	E	Two-34/43V @ 4.5A each Primary	5 7/8x5 3/8x6 3/4"	21	36.00	30.60	28.80

Let Allied Fill All Your Transformer Needs At OEM Prices

UTC Transformers, Inductors and Toroids

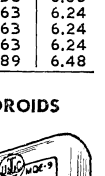
MIL-T-27B TYPES HVC AND TVC VARIABLE INDUCTORS



Hermetically sealed, provide a wide inductance range with a high Q in an extremely compact unit. Ideal for tuned circuits. Adjustable, —70% to +200% of mean inductance by 900° rotation. Usable over a wide frequency range. Highly stable with temperature and voltage change. TVC series has taps at 30% and 50% of total turns. Units have two 4-40 mtg. studs. Size: 1⅛x2 25/32x1 9/32". Wt., 2 oz.

Stock No.	Mfr's Type	Mean H	Max. mA	EACH 1-24	25-99	100-249
54 D 2114	HVC-1	.006	100	9.00	7.65	7.20
54 D 2115	HVC-2	.015	60	9.00	7.65	7.20
54 D 2116	HVC-3	.040	40	9.00	7.65	7.20
54 D 2117	HVC-4	.1	30	9.00	7.65	7.20
54 D 2118	HVC-5	.25	20	9.00	7.65	7.20
54 D 2119	HVC-6	.6	15	9.00	7.65	7.20
54 D 2121	HVC-7	1.5	10	9.60	8.16	7.68
54 D 2122	HVC-8	4.0	7	9.60	8.16	7.68
54 D 2123	HVC-9	10	5	9.60	8.16	7.68
54 D 2124	HVC-10	25	3.5	9.90	8.42	7.92
54 D 2131	HVC-11	60	2	10.80	9.18	8.64
54 D 2127	HVC-12	150	1.5	12.00	10.20	9.60
54 D 1330	TVC-1	.006	100	11.10	9.44	8.88
54 D 1331	TVC-2	.015	60	11.10	9.44	8.88
54 D 1332	TVC-3	.040	40	11.10	9.44	8.88
54 D 1333	TVC-4	.1	30	11.10	9.44	8.88
54 D 1334	TVC-5	.25	20	11.10	9.44	8.88
54 D 1335	TVC-6	.6	15	11.10	9.44	8.88
54 D 1336	TVC-7	1.5	10	11.70	9.95	9.36
54 D 1339	TVC-8	4	7	11.70	9.95	9.36
54 D 1338	TVC-9	10	5	11.70	9.95	9.36
54 D 1340	TVC-10	25	3.5	12.90	10.97	10.32
54 D 1342	TVC-12	150	1.5	15.30	13.01	12.24

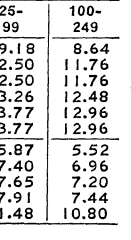
TYPE VIC VARIABLE INDUCTORS



Type VIC inductors offer a convenient approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, any inductance value of —45% to +85% from the mean value is obtained. Range is covered in 600° rotation with positive setting for precise values. Mounting centers on terminal board side are 1 3/16x2 9/32", and tapped for 4-40 screws. 1 11/32x1 1/4x1 7/16". Average shpg. wt., 5½ oz.

Stock No.	Mfr's Type	Mean H	Max. mA	EACH 1-24	25-99	100-249
54 D 2905	VIC-7	.13	25	6.90	5.87	5.52
54 D 2907	VIC-8	.21	21	7.20	6.12	5.76
54 D 2908	VIC-9	.34	18	7.20	6.12	5.76
54 D 2909	VIC-10	.54	15	7.20	6.12	5.76
54 D 2910	VIC-11	.85	12	7.20	6.12	5.76
54 D 2911	VIC-12	1.3	10	7.50	6.38	6.00
54 D 2912	VIC-13	2.2	8	7.50	6.38	6.00
54 D 2913	VIC-14	3.4	7	7.50	6.38	6.00
54 D 2914	VIC-15	5.4	6	7.80	6.63	6.24
54 D 2915	VIC-16	8.5	5	7.80	6.63	6.24
54 D 2916	VIC-17	13	4	7.80	6.63	6.24
54 D 2917	VIC-18	21	3.5	8.10	6.89	6.48

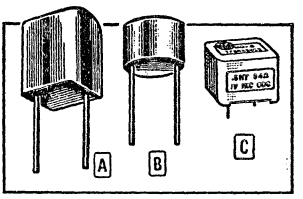
MIL-TF4RX20YY TYPE M PERMALLOY DUST TOROIDS



Hermetically sealed, meet MIL-T-27B specs. 1% tolerance. Type M toroids offer high voltage stability, maximum Q factor in their class, and miniature dimensions. Inductance is virtually independent of frequency, temperature or vibration. The DC currents shown will cause only a slight drop in coil inductance. Extremely low hum pickup. High permeability case affords additional shielding so close spacing of units is possible. Toroid sizes: Type MQA, 1 9/32x1 21/32x1 1/16"; Type MQB, 2 9/16x2 13/16x1 3/16"; Type MQE, 1 1/16x1 7/32x½". MQA, 4 oz.; MQB, 14 oz.; MQE, 1½ oz.

Stock No.	Mfr's Type	Induct-ance	Max. mA	EACH 1-24	25-99	100-249
54 D 2996	MQA-12	1 H	20	10.80	9.18	8.64
54 D 3383	MQB-1	10 mH	400	14.70	12.50	11.76
54 D 2956	MQB-4	120 mH	120	14.70	12.50	11.76
54 D 2957	MQB-5	.5 H	60	15.60	13.26	12.48
54 D 2958	MQB-6	1 H	40	16.20	13.77	12.96
54 D 2959	MQB-7	2 H	30	16.20	13.77	12.96
54 D 3393	MQE-0	4 mH	160	6.90	5.87	5.52
54 D 2978	MQE-9	.25 H	22	8.70	7.40	6.96
54 D 2979	MQE-10	.4 H	17	9.00	7.65	7.20
54 D 2981	MQE-12	.9 H	12	9.30	7.91	7.44
54 D 3397	MQE-16	4 H	5	13.50	11.48	10.80

MINIDUCTORS



A ML Series, Sealed in Hipermalloy Case

B MM, MH, MW Series. Symmetrical Toroids

C MO Series. Has Low Inductance Variation

For transistor and printed circuit, as well as vacuum tube designs. Hermetically sealed. Provide high Q in miniature form. Low hum pickup. Stable over a temperature range of from —55° C +100° C. The ML-5 thru 10 and the MO-2 thru 100 are for lower frequencies. The MM and the MW series are for medium frequencies. The MH series are for high frequencies. Miniductors meets specs of MIL-T-27B. MH, MM cases are 23/32" dia. x ¼" high; actual wt., 07. oz. MW cases are 23/32" dia. x ¼" high; actual wt., .25 oz. ML cases are 7/16x 31/64x9/16" high; actual wt., 2 oz. MO cases are ¾x1 1/16"x1 3/16" high; actual wt., 1 oz.

Stock No.	Mfr's Type	Induct-ance (0 DC)	DC mA Max.	EACH 1-24	25-99	100-249
54 D 1385	MH-1	.6 mH	90.0	8.10	6.89	6.48
54 D 1386	MH-2	1.5 mH	57.0	8.10	6.89	6.48
54 D 1387	MH-3	2.5 mH	44.0	8.40	7.14	6.72
54 D 1388	MH-4	6 mH	28	8.40	7.14	6.72
54 D 1389	MH-5	10.0 mH	22.0	8.70	7.40	6.96
54 D 1390	MH-6	15 mH	18	8.70	7.40	6.96
54 D 1391	MH-7	25 mH	14	9.00	7.65	7.20
54 D 1392	MH-8	40.0 mH	11.0	9.00	7.65	7.20
54 D 1377	MM-1	3 mH	50	7.50	6.38	6.00
54 D 1378	MM-2	5.0 mH	40.0	7.50	6.38	6.00
54 D 1379	MM-3	8.0 mH	30.0	7.80	6.63	6.24
54 D 1380	MM-4	12.5 mH	25	7.80	6.63	6.24
54 D 1381	MM-5	20.0 mH	20.0	8.10	6.89	6.48
54 D 1382	MM-6	30.0 mH	16.0	8.10	6.89	6.48
54 D 1383	MM-7	60.0 mH	11.0	8.40	7.14	6.72
54 D 1384	MM-8	120.0 mH	8.0	8.40	7.14	6.72
54 D 4189	MW-.10	.10 H	18	7.50	6.38	6.00
54 D 4116	MW-.25	.25 H	11	7.50	6.38	6.00
54 D 4107	MW-.5	.5 H	8	7.80	6.63	6.24
54 D 4109	MW-1	1.0 H	6	8.70	7.40	6.96
54 D 4110	MW-1.2	1.2 H	5	9.30	7.91	7.44
54 D 4111	MW-2	2 H	4	10.80	9.18	8.64
54 D 4112	MW-3	3 H	3.5	11.70	9.95	9.36
54 D 4113	MW-5	5 H	3	13.50	11.48	10.80
54 D 4117	ML-0	.15 H	12	8.40	7.14	6.72
54 D 1347	ML-1	.25 H	9.0	8.40	7.14	6.72
54 D 1348	ML-2	.4 H	7.0	8.40	7.14	6.72
54 D 1349	ML-3	.7 H	5.0	8.40	7.14	6.72
54 D 1370	ML-4	1.4 H	3.0	8.40	7.14	6.72
54 D 1371	ML-5	2.5 H	1.0	8.40	7.14	6.72
54 D 1372	ML-6	4.0 H	.7	8.40	7.14	6.72
54 D 1373	ML-7	6.0 H	.6	8.40	7.14	6.72
54 D 1374	ML-8	10.0 H	.5	8.40	7.14	6.72
54 D 1375	ML-9	25.0 H	.3	8.70	7.40	6.96
54 D 1376	ML-10	60.0 H	.2	9.90	8.42	7.92
54 D 4087	MO-.15	.15 H	45	9.30	7.91	7.44
54 D 4095	MO-.5	.5 H	23	9.30	7.91	7.44
54 D 4100	MO-1	1 H	16	9.30	7.91	7.44
54 D 4101	MO-2	2 H	8	9.60	8.16	7.68
54 D 4102	MO-5	5 H	5	9.60	8.16	7.68
54 D 4104	MO-20	20 H	2.7	9.60	8.16	7.68
54 D 4106	MO-100	100 H	1.1	9.90	8.42	7.92

FILAMENT AND TRANSISTOR TRANSFORMERS

Industrial-type transformer (primary 117 volts, 60 Hz) with demonstrated reliability in a wide variety of uses. All transformers listed below are low-temperature-rise, vacuum-sealed. *Transistor types with taps on primary to modify secondary nominal voltage from —6%, to +6%, or +12%. Av. shpg. wt., 2 lbs.

Stock No.	Mfr's Type	Secondary VCT@Amps		Size H x W x D	EACH 1-24	25-99	100-249
54 D 4124	FT-2	6.3	1.2	1 11/16x2 7/8x1 5/8"	4.80	4.08	3.84
54 D 4125	FT-4	6.3	3	2x3 5/16x1 7/8"	5.40	4.59	4.32
54 D 4128	FT-8	6.3	8	2 5/8x4x2½"	6.90	5.87	5.52
54 D 4129	FT-10	24/12	2/4	2 11/16x4x2 5/8"	7.80	6.63	6.24
54 D 4130	*FT-13	26	.04	1¼x2 1/8x1 3/8"	6.60	5.61	5.28
54 D 4131	*FT-14	26	.25	1 11/16x2 7/8x1 5/8"	6.00	5.10	4.80
54 D 4126	*FT-15	48	1	2 5/8x4x2½"	8.70	7.40	6.96
54 D 4127	*FT-16	11/5.5	2.5/5	2 5/16x3¾x2 1/8"	8.40	7.14	6.72

UTC Filters, Inductors and Transformers

DO-T TRANSISTOR TRANSFORMERS AND INDUCTORS

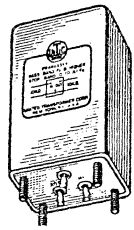
Subminiature transistor transformers and inductors. 5/16" diameter x 13/32" high. Units are rugged, fully hermetically sealed. Exceed MIL-T-27B, Grade 4. Exceptional reliability made possible by unique structure. The coil wire and external leads are rigidly anchored in terminal-board fashion; use no tapes—they are brought out through a strain relief. Turns are circular to eliminate turn corner stress, and provide uniform wire lay. Bobbin of units is completely rigid to eliminate stress and wire movement. 1½" leads are solder-melting plastic, insulated solid copper. Actual wt., 1/10 oz. Shpg. wt., 1 oz.

Stock No.	Mfr's Type DO-	Application	Primary Ohms	Secondary Ohms	EACH 1-24	25-99	100-249
54 D 2686	T1	Interstage	20K-30K	800-1200	6.00	5.10	4.80
54 D 2687	T2	Output	500-600	50-60	5.40	4.59	4.32
54 D 2688	T3	Output	1K-1.2K	50-60	5.40	4.59	4.32
54 D 2689	T4	Output	600	3.2	5.40	4.59	4.32
54 D 2690	T5	Output	1.2K	3.2	5.40	4.59	4.32
54 D 2691	T6	Output	10K	3.2	6.00	5.10	4.80
54 D 2692	T7	Input	200K	1K	9.30	7.91	7.44
54 D 2693	T8	Inductor 3.5 H @ 2 ma DC			4.80	4.08	3.84
54 D 2694	T9	Out. or Driver	10K-12K	500-600 CT	6.60	5.61	5.28
54 D 2695	T10	Driver	10K-12.5K	1.2K-1.5K CT	6.60	5.61	5.28
54 D 2696	T11	Driver	10K-12.5K	2K-2.5K CT	6.60	5.61	5.28
54 D 2697	T12	S/PP Output	150-200 CT	12-16	5.70	4.85	4.56
54 D 2698	T13	S/PP Output	300-400 CT	12-16	5.70	4.85	4.56
54 D 2706	T14	S/PP Output	600-800	12-16	6.00	5.10	4.80
54 D 2876	T15	S/PP Output	800-1070 CT	12-16	6.00	5.10	4.80
54 D 2877	T16	S/PP Output	1K-1.33K CT	12-16	6.00	5.10	4.80
54 D 2878	T17	S/PP Output	1.5K-2K CT	12-16	6.00	5.10	4.80
54 D 3087	T18	S/PP Output	7.5K-10K CT	12-16	6.30	5.36	5.04
54 D 3088	T19	Output to line	300 CT	600	6.00	5.10	4.80
54 D 3089	T20	Out. or Match to line	500 CT	600	6.00	5.10	4.80
54 D 1788	T21	Output to line	900 CT	600	6.00	5.10	4.80
54 D 3091	T22	Output to line	1.5K CT	600	6.00	5.10	4.80
54 D 3092	T23	Interstage	20K-30K CT	800-1.2K CT	6.90	5.87	5.52
54 D 3093	T24	Input	200K CT	1K CT	9.90	8.42	7.92
54 D 3094	T25	Interstage	10K-12K CT	1.5K-1.8K CT	7.20	6.12	5.76
54 D 3095	T26	Inductor 6 H @ 2 mA DC			5.70	4.85	4.56
54 D 3096	T27	Inductor 1.25 H @ 2 mA DC			4.80	4.08	3.84
54 D 1752	T28	Inductor .3 H @ 4 mA DC			4.80	4.08	3.84
54 D 1754	T30	Single/PP Output	320-400 CT	3.2-4	5.70	4.85	4.56
54 D 1755	T31	Single/PP Output	640-800 CT	3.2-4	6.00	5.10	4.80
54 D 1757	T33	Single/PP Output	1.06K-1.33K CT	3.2-4	6.00	5.10	4.80
54 D 1758	T34	Single/PP Output	1.6K-2K CT	3.2-4	6.00	5.10	4.80
54 D 1760	T36	Isol. or Interstage	10K-12K CT	10K-12K CT	7.50	6.38	6.00
54 D 3284	T37	Interstage	2K-2.5K split	8K-10K split	7.80	6.63	6.24
54 D 3293	T38	Interstage	10K-12K CT	K-2.4K split	7.80	6.63	6.24
54 D 3294	T39	Interstage	20K-30K CT	1K-1.5K split	7.80	6.63	6.24
54 D 3295	T40	Interstage	40K-50K CT	400-500 split	8.40	7.14	6.72
54 D 3296	T41	Output	400-500 CT	400-500 split	7.50	6.38	6.00
54 D 3298	T43	Interstage	400-500 CT	40-50 split	7.50	6.38	6.00
54 D 3299	T44	Interstage	80-100 CT	32-40 split	7.50	6.38	6.00
54 D 1648	T45	Interstage	1K-1.25K CT	16K-20K split	7.80	6.63	6.24
54 D 1649	T46	Input	100K CT	500 CT	9.60	8.16	7.68
54 D 4044	T47	Isol. or Interstage	9K-10K CT	9K-10K CT	8.10	6.89	6.48
54 D 3124	T50	Ser. .075 H @ 10 mA par., .018 H @		20 mA	5.70	4.85	4.56
54 D 3185	T51	Interstage	2K-2.5K CT	2K-2.5K CT	7.80	6.63	6.24
54 D 3125	T52	Interstage	4K-5K CT	8K-10K CT	7.80	6.63	6.24
54 D 1326	T53	Input	400-500 CT	4K-5K CT	7.80	6.63	6.24
54 D 1327	T54	Interstage	40K-50K CT	4K-5K CT	8.70	7.40	6.96
54 D 3134	T400	Pri., 28V 380-1000 Hz; Sec., 6.3 V @ 60 mA			6.60	5.61	5.28
54 D 3188	T410	Pri., 28 V 380-1000 Hz; 2 sec., ea. 6.3 V 30 mA			7.80	6.63	6.24
54 D 3189	T420	Isol.—pri. and sec., 28 V, 380-1000 Hz., 10 mA			7.80	6.63	6.24
54 D 3097	TSH	Hipermalloy shield and cover for any DO-T units			.90	.77	.72

DO-T200 SERIES TRANSISTOR TRANSFORMERS

Series DO-T200 are hermetically sealed miniature transistor transformers, metal encased, 11/32" diameter x 9/16" high. Meet MIL-T-27B, Grade 4. Uninsulated leads, 7/8" long .016 Dumet wire, gold plated; may be welded or soldered. Lead pattern and spacing on .1" radius conform to TO-5 cased semiconductors and micrologic elements. Actual wt. 1/8 oz. Shpg. wt., 1 oz.

Stock No.	Mfr's Type DO-	Application	Primary Ohms	Secondary Ohms	EACH 1-24	25-99	100-249
54 D 3200	T255	Output	1K-1.2K CT	50-60	6.90	5.87	5.52
54 D 3201	T275	Interstage	10K-12K CT	1.5K-1.8K CT	7.80	6.63	6.24
54 D 3202	T277	Interstage	10K-12K CT	2K-2.4K Split	8.70	7.40	6.96
54 D 3203	T278	Driver	10K-12.5K	2K-2.5K CT	8.70	7.40	6.96
54 D 3204	T283	Isol. or Interstage	10K-12K CT	10K-12K CT	8.70	7.40	6.96
54 D 3205	T288	Interstage	20K-30K CT	800-1.2K CT	8.70	7.40	6.96
54 D 3206	T297	Input and Chopper	200K CT	1K CT	10.80	9.18	8.64
54 D 3207	T200SH	Hipermalloy shield and cover for DO-T200			.75	.64	.60

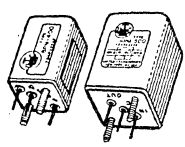


INTERSTAGE AND LINE FILTERS

Quality filters for midrange frequency filter requirements. Suffix in Mfr's Type indicates cut-off frequency. BMI units have source and load impedance of 10K. BML units have source and load impedance of 500/600 ohms, gain of 9. HMI filters are high-pass interstage units with source and load of 10K. HML filters are for use with source and load impedance of 500/600 ohms. BMI, BML units are sharply peaked, 2 dB down ±3% from center frequency, and down 40 db per octave. Cases sealed to meet MIL-F-18327B specifications. Av. shpg. wt., 9 oz.

Stock No.	Mfr's Type	Imp. (Ohms)	Size (Inches)	EACH 1-24	25-99	100-249
54 D 3048	BMI-60	10K	1⅝x1 1/16x1 3/16	30.00	25.50	24.00
54 D 3059	BMI-400	10K	1⅝x1 1/16x1 3/16	30.00	25.50	24.00
54 D 3064	BMI-1000	10K	1⅝x1 1/16x1 3/16	30.00	25.50	24.00
54 D 3079	LMI-100	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3081	LMI-400	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3082	LMI-500	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3083	LMI-800	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3102	LMI-2000	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3101	LMI-3000	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3104	LMI-10000	10K	1⅝x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3119	HMI-200	10K	2½x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3127	BML-400	500/600	1⅝x1 1/16x1 3/16	30.00	25.50	24.00
54 D 3130	HML-300	500/600	2½x1 1/16x1 3/16	39.00	33.15	31.20
54 D 4066	LML-3000	500/600	2½x1 1/16x1 3/16	31.50	26.78	25.20
54 D 3145	LML-8000	500/600	2½x1 1/16x1 3/16	31.50	26.78	25.20

INTERSTAGE MINIFILTERS

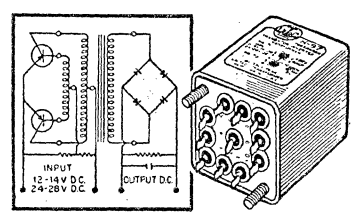


BPM HPM, LPM

Compact, hermetically-sealed interstage filters. Cases meet MIL-F-18327B specifications. Cutoff frequency indicated by digits in Manufacturer's Type number. All input and output impedances are 10K. BPM bandpass filters have 2:1 gain. Attenuation is approximately 2 dB ±3% from center frequency, down 35 dB per octave. For tube circuits, continuity is on grid side and input is DC blocking. For transistor use units may be reversed so that continuity is on input side and output is DC blocking. HPM high-pass filters are down less than 6 dB at cutoff frequency, more than 30 dB at 0.67 cutoff frequency. 40 dB at 0.6 cutoff frequency. LPM low-pass filters are down less than 6 dB at cutoff frequency, over 30 dB at 1.5 cutoff frequency, 40 dB at 1.65 cutoff frequency. Av. shpg. wt., 6 oz.

Stock No.	Mfr's Type	Size (Inches)	EACH 1-24	25-99	100-249
54 D 3225	BPM-1000	1⅛x¾x¾	27.00	22.95	21.60
54 D 3933	BPM-8000	1⅛x¾x¾	27.00	22.95	21.60
54 D 3105	HPM-500	1⅜x1x1	30.00	25.50	24.00
54 D 3252	HPM-1000	1⅜x1x1	30.00	25.50	24.00
54 D 3253	LPM-200	1⅜x1x1	30.00	25.50	24.00
54 D 3254	LPM-500	1⅜x1x1	30.00	25.50	24.00
54 D 3255	LPM-1000	1⅜x1x1	30.00	25.50	24.00
54 D 3263	LPM-2000	1⅜x1x1	30.00	25.50	24.00
54 D 3264	LPM-3000	1⅜x1x1	30.00	25.50	24.00
54 D 3266	LPM-5000	1⅜x1x1	30.00	25.50	24.00
54 D 4074	LPM-10000	1⅛x¾x¾	30.00	25.50	24.00

TRANSISTOR INVERTER TRANSFORMERS

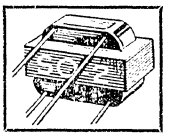


Hermetically sealed to MIL-T-27B. New winding/coupling method greatly reduces transistory peaks—protects driving transistors. DC output shown for 12/14 or 24/48 V battery. Current ratings same with 6/7 V battery but output V is halved. Optimum results at 1000 Hz. Av. wt., 1½ oz.

Stock No.	Mfr's Type	DC Output V	DC Output mA	Size (Inches)	EACH 1-24	25-99	100-249
54 D 3934	H-97	250	60	1 5/16x1 5/16x1¾	16.50	14.03	13.20
54 D 3935	H-98	375	100	1⅝x1 5/8x2⅜	18.00	15.30	14.40
54 D 3936	H-99	425	175	2 5/16x2 1/16x3⅛	24.30	20.66	19.44
54 D 3937	H-100	550	200	2¾x2⅜x2 13/16	23.70	20.15	18.96

UTC Miniature and Isolation Transformers

SUBOUNCER AND SUB-SUBOUNCER TRANSFORMERS



Tiny, lightweight, fixed-impedance-ratio transformers. Subouncers (SO) weigh less than ½ oz.; sub-subouncers (SSO), less than ⅓ oz. Mount with securely anchored 4" color-coded leads or with channels, listed below. Vacuum-processed and double-sealed (waterproof). Pri. windings of SO-11 through SO-16 are center-tapped; sec. windings are split. *Both windings are center-tapped; †both windings are split. SO-1 has max. dBm level of +10; SO-2, +20; SO-3 through SO-8, +23; SO-10 through SO-16, +24; SSO-1 and SSO-21, +7; SSO-2, +15; all others, +20. Size of Type SO, 19/32x23/32x7/8"; Type SSO, 7/16x3/4x43/64". Av. shpg. wt., 2 oz.

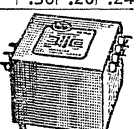
SUBOUNCER UNITS

Stock No.	Mfr's Type	Use (T.=Transistor)	Primary Imped. Ohms	Sec. Imped. Ohms	EACH 1-24	25-99	100-249
54 D 2210	SO-1	Input	200, 50	250K, 62.5K	4.20	3.57	3.36
54 D 2211	SO-2	Interstage	10K	90K	3.90	3.32	3.12
54 D 2212	SO-3	Pl. to line	10K, 25K	200, 500	3.90	3.32	3.12
54 D 2217	SO-8	Transistor to PP sec.	10K	2000 CT	3.60	3.06	2.88
54 D 2497	SO-10	Transistor to VC	2000 CT 4000 CT	8 16	3.60	3.06	2.88
54 D 1773	SO-11	T. Interstage	400, 500	400, 500	4.20	3.57	3.36
54 D 1774	SO-12	T. Interstage	400, 500	120, 150	4.20	3.57	3.36
54 D 3324	SO-15	T. Output	600	600	4.20	3.57	3.36
54 D 3325	SO-16	T. Interstage	2500	2500	4.20	3.57	3.36
54 D 2301	SO-CH	Mtg. channel for SO units			.30	.26	.24

SUB-SUBOUNCER UNITS

54 D 2236	SSO-1	Input	200, 50	250K 62.5K	4.95	4.21	3.96
54 D 2237	SSO-2	Interstage	10K	90K	4.95	4.21	3.96
54 D 2235	SSO-7	T. Interstage	20K, 30K	800, 1200	3.90	3.32	3.12
54 D 2229	SSO-8	T. to PP sec.	10K	2000 CT	4.20	3.57	3.36
54 D 2303	SSO-11	T. Output	500, 600	50, 60	3.60	3.06	2.88
54 D 2498	SSO-14	T. Interstage	10K CT 25K CT	200 CT 500 CT	4.50	3.83	3.60
54 D 1780	SSO-19	Out. Matching	500 CT	600 CT	3.60	3.06	2.88
54 D 1781	SSO-20	Output	1500 CT	600 CT	3.60	3.06	2.88
54 D 1782	SSO-21	Crystal/Chop.	200K CT	1000 CT	4.95	4.21	3.96
54 D 1784	SSO-23	Inductor: 8 H @ 2 mA; 4 H @ 5 mA; 650 ohms			3.00	2.55	2.40
54 D 1787	SSO-26	T. Interstage	40K, 50K*	400, 500†	5.10	4.34	4.08
54 D 2304	SSO-CH	Mtg. Channel for SSO units			.30	.26	.24

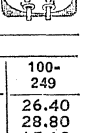
POWER-LINE ISOLATION TRANSFORMERS



Ultrashielded—provide maximum isolation for critical circuits. Coupling less than 0.10 pF. MIL type TF4RX01YY—meet MIL-T-27B specifications. Primary, 115V 50-60 Hz; secondary, 115 V. *Industrial rating.

Stock No.	Mfr's Type	Watts *	Size H x W x D	Wt., Lbs.	EACH 1-24	25-99	100-249
54 D 3365	HIT-1	60	4 1/32x4 1/32x3 1/32"	5 1/2	45.00	38.25	36.00
54 D 3366	HIT-15	150	5 11/32x5x3 1/2"	13	59.40	50.49	47.52
54 D 3367	HIT-2	200	5 17/32x5 17/32x4 17/32"	15 1/2	61.20	52.02	48.96
54 D 3368 X	HIT-3	480	8x6 17/32x5 17/32"	35	93.90	79.82	75.12

MQL, MQM LOW-FREQUENCY HIGH-Q COILS



Hermetically sealed to MIL-T-27B. Ideal when permalloy dust toroids are unsuitable. 2% tol. at 1 V, 60 Hz. Hipermalloy shielding greatly reduces hum pickup. Two like windings and 4 terminals permit series, parallel, center-tap, or trans.-type connections. MQL: 1 13/16x 2 1/2", wt., 16 oz.; MQM: 1 5/16x1 5/8", wt., 5 oz.

Stock No.	Mfr's Type	Series H	Parallel H	EACH 1-24	25-99	100-249
54 D 2898	MQL-3	200	50	33.00	28.05	26.40
54 D 3399	MQL-5	2500	625	36.00	30.60	28.80
54 D 4403	MQM-16	16	4	18.90	16.07	15.12
54 D 4404	MQM-40	40	10	18.90	16.07	15.12
54 D 4405	MQM-300	300	75	19.80	16.83	15.84
54 D 4406	MQM-600	600	150	19.80	16.83	15.84

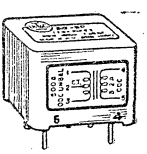
ALLIED CAN FURNISH THE ENTIRE LINE OF UTC TRANSFORMERS AND INDUCTORS. CONTACT ALLIED FOR FULL INFORMATION AND OEM PRICES ON ITEMS NOT LISTED.

OUNCER AUDIO UNITS

Compact, weigh just 1 ounce. Aluminum housing 1 3/16" high, 7/8" dia. Ideal for hearing aids, aircraft, concealed service. 0-1 thru 0-16 have max. dBm level of +8; 0-18 thru 0-21 and 0-26 thru 0-29, +20; 0-25, +15. *In table below indicates 1 watt at 200 Hz. "S" indicates split winding. Current ratings are DC. 1 1/16" mounting centers. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Primary Impedance Ohms	Secondary Imped. Ohms	EACH 1-24	25-99	100-249
54 D 2780	0-1	50, 200-250, 500-600	50K	7.80	6.63	6.24
54 D 2781	0-2	50, 200-250, 500-600	50K CT	7.80	6.63	6.24
54 D 2782	0-3	7.5-30	50K	7.50	6.38	6.00
54 D 2783	0-4	15K	60K	6.60	5.61	5.28
54 D 2785	0-6	15K	95K CT	7.50	6.38	6.00
54 D 2786	0-7	15K; 4 mA	95K CT	7.50	6.38	6.00
54 D 2787	0-8	15K	50,	7.80	6.63	6.24
54 D 2788	0-9	15K; 4 mA	200-250,	7.80	6.63	6.24
54 D 2789	0-10	30K CT	500-600	8.40	7.14	6.72
54 D 2790	0-12	50, 200-250		7.80	6.63	6.24
54 D 2792	0-13	50 H @ 3 mA DC	6000	6.30	5.36	5.04
54 D 2791	0-14	200	500K	7.50	6.38	6.00
54 D 2268	0-15	15K	1 meg	7.50	6.38	6.00
54 D 2794	0-16	250 CT	50K	10.20	8.67	8.16
54 D 2493	0-18	10K-2.5K S; 4 mA	2K-500	7.80	6.63	6.24
54 D 2494	0-19	10K-2.5K S; 4 mA	4K-1K S	7.80	6.63	6.24
54 D 2495	0-20	1500 CT; 8 mA	500-125	6.30	5.36	5.04
54 D 2793	0-22	400 CT/500 CT; 20 mA	3.2/4	5.40	4.59	4.32
54 D 1764	0-25	600-500 S	2000-500 S	8.10	6.89	6.48
54 D 1765	0-26	10K CT; 4 mA	100-20K	8.10	6.89	6.48
54 D 1766	0-27	10K CT; 4 mA	500-125 S	8.40	7.14	6.72
54 D 1769	0-30*	500-125 S; 20 mA	500-125 S	8.10	6.89	6.48
54 D 3497	0-37*	4K/1K S; 4 mA	600/150 S	8.10	6.89	6.48
54 D 2492	0-17	Mumetal Shield; for any Ouncer unit		1.50	1.28	1.20
54 D 3581	0-BR	Ouncer Chassis Mounting Bracket		.39	.33	.31

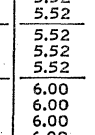
MOLDED-CASE SUBOUNCERS AND SUB-SUBOUNCERS



Vacuum molded and hermetically sealed. For use in a wide variety of miniature audio circuits. Meet specifications of MIL-T-27B Grade 5. Epoxy encased, with same design as Subouncers and Sub-Subouncers. Pin terminals are 1/4"x.04" diameter. *In table below indicates split windings. Mfr's type SO-15P has maximum dBm level of +24; all others, +20. SO-P Series, 3/4x 1x23/32" high. SSO-P Series, 3/4x7/8x9/16" high. Av. shpg. wt., 1/2 oz.

Stock No.	Mfr's Type	Use	Primary Imped. Ohms	Sec. Imped. Ohms	EACH 1-24	25-99	100-249
54 D 3360	SO-15P	T. Output	600CT	600*	7.80	6.63	6.24
54 D 3378	SSO-8P	T. to PP Sec.	10K	2000CT	7.80	6.63	6.24
54 D 3446	SSO-14P	T. Interstage	10K, 25K CT	200, 500CT	7.95	6.76	6.36
54 D 3465	SSO-15P	T. Interstage	20K, 30K CT	800, 1200CT	7.95	6.76	6.36
54 D 3483	SSO-20P	Output	1500CT	600CT	7.20	6.12	5.76
54 D 3495	SSO-25P	T. Interstage	10K CT	10K/ 2500*	8.10	6.89	6.48
54 D 3490	SSO-27P	Tr.Out or Dr	4K CT	600 split	8.10	6.89	6.48

MINIATURE PULSE TRANSFORMERS VACUUM TUBE TYPE



For wide use in all types of vacuum tube circuits. Meet specifications of MIL-T-21038B. —70°C to +130° C. Width at 50% amplitude. Rise time, 10% to 90% of max. amplitude. *Blocking osc. and coupling characteristics. Sizes: 45, 3/8x3/8"; 47-52, 9/16x9/16"; 54-57, 5/8x5/8". Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Width (μs)*	Rise Time (μs)	Volts Out	EACH 1-24	25-99	100-249
54 D 1719	H-45	.05	.01	17	7.80	6.63	6.24
54 D 1721	H-47	.20	.01	18	6.90	5.87	5.52
54 D 1722	H-48	.50	.01	20	6.90	5.87	5.52
54 D 1723	H-49	1.0	.02	24	6.90	5.87	5.52
54 D 1724	H-50	2	.05	27	6.90	5.87	5.52
54 D 1725	H-51	3	.07	26	6.90	5.87	5.52
54 D 1726	H-52	5	.15	23	6.90	5.87	5.52
54 D 1727	H-54	10	.25	24	7.50	6.38	6.00
54 D 1346	H-55	16	.40	23	7.50	6.38	6.00
54 D 3265	H-56	20	.6	23	7.50	6.38	6.00
54 D 1728	H-57	25	1.50	24	7.50	6.38	6.00

Chokes, Inductors, Toroids and Transformers

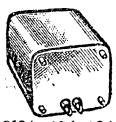
UTC TRANSFORMERS AND INDUCTORS

DI-T TRANSISTOR TRANSFORMERS AND INDUCTORS

Subminiature transistor transformers and inductors. Provide excellent power-handling capacity and reliability, plus extremely small size. Ruggedly constructed, fully hermetically sealed and metal cased, exceeding MIL-T-27B, Grade 4 specifications. Bobbin of units is completely rigid to eliminate stress and wire movement. Turns are circular. Coil wire and leads are rigidly anchored terminal-board fashion and brought out through a strain relief. 1½" solder-melting-plastic insulated solid-copper leads. Size, 5/16x1¼". Actual wt., 1/15 oz. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type DI-	Applicaton	Primary Ohms	Secondary Ohms	EACH 1-24	25-99	100-249
54 D 3136	T1	Interstage	20K-30K	800-1200	6.00	5.10	4.80
54 D 3108	T8	Inductor 2.5 H @ 2 mA DC			4.80	4.08	3.84
54 D 3109	T9	Output or Driver	10K-12K	500-600 CT	6.60	5.61	5.28
54 D 3111	T11	Driver	10K-12.5K	2K-2.5K CT	6.60	5.61	5.28
54 D 3141	T20	Output or line to line	500 CT	600	6.00	5.10	4.80
54 D 1746	T25	Interstage	10K-12K CT	1.5K-1.8K CT	7.20	6.12	5.76
54 D 1747	T26	Inductor 4:5 H @ 2 mA DC			5.70	4.85	4.56
54 D 1748	T27	Inductor .9 H @ 2 mA DC			4.80	4.08	3.84
54 D 1750	T36	Isol. or Interstage	10K-12K CT	10K-12K CT	7.50	6.38	6.00
54 D 1651	T37	Isol. or Interstage	2K-2.5K CT	8K-10K split	7.80	6.63	6.24
54 D 3242	T51	Interstage	2K-2.5K CT	2K-2.5K split	7.80	6.63	6.24
54 D 3157	T52	Interstage	4K-5K CT	8K-10K CT	7.80	6.63	6.24
54 D 1328	T53	Input	400-500 CT	4K-5K CT	7.80	6.63	6.24
54 D 1751	TSH	Hipermalloy shield and cover for DI-T units			.90	.77	.72

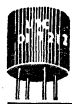
MIL-T-27B HERMETICALLY SEALED FILTER INDUCTORS



All are hermetically sealed for highest reliability. Type H-170 has two windings, is designed for transistor applications. Inductance values shown in table are given for maximum military current ratings. Type H-72 is rated at 2500 volts rms; H-70 and H-170, 1000 volts. Stainless steel mounting studs. Sizes (HxWxD"): H-70, 1¾x1 5/16x1 5/16"; H-72, 2 13/16x2¾x2⅜"; H-170, 2 13/16x2¾x2⅜". *Millihenrys. Shpg. wt.: H-72, ⅜ lb.; H-70 and H-170, 2½ lbs.

Stock No.	Mfr's Type	Ind. H	DC mA	DC Ohms	EACH 1-24	25-99	100-249
54 D 1729	H-70	10.0	35	925	9.00	7.65	7.20
54 D 1731	H-72	7.0	125	215	12.60	10.71	10.08
54 D 3941	H-170	*140, 35	250, 500	.6, .15	13.20	11.22	10.56

DI-T200 TRANSISTOR TRANSFORMERS



Similar in construction to DI-T series (left), but with leads of uninsulated, gold-plated .017D Dumet wire. Leads are spaced on 1/10" radius circle. Hermetically sealed, metal cased to meet MIL-T-27B Grade 4 Class R (105° max.). 5/16" x ⅜". Actual wt., 1/15 oz. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type DI-	Application	Primary Ohms	Secondary Ohms	EACH 1-24	25-99	100-249
54 D 3174	T208	Series .5 H @ 6 mA, Par. .1 H @ 12 mA			6.00	5.10	4.80
54 D 3175	T212	Series .9 H @ 4 mA, Par. .2 H @ 8 mA			6.00	5.10	4.80
54 D 3163	T240	Interstage	400-500 CT	400-500 split	8.40	7.14	6.72
54 D 3165	T245	Output	500-600 CT	50-60 CT	6.90	5.87	5.52
54 D 3166	T250	Output	500 CT	600 CT	7.20	6.12	5.76
54 D 4012	T255	Output	1K-1.2K CT	50-60 CT	6.90	5.87	5.52
54 D 4014	T260	Output to Line	1.5K CT	600 CT	7.20	6.12	5.76
54 D 4016	T265	Isol. or Interstage	2K-2.5K CT	8K-10K split	8.70	7.40	6.96
54 D 4017	T270	Output or Driver	10K-12K CT	500-600 CT	7.80	6.63	6.24
54 D 3170	T273	Output	10K-12.5K CT	1.2K-1.5K CT	7.80	6.63	6.24
54 D 4019	T276	Interstage	10K-12K CT	2K-2.4K CT	7.80	6.63	6.24
54 D 4032	T283	Isol. or Interstage	10K-12K CT	10K-12K CT	8.40	7.14	6.72
54 D 3172	T288	Interstage	20K-30K CT	800-1.2K CT	8.10	6.89	6.48
54 D 3177	T200 SH	Hipermalloy shield and cover for DI-T200			.75	.64	.60

TYPE PIP SUBMINIATURE PULSE TRANSFORMERS

Same physical design and reliability as UTC DO-T and DI-T transformers. Metal-cased and hermetically sealed to MIL-T-21038B. Types 1 through 9 are MIL type TP6-RX-4410CZ and have a 4:4.1 ratio. Types 11 and 12 are MIL type TP6RK-5310CZ and have a 5:3.1 ratio. 5/16Dx3/16"H. Actual wt., 1/20 oz. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Width (μs)	Rise Time (μs)	Volts Out	Imp. In, Out, (Ohms)	EACH 1-24	25-99	100-249
54 D 1654	PIP-1	.05	.02	9	50	6.00	5.10	4.80
54 D 1664	PIP-2	.1	.025	8	50	6.00	5.10	4.80
54 D 1656	PIP-3	.2	.030	7	100	6.00	5.10	4.80
54 D 1657	PIP-4	.5	.05	7	100	6.00	5.10	4.80
54 D 1658	PIP-5	1	.08	6.8	100	6.00	5.10	4.80
54 D 1659	PIP-6	2	.10	6.6	100	6.00	5.10	4.80
54 D 1660	PIP-7	3	.20	6.8	100	6.00	5.10	4.80
54 D 1661	PIP-8	5	.30	7.9	200	6.00	5.10	4.80
54 D 1662	PIP-9	10	.35	6.5	200	6.00	5.10	4.80
54 D 4120	PIP-11	1	.02	6.6	280/100	6.00	5.10	4.80
54 D 4121	PIP-12	5	.05	8	560/200	6.00	5.10	4.80
54 D 2126	PIPSH	Hipermalloy Shield and Cover				.90	.77	.72

NYTRONICS ADJUSTOROID MINIATURE VARIABLE TOROIDS

For printed-circuit and similar applications. Very high-Q, continuously adjustable, inherently shielded. Hermetically sealed to meet MIL-C-15305A. No physical contact between adjusting screw and winding. Adjustment range not less than ±5% of nom. inductance. Min. Q and f_o not less than 80% of specified values at nom. ind. Size: ATE-11, ¾" dia. x 13/16"; ATE-O, 1 1/16" dia. x 1"; ATE-4, 1 5/16" dia. x 13/16". Two mtg. studs except ATE-11, one. Wt., ATE-11, 0.83 oz.; ATE-O, 2 oz.; ATE-4, 4 oz.

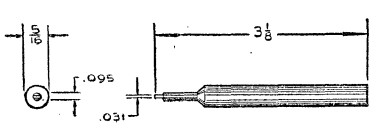
Henry Range	EACH 1-24	25-49	50-99	100-249	250-499	500-999
0.010 to 0.068	14.00	12.75	9.50	7.35	5.40	4.75
0.082 to 0.180	15.67	14.25	10.88	8.19	5.90	5.14
0.220 to 1.500	18.45	16.77	12.80	9.66	7.02	6.14
1.800 to 3.300	19.88	18.08	13.78	10.43	7.63	6.59
3.900 to 6.800	20.62	18.75	14.31	10.85	7.97	6.89
8.200 to 12.000	23.50	21.38	16.31	12.35	9.05	7.89

Stock No.	Mfr's Type	Ind. H	Q	Freq. (kHz)
54 D 0804	ATE-11-0.010	.010	75	15
54 D 0805	ATE-11-0.012	.012	75	15
54 D 0806	ATE-11-0.015	.015	75	15
54 D 0807	ATE-11-0.018	.018	75	15
54 D 0808	ATE-11-0.022	.022	75	15
54 D 0809	ATE-11-0.027	.027	75	15
54 D 0810	ATE-11-0.033	.033	70	15
54 D 0811	ATE-11-0.039	.039	70	15
54 D 0812	ATE-11-0.047	.047	70	15
54 D 0813	ATE-11-0.056	.056	70	15
54 D 0814	ATE-11-0.068	.068	65	10
54 D 0815	ATE-11-0.082	.082	65	10
54 D 0816	ATE-11-0.100	.100	60	10

Stock No.	Mfr's Type	Ind. H	Q	Freq. (kHz)
54 D 0817	ATE-11-0.12	.120	60	10
54 D 0818	ATE-11-0.15	.150	55	10
54 D 0819	ATE-11-0.18	.180	55	10
54 D 0820	ATE-0-0.22	.220	95	7
54 D 0821	ATE-0-0.27	.270	95	7
54 D 0822	ATE-0-0.33	.330	95	7
54 D 0823	ATE-0-0.39	.390	90	6
54 D 0824	ATE-0-0.47	.470	90	6
54 D 0825	ATE-0-0.56	.560	90	6
54 D 0826	ATE-0-0.68	.680	85	6
54 D 0827	ATE-0-0.82	.820	85	6
54 D 0828	ATE-0-1.00	1.000	85	5
54 D 0829	ATE-0-1.20	1.200	80	5

Stock No.	Mfr's Type	Ind. H	Q	Freq. (kHz)
54 D 0830	ATE-0-1.500	1.5	80	5.0
54 D 0831	ATE-4-1.800	1.8	100	4.0
54 D 0832	ATE-4-2.200	2.2	90	3.0
54 D 0833	ATE-4-2.700	2.7	90	3.0
54 D 0834	ATE-4-3.300	3.3	90	3.0
54 D 0835	ATE-4-3.900	3.9	80	2.0
54 D 0836	ATE-4-4.700	4.7	80	2.0
54 D 0837	ATE-4-5.600	5.6	80	2.0
54 D 0838	ATE-4-6.800	6.8	60	1.50
54 D 0839	ATE-4-8.200	8.2	60	1.50
54 D 0840	ATE-4-10.00	10.0	40	1.
54 D 0841	ATE-4-12.00	12.0	40	1.

NYTRONICS TUNING TOOL FOR "VIV" INDUCTORS



Tuning tool for Nytronics "Vari-Ductor" variable inductors on facing page. Adds no inductance or capacitance to the circuit—no detuning occurs when tool is removed from inductor. Made of polyester-bonded fiberglass. 3⅛x3/32". 0.031" wide slot. Wt., 1 oz.

54 D 0216 ..... .50

OHMITE RF CHOKES (Av. shpg. wt., 2 oz.)

Stock No.	Mfr's Type	μH	mA	MHz	EACH 1-9	10-24	25-99
54 D 1548	Z-460	0.2	1000	320-520	.45	.38	.32
54 D 1549	Z-235	0.84	1000	160-350	.45	.38	.32
54 D 1550	Z-144	1.8	1000	80-200	.45	.38	.32
54 D 1551	Z-50	7.0	1000	35-110	.48	.41	.34
54 D 1552	Z-28	21	600	20-60	.60	.51	.42
54 D 1553	Z-14	44	600	7-35	.71	.60	.50
54 D 1554	Z-7	84	1000	3-20	1.44	1.22	1.01

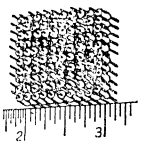
Allied Is the World's Largest Supplier of Electronic Components for Industry

Miniature Molded Inductors

NYTRONICS

DECI-DUCTOR SUBMINIATURE RF INDUCTORS

Epoxy molded, unshielded, with extreme inductance-to-size ratio. One hundred require only one sq. in. space. Designed to meet all environmental requirements of MIL-C-15305C, Grade 1 (resistance to moisture and immersion), Class B (oper. temp.) from —55° to +125° C. Vibration, shock resistant. Operates to 70,000 ft. Toler., ±10%. ¼" long x 1/10" dia. 1¼" #24 leads. Av. wt. per 100, 3 oz.

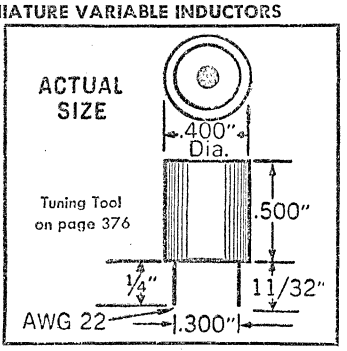


μH	EACH					
	1-24	25-49	50-99	100-249	250-499	500-999
Values 0.1-1	.81	.64	.56	.51	.47	.44
Values 1.5-22	.88	.70	.61	.56	.51	.48
Values 33-100	.93	.74	.65	.59	.54	.51
Values 150-1000	.97	.78	.67	.61	.57	.53

Stock No.	Type DD-	Ind. μH	Q @ MHz		Stock No.	Type DD-	Ind. μH	Q @ MHz	
54 D 0162	.10	.10	40	25	54 D 0174	10.0	10.0	60	7.9
54 D 0163	.15	.15	38	25	54 D 0175	15	15	47	2.5
54 D 0164	.22	.22	35	25	54 D 0176	22	22	50	2.5
54 D 0165	.33	.33	32	25	54 D 0177	33	33	50	2.5
54 D 0166	.47	.47	32	25	54 D 0178	47	47	50	2.5
54 D 0167	.68	.68	33	25	54 D 0179	68	68	52	2.5
54 D 0168	1.0	1.0	30	25	54 D 0180	100	100	50	2.5
54 D 0169	1.5	1.5	32	7.9	54 D 0181	150	150	28	.79
54 D 0170	2.2	2.2	35	7.9	54 D 0182	220	220	26	.79
54 D 0171	3.3	3.3	45	7.9	54 D 0183	330	330	26	.79
54 D 0172	4.7	4.7	45	7.9	54 D 0184	470	470	27	.79
54 D 0173	6.8	6.8	52	7.9	54 D 0186	1000	1000	28	.79

TYPE "VIV" MINIATURE VARIABLE INDUCTORS

Epoxy encapsulated variable inductors conforming to MIL-C-15305A, Grade 1, Class B. Feature high reliability, light weight and stable inductance over extreme temperature variations. Types to give inductance values from 0.09 μH to 5640 μH with high Q. Tunable range: values 0.33 μH—4700, ±20%; values 0.15 μH —0.22 μH, ±15%; 0.1 μH, ±10%. Size, ½"x .400" dia. Vertical mounting—AWG #22 start and finish leads .300" apart. Av., 1 oz.



μH	EACH			
	1-24	25-49	50-99	100-249
Values 0.1-15	3.25	2.60	2.26	2.06
Values 22-4700	3.48	2.78	2.42	2.20

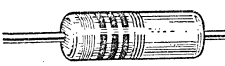
Stock No.	Type VIV-	Nom. μH	Q @ MHz		Stock No.	Type VIV-	Nom. μH	Q @ MHz	
54 D 0187	0.10	0.10	85	25	54 D 0198	6.80	6.80	80	7.9
54 D 0188	0.15	0.15	100	25	54 D 0199	10.0	10.0	82	7.9
54 D 0189	0.22	0.22	100	25	54 D 0200	15.0	15.0	65	2.5
54 D 0190	0.33	0.33	100	25	54 D 0201	22.0	22.0	55	2.5
54 D 0191	0.47	0.47	100	25	54 D 0202	33.0	33.0	54	2.5
54 D 0192	0.68	0.68	100	25	54 D 0203	47.0	47.0	51	2.5
54 D 0193	1.00	1.00	90	25	54 D 0205	100	100.0	50	2.5
54 D 0194	1.50	1.50	70	7.9	54 D 0209	470	470	45	.79
54 D 0195	2.20	2.20	73	7.9	54 D 0211	1000	1000	40	.79
54 D 0196	3.30	3.30	80	7.9	54 D 0213	2200	2200	44	.25
54 D 0197	4.70	4.70	75	7.9	54 D 0215	4700	4700	48	.25

WEE V-L SHIELDED VARIABLE INDUCTORS

Subminiature (0.4x0.3" dia.) hi-Q epoxy-molded inductors. Inductance range adjustable ±10% of rated value. Meet MIL-C-15305C Style LT-K, Grade 1, Class B specifications. Moisture, vibration and shock resistant for long-life reliability. Shielded for minimum coupling. Oper. temp., —55° to +125° C. For up to 70,000 ft. altitude. 300 WVDC. 0.2" grid spacing. *Type No. and inductance in μH. Av. shpg. wt. per 100, 3½ oz.

Stock No.	*WEE V-L-	kHz	Nom. Q	Stock No.	*WEE V-L-	kHz	Nom. Q
54 D 0246	100,000	79	60	54 D 0238	4700	250	85
54 D 0245	68,000	79	60	54 D 0236	2200	250	100
54 D 0244	47,000	79	70	54 D 0235	1500	250	90
54 D 0243	33,000	79	70	54 D 0234	1000	790	100
54 D 0242	22,000	79	70	54 D 0233	680	790	100
54 D 0241	15,000	79	70	54 D 0232	470	790	100
54 D 0240	10,000	250	70	54 D 0231	330	790	100
54 D 0239	6800	250	75	54 D 0230	220	790	95

"SUPER WEE-DUCTOR" SUBMINIATURE RF INDUCTORS



- Only 0.395" by 0.157"
- Meet MIL-C-15305C

Epoxy molded and shielded for minimum coupling in high-density package. Meet electrical and environmental requirements of MIL-C-15305C, Grade 1 (resistance to moisture and immersion), Class B (from —55° to +125° C.) For altitudes to 70,000 ft. Tol. ±10%. Less than 3% coupling. Low DC resis. 700 V rms diel. strength. 0.157" dia. 1⅞"; 0.395" AWG #22 leads, internal T termination. Av. wt./100, 3½ oz.

μH	EACH					
	1-24	25-49	50-99	100-249	250-499	500-999
Values 0.1 to 15	1.20	.90	.80	.70	.65	.60
Values 22 to 6800	1.40	1.00	.90	.80	.75	.70
Values 10,000-100,000	1.50	1.30	1.20	1.15	1.05	1.00

Stock No.	Type SWD-	Ind. μH	Q @ MHz		Stock No.	Type SWD-	Ind. μH	Q @ MHz	
54 D 0100	100,000	100,000	18	.079	54 D 0118	100	100	52	2.5
54 D 0101	68,000	68,000	23	.079	54 D 0119	68	68	51	2.5
54 D 0102	47,000	47,000	23	.079	54 D 0120	47	47	52	2.5
54 D 0103	33,000	33,000	27	.079	54 D 0121	33	33	45	2.5
54 D 0104	22,000	22,000	27	.079	54 D 0122	22	22	46	2.5
54 D 0105	15,000	15,000	31	.079	54 D 0123	15	15	44	2.5
54 D 0106	10,000	10,000	39	.25	54 D 0124	10	10	49	7.9
54 D 0107	6800	6800	43	.25	54 D 0125	6.8	6.8	50	7.9
54 D 0108	4700	4700	44	.25	54 D 0126	4.7	4.7	44	7.9
54 D 0109	3300	3300	43	.25	54 D 0127	3.3	3.3	44	7.9
54 D 0110	2200	2200	50	.25	54 D 0128	2.2	2.2	45	7.9
54 D 0111	1500	1500	49	.25	54 D 0129	1.5	1.5	45	7.9
54 D 0112	1000	1000	65	.79	54 D 0130	1.0	1.0	47	25
54 D 0113	680	680	60	.79	54 D 0131	.68	.68	42	25
54 D 0114	470	470	60	.79	54 D 0132	.47	.47	44	25
54 D 0115	330	330	54	.79	54 D 0133	.33	.33	46	25
54 D 0116	220	220	58	.79	54 D 0135	.15	.15	51	25
54 D 0117	150	150	56	.79	54 D 0136	.10	.10	50	25

"WEE WEE DUCTOR" MINIATURE SHIELDED RF INDUCTORS

High-inductance inductors for use in miniaturized modules. Provide high-reliability under severe climatic conditions. Excellent shielding characteristics. Encapsulated, nonflammable. Designed to meet MIL-C-15305C, Grade 1, Class B. Operating temperature, —55° to +125° C. Resistant to moisture and immersion. Tolerance, ±10%. Less than 3% coupling. Low DC resistance. 0.33" long x 0.133" diameter. 1¼" #24 leads. Av. wt. per 100, 3 oz.

μH	EACH					
	1-24	25-49	50-99	100-249	250-499	500-999
Values 0.1-0.68	1.50	1.20	1.10	1.00	.90	.80
Values 1-10	1.60	1.30	1.20	1.10	1.00	.90
Values 15-1000	1.85	1.50	1.35	1.25	1.10	1.00

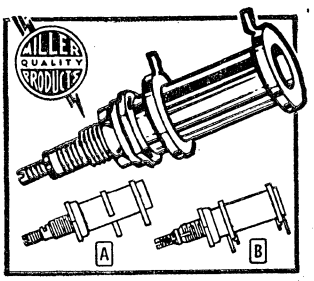
Stock No.	Type WEE-WEE-	Ind. μH	Q @ MHz		Stock No.	Type WEE-WEE-	Ind. μH	Q @ MHz	
54 D 0137	.10	.10	42	25	54 D 0149	10	10	51	7.9
54 D 0138	.15	.15	42	25	54 D 0150	15	15	45	2.5
54 D 0139	.22	.22	42	25	54 D 0151	22	22	42	2.5
54 D 0140	.33	.33	42	25	54 D 0152	33	33	46	2.5
54 D 0141	.47	.47	41	25	54 D 0153	47	47	42	2.5
54 D 0142	.68	.68	36	25	54 D 0154	68	68	46	2.5
54 D 0143	1.0	1.0	42	25	54 D 0155	100	100	43	2.5
54 D 0144	1.5	1.5	38	7.9	54 D 0156	150	150	49	0.79
54 D 0145	2.2	2.2	36	7.9	54 D 0157	220	220	53	0.79
54 D 0146	3.3	3.3	38	7.9	54 D 0158	330	330	57	0.79
54 D 0147	4.7	4.7	42	7.9	54 D 0159	470	470	50	0.79
54 D 0148	6.8	6.8	45	7.9	54 D 0161	1000	1000	49	0.79

Values in μH	EACH				
	1-24	25-49	50-99	100-249	250-499
1.5 to 10,000	4.75	3.80	3.30	3.00	2.77
12,000 to 100,000	6.78	5.43	4.71	4.29	3.96

Actual Size

Stock No.	*WEE V-L-	KHz	Nom. Q	Stock No.	*WEE V-L-	KHz	Nom. Q
54 D 0229	150	790	90	54 D 0221	6.8	7900	85
54 D 0228	100	2500	95	54 D 0248	5.6	7900	95
54 D 0227	68	2500	105	54 D 0220	4.7	7900	95
54 D 0226	47	2500	110	54 D 0219	3.3	7900	90
54 D 0225	33	2500	120	54 D 0218	2.2	7900	110
54 D 0223	15	2500	120	54 D 0247	1.8	7900	115
54 D 0222	10	7900	90	54 D 0217	1.5	7900	100

Coil Forms and Winder, RF Transformers



J.W. MILLER ADJUSTABLE RF COIL FORMS

- Metal Parts Are Plated for Protection Against Corrosion
- Available in Frequency Ranges from 0.2 MHz to 100 MHz and Up

New precision-made, bushing-mounted ceramic coil forms manufactured for use in most standard and industrial electronic equipment. Our wide selection lets you choose the exact style and frequency range you require. All metal parts are plated for protection against corrosion. Cores are powdered iron, fully moisture-proofed, except 100 MHz and up (suffix -5) which is brass. Available in selected frequency ranges of 0.2 MHz to 100 MHz and up, or as form alone, without tuning core. Types 64A022, 66A022, and 60A022 are all crafted with two collars and one terminal on each collar. Types 64A024, 66A024, and 60A024 are all constructed with two collars, with two terminals on each collar. Types 4300 and 4500 each are made with two wire ring terminals. All are bushing-mounting; supplied complete with mounting hardware. Illustrations (A) and (B) at left show the basic styles available. **Quantities of 100 and more are shipped bulk packed, with freight prepaid.** Av. shpg. wt., 2 oz.

SERIES 4300 COIL FORMS

Style A. With two wire ring terminals.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0948	4300-0	.593x.205	Form only	.99	.66	.50	.41
54 D 0949	4300-1	.593x.205	0.2-1.5 MHz	1.14	.76	.57	.48
54 D 0950	4300-2	.593x.205	1.0-2.0 MHz	1.14	.76	.57	.48
54 D 0951	4300-3	.593x.205	20-50 MHz	1.14	.76	.57	.48
54 D 0952	4300-4	.593x.205	50-200 MHz	1.14	.76	.57	.48
54 D 0953	4300-5	.593x.205	100 and Up	1.32	.88	.66	.55
54 D 0954	4300-6	.593x.205	2.0-40 MHz	1.14	.76	.57	.48
54 D 0963	4300-7	.593x.205	40-300 MHz	1.14	.76	.57	.48

SERIES 4500 COIL FORMS

Style A. With two wire ring terminals.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0955	4500-0	.858x.260	Form only	1.08	.72	.54	.45
54 D 0956	4500-1	.858x.260	0.2-1.5 MHz	1.23	.82	.62	.51
54 D 0957	4500-2	.858x.260	1.0-20 MHz	1.23	.82	.62	.51
54 D 0958	4500-3	.858x.260	20-50 MHz	1.23	.82	.62	.51
54 D 0959	4500-4	.858x.260	50-200 MHz	1.23	.82	.62	.51
54 D 0960	4500-5	.858x.260	100 and Up	1.41	.94	.71	.59
54 D 0961	4500-6	.858x.260	2.0-40 MHz	1.23	.82	.62	.51
54 D 0962	4500-7	.858x.260	40-300 MHz	1.23	.82	.62	.51

SERIES 60A022 AND 60A024 COIL FORMS

Style B. Type 60A022 has 1 terminal/collar; 60A024, 2 per collar.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0900	60A022-0	.593x.205	Form only	1.35	.90	.68	.56
54 D 0901	60A022-1	.593x.205	0.2-1.5 MHz	1.50	1.00	.75	.63
54 D 0902	60A022-2	.593x.205	1.0-20 MHz	1.50	1.00	.75	.63
54 D 0903	60A022-3	.593x.205	20-50 MHz	1.50	1.00	.75	.63
54 D 0904	60A022-4	.593x.205	50-200 MHz	1.50	1.00	.75	.63
54 D 0905	60A022-5	.593x.205	100 and Up	1.71	1.14	.86	.71
54 D 0906	60A022-6	.593x.205	2.0-25 MHz	1.50	1.00	.75	.63
54 D 0907	60A022-7	.593x.205	25 and Up	1.50	1.00	.75	.63
54 D 0908	60A024-0	.593x.205	Form only	1.29	.86	.65	.54
54 D 0909	60A024-1	.593x.205	0.2-1.5 MHz	1.50	1.00	.75	.63
54 D 0910	60A024-2	.593x.205	1.0-20 MHz	1.50	1.00	.75	.63
54 D 0911	60A024-3	.593x.205	20-50 MHz	1.50	1.00	.75	.63
54 D 0912	60A024-4	.593x.205	50-200 MHz	1.50	1.00	.75	.63
54 D 0913	60A024-5	.593x.205	100 and Up	1.71	1.14	.86	.71
54 D 0914	60A024-6	.593x.205	2.0-40 MHz	1.50	1.00	.75	.63
54 D 0915	60A024-7	.593x.205	40-300 MHz	1.50	1.00	.75	.63

SERIES 64A022 AND 64A024 COIL FORMS

Style B. Type 64A022 has 1 terminal/collar; 64A024, 2 per collar.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0916	64A022-0	1.060x.375	Form only	1.74	1.16	.87	.73
54 D 0917	64A022-1	1.060x.375	0.2-1.5 MHz	1.89	1.26	.95	.79
54 D 0918	64A022-2	1.060x.375	1.0-20 MHz	1.89	1.26	.95	.79
54 D 0919	64A022-3	1.060x.375	20-50 MHz	1.89	1.26	.95	.79
54 D 0920	64A022-4	1.060x.375	50-200 MHz	1.89	1.26	.95	.79
54 D 0921	64A022-5	1.060x.375	100 and Up	2.04	1.36	1.02	.85
54 D 0922	64A022-6	1.060x.375	2.0-25 MHz	1.89	1.26	.95	.79
54 D 0923	64A022-7	1.060x.375	25 and Up	1.89	1.26	.95	.79
54 D 0924	64A024-0	1.060x.375	Form only	1.74	1.16	.87	.73
54 D 0925	64A024-1	1.060x.375	0.2-1.5 MHz	1.89	1.26	.95	.79
54 D 0926	64A024-2	1.060x.375	1.0-20 MHz	1.89	1.26	.95	.79
54 D 0927	64A024-3	1.060x.375	20-50 MHz	1.89	1.26	.95	.79
54 D 0928	64A024-4	1.060x.375	50-200 MHz	1.89	1.26	.95	.79
54 D 0929	64A024-5	1.060x.375	100 and Up	2.04	1.36	1.02	.85
54 D 0930	64A024-6	1.060x.375	2.0-40 MHz	1.89	1.26	.95	.79
54 D 0931	64A024-7	1.060x.375	40-300 MHz	1.89	1.26	.95	.79

SERIES 66A022 COIL FORMS

Style B. Two collars, with one terminal per collar.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0932	66A022-0	1.249x.500	Form only	1.89	1.26	.95	.79
54 D 0933	66A022-1	1.249x.500	0.2-1.5 MHz	2.10	1.40	1.05	.88
54 D 0934	66A022-2	1.249x.500	1.0-20 MHz	2.10	1.40	1.05	.88
54 D 0935	66A022-3	1.249x.500	20-50 MHz	2.10	1.40	1.05	.88
54 D 0936	66A022-4	1.249x.500	50-200 MHz	2.10	1.40	1.05	.88
54 D 0937	66A022-5	1.249x.500	100 and Up	2.28	1.52	1.14	.95
54 D 0938	66A022-6	1.249x.500	2.0-40 MHz	2.10	1.40	1.05	.88
54 D 0939	66A022-7	1.249x.500	40-300 MHz	2.10	1.40	1.05	.88

SERIES 66A024 COIL FORMS

Style B. Two collars, with two terminals per collar.

Stock No.	Mfr's Type	Length x Dia. (Inches)	Freq. Range of Core Material	EA.	BULK PACKED		
				1-99	100-249	250-499	500-Up
54 D 0940	66A024-0	1.249x.500	Form only	1.89	1.26	.95	.79
54 D 0941	66A024-1	1.249x.500	0.2-1.5 MHz	2.10	1.40	1.05	.88
54 D 0942	66A024-2	1.249x.500	1.0-20 MHz	2.10	1.40	1.05	.88
54 D 0943	66A024-3	1.249x.500	20-50 MHz	2.10	1.40	1.05	.88
54 D 0944	66A024-4	1.249x.500	50-200 MHz	2.10	1.40	1.05	.88
54 D 0945	66A024-5	1.249x.500	100 and Up	2.28	1.52	1.14	.95
54 D 0946	66A024-6	1.249x.500	2.0-40 MHz	2.10	1.40	1.05	.88
54 D 0947	66A024-7	1.249x.500	40-300 MHz	2.10	1.40	1.05	.88

J.W. MILLER RF POWER TRANSFORMERS

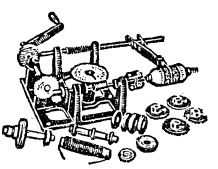
- For Inexpensive High-Voltage DC Supplies
- Provide 5000 or 10,000 Volt DC Output

Used with RF oscillator and 1B3 rectifier for high-voltage power supply. Simple resistive-capacitive filter will give low-ripple output. Complete schematic included with each unit. Av. wt., 2½ oz.

Type 4525. RF power supply transformer for all types of TV receivers, oscilloscopes, etc. Provides up to 5000 volts DC power. Size: 3¾x1¼" diameter.
54 D 1101 ..... 6.30

Type 4526. Provides up to 10,000 volts DC power (up to 30,000 volts in rectifier-tripler circuit). 6x2¼" diameter.
54 D 1102 ..... 9.45

MORRIS "COILMASTER" COIL WINDER



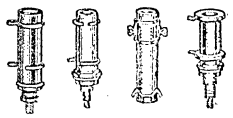
- For Variety of Coil Styles
- Includes Turns Indicator

Easy-to-operate coil winder makes professional-looking self-supporting, universal and honeycomb coils; solenoids; single-layer coils; etc. Just set winder for type of coil desired and turn handle. Indicator counts turns as you wind, for neat and precise winding. Has 3 cams and 4 gears—easily adjusts for pi spacing and different types of coil forms. For use with No. 22 to No. 40 wire, and variety of coil form sizes. Base size, 5x5". Wire and coil forms not included. See above listing and other pages for coil forms. Shpg. wt., 3 lbs.
54 D 1053 ..... 8.50

Coil Forms in Quantities of 100 and More Shipped Bulk Packed, Freight Prepaid

J. W. Miller Coils, Coil Forms and Chokes

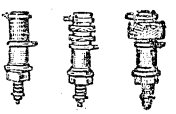
RF COIL FORMS



For use in most electronic equipment. Types 20A000-2, 21A000-2, and 22A000-2 are resinite phenolic impregnated tubing and can be certified to meet MIL-P-79B, Type PBG Specs. Types 40A000CBI, 41A000CBI, 42A000CBI, 43A000-CBI, and 4400, are silicone-impregnated ceramic material that conforms to JAN-1-10, grade .5 specs. Type 4200 constructed of nylon. Hardware, core with range of 1-30 MHz. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	EACH 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 3908	20A000-2	.96	.64	.48	.40
54 D 3909	21A000-2	.96	.64	.48	.40
54 D 3910	22A000-2	1.44	.96	.72	.60
54 D 0250	40A000CBI	1.50	1.00	.75	.63
54 D 0251	41A000CBI	1.59	1.06	.80	.66
54 D 3913	42A000CBI	1.65	1.10	.83	.69
54 D 3914	43A000CBI	1.71	1.14	.86	.71
54 D 3915	4200-8	.75	.50	.38	.31
54 D 0982	4400-2	1.38	.92	.69	.58

MINIATURE AND STANDARD RF COILS



A wide selection of variable coils designed for exacting requirements. All are wound on high-grade silicone-impregnated ceramic forms to reduce moisture absorption. Both Standard and Miniature Types are tuned by means of a powdered-iron core. Supplied complete with mounting hardware, see below.

STANDARD. High "Q" units with large inductance range. Mounting bushing requires a ¼" dia. hole. ⅜" dia., 1⅛" long. Av. wt., 2 oz.

Stock No.	Mfr's Type	Inductance Min. μH	Inductance Max. μH	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 0983	4403	.99	1.5	1.83	1.22	.92	.76
54 D 0984	4404	1.6	3.1	1.86	1.24	.93	.78
54 D 0985	4405	3.3	6.5	1.89	1.26	.95	.79
54 D 0986	4406	7.3	14.0	1.95	1.30	.98	.81
54 D 0987	4407	16.0	29.0	2.01	1.34	1.01	.84
54 D 0988	4408	33.0	66.0	2.10	1.40	1.05	.88
54 D 0989	4409	74	124	2.16	1.44	1.08	.90
54 D 0990	4410	138	238	2.19	1.46	1.10	.91
54 D 0991	4411	270	451	2.22	1.48	1.11	.93
54 D 0992	4412	495	760	2.25	1.50	1.13	.94
54 D 0993	4413	825	1300	2.28	1.52	1.14	.95
54 D 0994	4414	1400	2000	2.28	1.52	1.14	.95

MINIATURE. Same high-quality coils as above, but designed for limited-space applications. Units mount in a 3/16" diameter hole. Size: ¼" dia., ⅞" long. Includes all required mounting hardware: nut, lock washer and spring clip. Av. shpg. wt., 2 oz.

54 D 3930	4501	.44	.76	1.68	1.12	.84	.70
54 D 0871	4502	1.1	1.5	1.68	1.12	.84	.70
54 D 0872	4503	1.7	2.7	1.68	1.12	.84	.70
54 D 0873	4504	3.1	4.8	1.68	1.12	.84	.70
54 D 0874	4505	5.5	8.6	1.74	1.16	.87	.73
54 D 0875	4506	9.9	15.0	1.80	1.20	.90	.75
54 D 0876	4507	17.0	23.0	1.86	1.24	.93	.78
54 D 0877	4508	26.0	33.0	1.89	1.26	.95	.79
54 D 0878	4509	38.0	57.0	1.92	1.28	.96	.80
54 D 0879	4511	66.0	114	1.95	1.30	.98	.81
54 D 0880	4512	120	190	1.98	1.32	.99	.83
54 D 0881	4513	209	314	2.01	1.34	1.01	.84
54 D 0882	4514	350	475	2.04	1.36	1.02	.85

ALUMINUM COIL SHIELDS

Drawn aluminum, tarnish-proof satin finish. Two #6-32 threaded bolts riveted to shield. *Has ¼" dia. hole in top. Av. shpg. wt., 2 oz.

Stock No.	Type No.	Dimensions	Mtg. Center	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 2566	S-21	2⅛" dia. x 3½"	2"	.60	.40	.30	.25
54 D 2570	S-32	1⅛" sq. x 2⅛"	1⅛"	.60	.40	.30	.25
54 D 2571	*S-33	1⅛" sq. x 2⅛"	1⅛"	.60	.40	.30	.25
54 D 0011	S-34	1" sq. x 1¼"	.....	.60	.40	.30	.25
54 D 0012	S-42	2" dia. x 3"	.....	.57	.....	.....	.....
54 D 0013	S-42C	Cover for S-42	.....	.48	.....	.....	.....
54 D 2587	S-51	1⅜" sq. x 3¼"	1⅝"	.60	.40	.30	.25
54 D 2590	S-71	1¼" dia. x 2"	1⅝"	.60	.40	.30	.25
54 D 2591	L-110	2" sq. x 4¼"	1⅝"	.84	.....	.....	.....
54 D 2595	S-727	2⅛" dia. x 2½"	2"	.60	.....	.....	.....

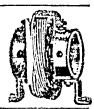
Quantities of 100 Pieces and Up Shipped Bulk Packed

HEAVY-DUTY HASH FILTER CHOKES

Stock No.	Mfr's Type	μH ±20%	Max. DC Ohms	EACH
54 D 0368	5218	3.35	.010	1.41
54 D 0369	5219	4.9	.016	1.41
54 D 0370	5220	8.8	.021	1.41
54 D 0371	5230	4.0	.012	1.05
54 D 0372	5240	40.0	.082	1.11
54 D 0373	5248	68.0	.054	1.29
54 D 0374	5250	100.0	.216	1.39

Relatively high inductance, high current chokes. Molded, powdered iron form. 9/16" dia., 1¼" long. Av. wt., 2 oz.

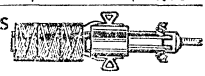
DUO-LATERAL LINE FILTER CHOKES



Ideal for AC lines to filter RF or noise pulses from transmitters, power supplies, intermittent-type switching systems—many more. Type 7825 on bakelite form; 1⅞x1¾". 7827, ceramic form; 2½x4". 4 oz.

Stock No.	Type No.	Millihenries	Amps	DC Ohms	EACH
54 D 1054	7825	.600	2	.7	2.40
54 D 1055	7827	.370	10	.15	6.90

WIDE-RANGE ADJUSTABLE INDUCTORS



For prototypes when inductance value is unknown. Max. diameter ¾"; length, 2¼". *Indicates μH. Shpg. wt., 3 oz.

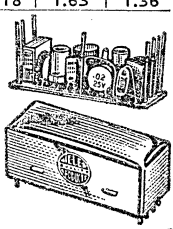
UNTAPPED INDUCTORS

Stock No.	Mfr's Type	Min. mH	Q Min.	Max. mH	Q Min.	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 3900	9001	40*	85	.24	220	1.32	.88	.66	.55
54 D 3901	9002	.18	80	.80	170	1.50	1.00	.75	.63
54 D 3902	9003	.57	73	2.80	110	1.80	1.20	.90	.75
54 D 3903	9004	2.10	72	8.00	88	2.10	1.40	1.05	.88
54 D 3904	9005	6.00	69	16.0	105	2.37	1.58	1.19	.99
54 D 3905	9006	12.0	43	40.0	72	2.76	1.84	1.38	1.15
54 D 3906	9007	30.0	43	105.0	76	2.85	1.90	1.42	1.19
54 D 3907	9008	78.0	36	240.0	61	2.88	1.92	1.44	1.20
54 D 0091	9009	180.0	20	750.0	41	2.97	1.98	1.49	1.24

TAPPED OSCILLATING INDUCTORS (Basic Type Refers to Table Above)

Stock No.	Mfr's Type	Basic Type	Total Turns	Turns to Tap	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 0036	9011	9001	102	34	1.62	1.08	.81	.68
54 D 0037	9012	9002	204	68	1.80	1.20	.90	.75
54 D 0040	9013	9003	376	128	2.10	1.40	1.05	.88
54 D 0042	9014	9004	608	203	2.40	1.60	1.20	1.00
54 D 0043	9015	9005	1000	333	2.67	1.78	1.34	1.12
54 D 0045	9016	9006	1480	493	2.76	1.84	1.38	1.15
54 D 0048	9017	9007	2480	827	2.82	1.88	1.41	1.18
54 D 0060	9018	9008	3860	1286	3.18	2.12	1.59	1.33
54 D 0092	9019	9009	6100	2030	3.27	2.18	1.63	1.36

TYPE 8903-B PRE-PACKAGED PRE-TUNED 455-kHz IF STRIP



Precision assembled unit with one type 8901B IF transformer and one type 8902B IF strip. Precisely tuned 455 kHz strip offers superb gain (55 dB) and selectivity (6 dB down at 8 kHz). Factory aligned. 21 components on PC board, 2-transistor amplifier and diode detector for earphones. Size, ½x½x½". Shpg. wt., 3 oz.

54 D 0099.....5.75

MOISTURE- AND FUNGUS-RESISTANT RF CHOKES

Low distributed capacity. Phenolic, 3/16" dia. x ¾" long; iron, 7/32"x⅞". *Indicates max.; †min. Tolerance: ±5% except, ‡ ±20%, § ±10%. F is self-resonant freq. 2 oz.

PHENOLIC FORM—SINGLE LAYER WINDING

Stock No.	Mfr's Type	μH	†Q	†F MHz	DC* Ohms	mA Max.	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 3828	4602	‡1.0	60	190	.050	2000	.54	.36	.27	.23
54 D 3829	4604	§1.5	58	149	.093	1800	.54	.36	.27	.23
54 D 3830	4606	§2.4	56	120	.100	1500	.54	.36	.27	.23
54 D 3836	4612	§10.0	36	61	1.50	500	.57	.38	.29	.24

IRON CORE FORM—SINGLE LAYER WINDING

54 D 3838	4624	15	62	33	.17	1000	.63	.42	.32	.28
54 D 3840	4628	39	70	20	.65	600	.66	.44	.33	.30
54 D 3841	4629	55	72	17	1.0	500	.69	.46	.35	.21
54 D 3844	4632	100	107	12	3.0	400	.69	.46	.35	.31

PHENOLIC FORM—3-SECTION WINDING

54 D 3845	4642	100	49	11	5.4	160	.69	.46	.35	.31
54 D 3846	4644	150	53	8.8	6.5	160	.69	.46	.35	.31
54 D 3850	4646	240	56	7.2	8.5	160	.69	.46	.35	.31
54 D 3856	4652	1000	59	3.7	19.0	160	.75	.50	.38	.34

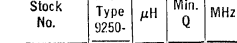
J. W. Miller Molded RF Chokes

MOLDED MINIATURE RF CHOKES

Meet MIL-C-1530C. 9210 and 9310, .155x.375″; 9230, .095x.250″; 9320, .185x.437″; 9330, .215x.560″; 9340, .280x.900″; 9350, .468x.687″ max.; 9360, .300x.968″. *Phenolic core. †Iron. ‡Ferrite. 2 oz.

Stock No.	Mfr's Type	μH	Tol. ± %	Q	MHz	Min. Fo MHz	Max. DC Ohm	Max. mA	EACH 1-99	EACH 100-249	BULKPACKED 250-499	BULKPACKED 500-Up
54D 0296	9210-54†	36	5	60	2.5	15.5	2.50	180	.90	.68	.60	.46
54D 0297	9210-58†	43	5	60	2.5	13.7	2.70	172	.90	.68	.60	.46
54D 0298	9210-60†	47	5	55	2.5	13.0	2.75	170	.90	.68	.60	.46
54D 0299	9210-62†	51	5	55	2.5	12.7	2.85	167	.90	.68	.60	.46
54D 0304	9210-68†	68	5	55	2.5	11.0	3.30	156	.90	.68	.60	.46
54D 0305	9210-74†	91	5	50	2.5	10.0	4.30	136	.90	.68	.60	.46
54D 0306	9210-76†	100	5	50	2.5	9.5	4.50	133	.99	.74	.66	.52
54D 0307	9210-78†	110	5	60	.790	8.9	4.90	128	.99	.74	.66	.52
54D 0308	9210-80†	120	5	65	.790	8.7	5.20	124	.99	.74	.66	.52
54D 0310	9210-84†	150	5	65	.790	8.0	6.05	114	.99	.74	.66	.52
54D 0311	9210-88†	180	5	65	.790	7.0	6.75	108	.99	.74	.66	.52
54D 0312	9210-90†	200	5	65	.790	6.5	7.10	106	.99	.74	.66	.52
54D 0313	9210-92†	220	5	65	.790	6.2	7.45	103	.99	.74	.66	.52
54D 0314	9210-94†	240	5	65	.790	5.9	7.80	101	.99	.74	.66	.52
54D 0318	9230-08*	.33	10	30	25	410	.20	780	1.02	.76	.68	.51
54D 0320	9230-12*	.47	10	30	25	340	.35	590	1.02	.76	.68	.51
54D 0321	9230-16*	.68	10	28	25	275	.60	450	1.02	.76	.68	.51
54D 0327	9230-22†	1.20	10	25	7.9	150	.18	825	1.08	.81	.72	.55
54D 0328	9230-24†	1.50	10	28	7.9	140	.22	745	1.08	.81	.72	.55
54D 0329	9230-26†	1.80	10	30	7.9	125	.30	640	1.08	.81	.72	.55
54D 0330	9230-28†	2.20	10	30	7.9	115	.40	550	1.08	.81	.72	.55
54D 0331	9230-30†	2.70	10	37	7.9	100	.50	495	1.08	.81	.72	.55
54D 0332	9230-36†	4.70	10	45	7.9	75	1.20	320	1.08	.81	.72	.55
54D 0333	9230-38†	5.60	10	50	7.9	68	1.80	260	1.23	.92	.82	.62
54D 0334	9230-42†	8.20	10	55	7.9	55	2.70	210	1.23	.92	.82	.62
54D 0335	9230-46†	12.0	10	45	2.5	40	2.70	210	1.32	1.01	.90	.67
54D 0336	9230-52†	22.0	10	50	2.5	25	3.30	190	1.32	1.01	.90	.67
54D 0337	9230-56‡	33.0	10	45	2.5	24	3.40	187	1.41	1.06	.94	.70
54D 0338	9230-64‡	68.0	10	50	2.5	15	6.70	135	1.65	1.10	.98	.83
54D 2802	9310-00*	.15	20	50	25	525	.03	2450	.60	.45	.40	.33
54D 2803	9310-02*	.22	20	50	25	450	.055	1900	.60	.45	.40	.33
54D 2804	9310-04*	.33	20	45	25	360	.09	1400	.60	.45	.40	.33
54D 2807	9310-06*	.47	20	45	25	310	.12	1225	.60	.45	.40	.33
54D 2808	9310-08*	.68	10	50	25	250	.15	1100	.60	.45	.40	.33
54D 2809	9310-10*	.82	10	50	25	220	.22	900	.60	.45	.40	.33
54D 2811	9310-12*	1.00	10	50	25	200	.29	830	.60	.45	.40	.33
54D 2812	9310-14*	1.20	10	33	7.9	180	.42	650	.60	.45	.40	.33
54D 2814	9310-16*	1.50	10	33	7.9	160	.50	600	.60	.45	.40	.33
54D 2815	9310-18*	1.80	10	33	7.9	150	.65	525	.60	.45	.40	.33
54D 2819	9310-20*	2.20	10	33	7.9	135	.95	435	.60	.45	.40	.33
54D 2823	9310-22*	2.70	10	33	7.9	120	1.20	385	.60	.45	.40	.33
54D 2832	9310-24*	3.30	10	33	7.9	110	2.00	300	.60	.45	.40	.33
54D 2833	9310-26*	3.90	10	33	7.9	100	2.30	280	.60	.45	.40	.33
54D 2834	9310-28*	4.70	10	33	7.9	90	2.60	260	.60	.45	.40	.33
54D 2836	9310-30†	5.60	10	45	7.9	60	.32	750	.66	.49	.44	.36
54D 2838	9310-32†	6.80	10	50	7.9	55	.50	600	.66	.49	.44	.36
54D 2839	9310-34†	8.20	10	50	7.9	50	.60	545	.66	.49	.44	.36
54D 2842	9310-36†	10.0	10	55	7.9	45	.90	445	.66	.49	.44	.36
54D 2852	9310-40†	15.0	10	65	2.5	40	1.40	370	.66	.49	.44	.36
54D 2853	9310-42†	18.0	10	75	2.5	34	2.25	280	.66	.49	.44	.36
54D 2854	9310-44†	22.0	10	75	2.5	30	2.50	265	.66	.49	.44	.36
54D 2856	9310-46†	24.0	10	60	2.5	26	2.50	265	.75	.56	.50	.41
54D 2859	9310-52†	33.0	20	65	2.5	19	3.00	250	.75	.56	.50	.41
54D 2865	9320-04*	.33	20	50	25	350	.065	2000	.60	.45	.40	.33
54D 2879	9320-10*	1.00	10	40	25	200	.29	930	.60	.45	.40	.33
54D 2883	9320-18†	3.30	10	30	7.9	70	.14	1350	.66	.49	.44	.36
54D 2885	9320-22†	4.70	10	30	7.9	60	.21	1100	.66	.49	.44	.36
54D 2888	9320-28†	8.20	10	30	7.9	48	.44	750	.66	.49	.44	.36
54D 2889	9320-30†	10.0	10	30	7.9	42	.605	640	.66	.49	.44	.36
54D 2892	9320-36†	22.0	10	60	2.5	24	2.20	335	.66	.49	.44	.36
54D 2893	9320-38†	27.0	10	65	2.5	22	2.75	300	.66	.49	.44	.36
54D 2925	9330-04*	1.00	10	65	25	200	.14	1290	.66	.49	.44	.36
54D 2935	9330-24†	10.0	10	35	7.9	42	.26	950	.75	.56	.50	.37
54D 2938	9330-30†	18.0	10	50	2.5	28	.70	580	.75	.56	.50	.37
54D 2942	9330-38†	39.0	10	70	2.5	18	2.00	340	.75	.56	.50	.37
54D 0376	9340-03*	1.8	10	60	7.9	140	135	1750	.78	.59	.52	.38
54D 0381	9340-12*	4.7	10	60	7.9	90	.560	860	.78	.59	.52	.38
54D 0383	9340-28†	22.0	10	50	2.5	25	.295	1150	.84	.63	.56	.40
54D 0384	9340-30†	27.0	10	45	2.5	22	.350	1050	.84	.63	.56	.40
54D 0386	9340-39†	68.0	10	75	2.5	13	1.85	470	.84	.63	.56	.40
54D 0388	9350-00*	47	10	18	2.5	13.5	5.9	195	1.02	.76	.68	.51
54D 0391	9350-10†	120	10	75	.790	9.3	4.7	215	1.08	.81	.72	.55
54D 0392	9350-12†	150	10	75	.790	8.3	5.3	200	1.08	.81	.72	.55
54D 0393	9350-16†	220	10	80	.790	5.5	5.9	220	1.08	.81	.72	.55
54D 0395	9350-26†	560	10	80	.790	3.5	10.0	180	1.11	.83	.74	.57
54D 0396	9350-37†	2200	10	85	.250	1.8	27.0	115	1.14	.84	.75	.58
54D 0080	9360-08†	22	10	30	2.5	27	.30	1500	1.35	1.01	.90	.67
54D 0082	9360-09†	33	10	45	2.0	21	.60	1100	1.35	1.01	.90	.67
54D 0095	9360-10†	47	10	70	1.5	16	1.20	700	1.35	1.01	.90	.67
54D 0096	9360-11†	82	10	85	1.2	14	2.20	600	1.35	1.01	.90	.67
54D 0097	9360-12†	100	10	85	1.0	14	2.80	500	1.35	1.01	.90	.67
54D 0098	9360-13†	120	10	85	1.0	13	4.0	400	1.35	1.01	.90	.67

MOLDED SHIELDED MINIATURE RF CHOKES



Meet MIL-C-15305 and MS-90537 (LT4K). Coupling between two units less than 2%. Ferrite core, except: .10 to .82 μH, phenolic; 1.00 to 12.0 μH, iron. Size: .157″ dia. x .395″ long; AWG #22 leads, 1.438″. Av. wt., 2 oz.

Stock No.	Mfr's Type 9250-	μH	Min. Q	MHz	Min. Fo MHz	Max. DC Ohm	Max. mA	EACH 1-24	EACH 25-49	EACH 50-99	BULK PACKED 100-249	BULK PACKED 250-499
54D 0001	101	.10	50	25	250	.025	2900	1.68	1.36	1.20	1.00	.79
54D 0004	121	.12	51	25	250	.034	2800	1.68	1.36	1.20	1.00	.79
54D 0005	151	.15	51	25	250	.037	2750	1.68	1.36	1.20	1.00	.79
54D 0006	181	.18	50	25	250	.047	2200	1.69	1.36	1.20	1.00	.79
54D 0007	221	.22	49	25	250	.067	1700	1.68	1.36	1.20	1.00	.79
54D 0008	271	.27	47	25	250	.11	1500	1.68	1.36	1.20	1.00	.79
54D 0010	331	.33	46	25	250	.13	1300	1.68	1.36	1.20	1.00	.79
54D 0014	391	.39	44	25	250	.18	1100	1.68	1.36	1.20	1.00	.79
54D 0015	471	.47	44	25	235	.25	1000	1.68	1.36	1.20	1.00	.79
54D 0016	561	.56	43	25	210	.33	900	1.68	1.36	1.20	1.00	.79
54D 0283	681	.68	42	25	190	.45	750	1.68	1.36	1.20	1.00	.79
54D 0284	821	.82	40	25	180	.59	600	1.68	1.36	1.20	1.02	.79
54D 0285	102	1.00	47	25	140	.07	1900	1.98	1.43	1.27	1.07	.85
54D 0286	122	1.20	46	7.9	130	.093	1600	1.98	1.43	1.27	1.07	.85
54D 0287	152	1.50	45	7.9	115	.12	1300	1.98	1.43	1.27	1.07	.85
54D 0288	182	1.80	43	7.9	105	.14	1200	1.98	1.43	1.27	1.07	.85
54D 0289	222	2.20	45	7.9	100	.19	1100	1.98	1.43	1.27	1.07	.85
54D 0290	272	2.70	46	7.9	92	.28	950	1.98	1.43	1.27	1.07	.85
54D 0291	332	3.30	44	7.9	85	.35	800	1.98	1.43	1.27	1.07	.85
54D 0292	392	3.90	44	7.9	75	.40	750	1.98	1.43	1.27	1.07	.85
54D 0273	472	4.70	44	7.9	70	.55	650	1.98	1.43	1.27	1.07	.85
54D 0274	562	5.60	47	7.9	65	.72	550	1.98	1.43	1.27	1.07	.85
54D 0275	682	6.80	50	7.9	55	1.02	500	1.98	1.43	1.27	1.07	.85
54D 0276	822	8.20	50	7.9	50	1.32	475	1.98	1.43	1.27	1.07	.85
54D 0277	103	10.0	49	7.9	46	1.62	450	1.98	1.43	1.27	1.07	.85
54D 0278	123	12.0	55	2.5	44	2.00	400	1.98	1.43	1.27	1.07	.85
54D 0279	153	15.0	44	2.5	49	.80	620	2.34	1.52	1.36	1.16	.92
54D 0280	183	18.0	45	2.5	45	.89	610	2.34	1.52	1.36	1.16	.92
54D 0281	223	22.0	46	2.5	41	.96	600	2.34	1.52	1.36	1.16	.92
54D 0282	273	27.0	49	2.5	38	1.19	500	2.34	1.52	1.36	1.16	.92
54D 0017	333	33.0	45	2.5	34	1.37	490	2.34	1.52	1.36	1.16	.92
54D 0018	393	38	53	2.5	29	1.93	410	2.34	1.52	1.36	1.16	.92
54D 0019	473	47	52	2.5	27	2.11	400	2.34	1.52	1.36	1.16	.92
54D 0020	563	56	49	2.5	25	2.23	380	2.34	1.52	1.36	1.16	.92
54D 0021	683	68	51	2.5	21	2.70	370	2.34	1.52	1.36	1.16	.92
54D 0022	823	82	45	2.5	10.5	2.44	360	2.82	1.63	1.47	1.27	1.02
54D 0023	104	100	52	2.5	10.0	3.12	325	2.82	1.63	1.47	1.27	1.02
54D 0024	124	120	57	.79	9.7	3.60	290	2.82	1.63	1.47	1.27	1.02
54D 0271	154	150	56	.79	8.5	4.10	275	2.82	1.63	1.47	1.27	1.02
54D 0272	184	180	60	.79	8.0	4.40	260	2.82	1.63	1.47	1.27	1.02
54D 0293	224	220	58	.79	7.5	5.00	250	2.82	1.63	1.47	1.27	1.02
54D 0294	274	270	60	.79	7.0	5.80	240	2.82	1.63	1.47	1.27	1.02
54D 0295	334	330	54	.79	6.5	6.40	225	2.82	1.63	1.47	1.27	1.02
54D 0357	394	390	67	.79	6.2	7.40	200	2.82	1.63	1.47	1.27	1.02
54D 0358	474	470	60	.79	5.7	9.50	180	2.82	1.63	1.47	1.27	1.02
54D 0359	564	560	60	.79	4.7	10.5	174	2.82	1.63	1.47	1.27	1.02
54D 0360	684	680	60	.79	4.5	11.8	168	2.82	1.63	1.47	1.27	1.02
54D 0361	824	820	57	.79	4.2	13.0	152	2.82	1.63	1.47	1.27	1.02
54D 0362	105	1000	65	.79	3.8	17.5	135	2.82	1.63	1.47	1.27	1.02
54D 0363	125	1200	45	.25	1.5	22.1	115	3.00	1.90	1.64	1.34	1.14
54D 0364	155	1500	49	.25	1.2	26.5	110	3.00	1.90	1.64	1.34	1.14
54D 0365	185	1800	47	.25	1.0	29.9	105	3.00	1.90	1.64	1.34	1.14
54D 0366	225	2200	50	.25	.97	33.8	99	3.00	1.90	1.64	1.34	1.14
54D 0400	275	2700	47	.25	.92	47.3	83	3.00	1.90	1.64	1.34	1.14
54D 0401	335	3300	43	.25	.84	53.0	80	3.00	1.90	1.64	1.34	1.14
54D 0402	395	3900	43	.25	.80	73.8	67	3.00	1.90	1.64	1.34	1.14
54D 0403	475	4700	44	.25	.74	81.6	63	3.00	1.90	1.64	1.34	1.14
54D 0404	565	5600	45	.25	.73	98.9	56	3.00	1.90	1.64	1.34	1.14
54D 0405	586	6800	43	.25	.66	111	54	3.00	1.90	1.64	1.34	1.14
54D 0406	825	8200	42	.25	.54	119	52	3.00	1.90	1.64	1.34	1.14
54D 0407	106	10000	39	.25	.47	137	49	3.00	1.90	1.64	1.34	1.14
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Quantities of 100 or 250 and Up Are Shipped Bulk Packed

J. W. Miller and National RF Chokes

J. W. MILLER RF CHOKES

SUBMINIATURE IRON CORE RF CHOKES

Type 70F. Iron core RF chokes for high reliability in ultra-miniature components. Ideal for network and filter design, delay lines, computer applications. Rated 50 mA max. DC current. ¼" in length except: 10-.82 μH, 5/16"; 3.30-22 mH, 25-100 mH, 5/8". †Millihenries. Av. shpg. wt., 2 oz.

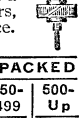
Stock No.	Type 70-F-	μH	Min. Q	Freq.	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 0418	107AP	.10	49	25 MHz	.60	.40	.30	.25
54 D 0419	157AP	.15	52	25 MHz	.60	.40	.30	.25
54 D 0420	227AP	.22	48	25 MHz	.60	.40	.30	.25
54 D 0421	337AP	.33	47	25 MHz	.60	.40	.30	.25
54 D 0422	477AP	.47	46	25 MHz	.60	.40	.30	.25
54 D 0423	687AP	.68	48	25 MHz	.60	.40	.30	.25
54 D 0424	757AP	.75	48	25 MHz	.60	.40	.30	.25
54 D 0425	827AP	.82	48	25 MHz	.60	.40	.30	.25
54 D 1852	106AI	1	41	25 MHz	.60	.40	.30	.25
54 D 1868	226AI	2.2	43	7.9 MHz	.60	.40	.30	.25
54 D 1898	336AI	3.3	40	7.9 MHz	.60	.40	.30	.25
54 D 1812	105AI	10	36	7.9 MHz	.69	.46	.35	.29
54 D 1854	125AI	12	52	2.5 MHz	.69	.46	.35	.29
54 D 1859	155AI	15	52	2.5 MHz	.69	.46	.35	.29
54 D 1867	225AI	22	51	2.5 MHz	.69	.46	.35	.29
54 D 1870	255AI	25	48	2.5 MHz	.69	.46	.35	.29
54 D 1872	335AI	33	50	2.5 MHz	.69	.46	.35	.29
54 D 1878	104AI	100	25	2.5 MHz	.69	.46	.35	.29
54 D 1853	124AI	120	40	790 kHz	.69	.46	.35	.29
54 D 1879	154AI	150	47	790 kHz	.69	.46	.35	.29
54 D 1863	204AI	200	47	790 kHz	.69	.46	.35	.29
54 D 1880	224AI	220	46	790 kHz	.69	.46	.35	.29
54 D 1881	334AI	330	41	790 kHz	.69	.46	.35	.29
54 D 1882	474AI	470	35	790 kHz	.75	.50	.38	.31
54 D 1883	684AI	680	37	790 kHz	.75	.50	.38	.31
54 D 1885	103AI	1.00mH†	30	790 kHz	.75	.50	.38	.31
54 D 1886	153AI	1.50mH†	40	250 kHz	.75	.50	.38	.31
54 D 1887	223AI	2.20mH†	40	250 kHz	.81	.54	.41	.34
54 D 1869	253AI	2.50mH†	48	250 kHz	.84	.56	.42	.35
54 D 1888	333AI	3.30mH†	52	250 kHz	.84	.56	.42	.35
54 D 1889	473AI	4.70mH†	49	150 kHz	.84	.56	.42	.35
54 D 1890	683AI	6.80mH†	51	250 kHz	.84	.56	.42	.35
54 D 1892	102AI	10 mH†	41	250 kHz	.99	.66	.50	.41
54 D 1860	182AI	18 mH†	49	79 kHz	1.08	.72	.54	.45
54 D 1865	222AI	22 mH†	50	79 kHz	1.17	.78	.59	.49
54 D 0426	252AF	25 mH†	59	79 kHz	1.08	.72	.54	.45
54 D 0408	272AF	27 mH†	61	79 kHz	1.08	.72	.54	.45
54 D 0409	332AF	33 mH†	61	79 kHz	1.11	.74	.56	.46
54 D 0410	392AF	39 mH†	59	79 kHz	1.14	.76	.57	.48
54 D 0411	472AF	47 mH†	57	79 kHz	1.17	.78	.59	.49
54 D 0412	502AF	50 mH†	57	79 kHz	1.20	.80	.60	.50
54 D 0413	562AF	56 mH†	57	79 kHz	1.26	.84	.63	.53
54 D 0414	682AF	68 mH†	57	79 kHz	1.35	.90	.68	.56
54 D 0415	752AF	75 MH†	53	79 kHz	1.44	.96	.72	.60
54 D 0416	822AF	82 mH†	50	79 kHz	1.44	.96	.72	.60
54 D 0417	912AF	91 mH†	51	79 kHz	1.47	.98	.74	.61
54 D 0427	101AF	100 mH†	48	79 kHz	1.50	1.00	.75	.63

FERRITE CORE RF CHOKES

Meet industrial standards. High permeability of the ferrite core provides increased inductance—permits size of choke to be much smaller for a given inductance than one with a conventional core. Applications: transmitters, receivers, test equipment. Provide high inductance, low DC resistance. Core ¼" dia.; 7/8" long. 1½" axial leads. Av. wt., 2 oz.

Stock No.	Mfr's Type	mH	Ohms	mA	Dia.	EA. 1-99	BULK PACKED 100-249	250-499	500-Up
54 D 1893	6302	2.5	9.0	160	15/32"	.99	.66	.50	.41
54 D 1894	6304	5	14	160	17/32"	1.14	.76	.57	.48
54 D 1895	6306	10	31	100	17/32"	1.26	.84	.63	.53
54 D 1896	6308	25	82	65	17/32"	1.26	.84	.63	.53
54 D 1897	6310	50	127	65	5/8"	1.50	1.00	.75	.63

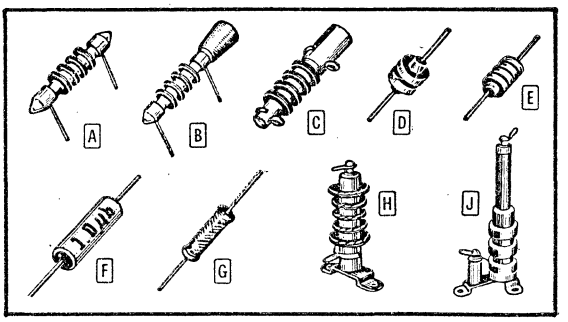
PRINTED CIRCUIT RF CHOKES



Available in a wide range of inductances. With printed-circuit type mounting lugs for quick, easy soldering. Coil forms are 7/8" long. Av. shpg. wt., 1½ oz.

54 D 1061	970	1	20.6	125	11/16"	.78	.52	.39	.33
54 D 1063	972	1.5	26.4	125	3/4"	.78	.52	.39	.33
54 D 1067	975	2.7	37.4	125	13/16"	.84	.56	.42	.35
54 D 1068	976	3.3	41.8	125	13/16"	.87	.58	.44	.36
54 D 1070	978	4.7	51.8	125	7/8"	.87	.58	.44	.36
54 D 1074	982	10	81.6	100	7/8"	.90	.60	.45	.38
54 D 1076	984	15	105	100	15/16"	.96	.64	.48	.40
54 D 1078	986	22	130	75	31/32"	.99	.66	.50	.41
54 D 1079	987	27	145	75	1 1/16"	1.02	.68	.51	.43
54 D 1086	994	100	473	50	1 1/16"	1.38	.92	.69	.58

NATIONAL CHOKES



Versatile RF chokes designed for highly reliable performance in original equipment, or for replacement use. Cover a wide range of inductance values from 0.2 microhenry to 10 millihenries. Current ratings up to 1.5 amperes available. (Based on 20° C temp. rise.) Precision wound on rugged forms with moistureproof varnish finish. Under Mfr's Type, suffix "U" after number indicates standoff insulator is removable; suffix "S" after number indicates fixed standoff with silverplated spring clips; §symbol after number indicates choke has standoff insulator for vertical mounting. ‡Millihenries. **Microhenries. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	mH‡	mA	Ohms	EACH 1-49	50-99	100-199	200-499
54 D 1115	R-33	D	11**	350	1.8	.36	.34	.32	.29
54 D 1116	R-33	D	50**	225	3.5	.36	.34	.32	.29
54 D 1117	R-33	D	100**	200	5	.36	.34	.32	.29
54 D 1118	R-33	D	750**	125	16	.36	.34	.32	.29
54 D 1119	R-50	D	0.5	150	15	.42	.40	.38	.34
54 D 1160	R-50	E	1	135	23	.42	.40	.38	.34
54 D 1161	R-50	E	2.5	125	38	.42	.40	.38	.34
54 D 1162	R-50	E	10	115	36	.72	.68	.65	.58
54 D 1168	R-60	G	2**	700	0.06	.29	.28	.26	.23
54 D 1169	R-60	G	4**	700	0.15	.29	.28	.26	.23
54 D 1301	R-100	A	2.5	115	44	.57	.54	.51	.46
54 D 1367	R-100	A	10	60	130	1.12	1.06	1.01	.90
54 D 1495	R-100S§	C	2.5	115	44	.99	.94	.89	.79
54 D 1497	R-100S§	C	10	60	130	1.49	1.42	1.34	1.19
54 D 1368	R-100U§	B	2.5	115	44	.74	.70	.67	.59
54 D 1399	R-100U§	B	10	60	130	1.26	1.20	1.13	1.01
54 D 1501	R-152	J	4	600	10	2.45	2.33	2.21	1.96
54 D 1503	R-154U	H	1	600	6	2.01	1.91	1.81	1.61
54 D 1504	R-175A	J	145**	800	5	4.46	4.24	4.01	3.57
54 D 1505	R-300	A	0.5	400	7	.57	.54	.51	.46
54 D 1506	R-300	A	1	400	11	.57	.54	.51	.46
54 D 1507	R-300	A	2.5	375	17	.74	.70	.67	.59
54 D 1508	R-300	A	5	325	24	.90	.86	.81	.72
54 D 1515	R-300S§	C	2.5	375	17	1.12	1.06	1.01	.90
54 D 1511	R-300U§	B	2.5	375	17	.92	.87	.83	.74

(D) SERIES R-40 FERRITE CORE CHOKES

High Q with small size. For 50-1500 kHz networks and filters. Fungus proofed per MIL-V-173A specs. Temp. coef. less than 550 ppm per degree C for coils with inductance less than 1 mH; less than 250 ppm per degree C for coils of 1 mH or larger. *Indicates mH †Indicates self-resonant frequency ±10%. Av. shpg. wt., 2 oz.

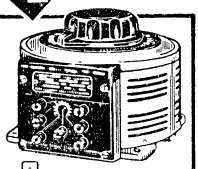
Stock No.	Mfr's Type	μH	mA	† MHz	EACH 1-49	50-99	100-199	200-499
54 D 1824	R-40-150	150	250	7.9	.50	.48	.45	.40
54 D 1825	R-40-220	220	250	7.0	.50	.48	.45	.40
54 D 1830	R-40-1	1.0*	175	3.3	.53	.50	.48	.42
54 D 1832	R-40-2.2	2.2*	150	1.9	.53	.50	.48	.42
54 D 1833	R-40-3.3	3.3*	125	1.6	.53	.50	.48	.42
54 D 1837	R-40-10	10.0*	80	0.85	.56	.53	.50	.45

(F) SERIES R-45 FERRITE BEAD CHOKES

For use as filament chokes, parasitic suppressors, and series elements of low-pass filters for 5 to 200 MHz. Handle 2 amps of filament current with a voltage drop of less than 0.02 volt. Unaffected by extremes of humidity and temperatures as high as 125°C. Epoxy-filled, epoxy shell insulation. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	AC Res. @10 MHz	Imped. @10 MHz	EACH 1-49	50-99	100-199	200-499
54 D 1814	R-45-1	25 ohms	16 ohms	.92	.87	.83	.74
54 D 1815	R-45-2	50 ohms	32 ohms	.86	.82	.77	.69
54 D 1817	R-45-4	100 ohms	60 ohms	.89	.85	.80	.71
54 D 1819	R-45-12	320 ohms	230 ohms	1.95	1.85	1.76	1.56
54 D 1821	R-45-154	610 ohms	100 ohms	1.38	1.31	1.24	1.10
54 D 1823	R-45-254	1400 ohms	230 ohms	1.10	1.05	.99	.88

Superior Electric Variable Transformers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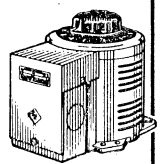
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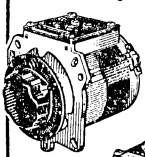
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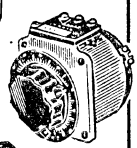
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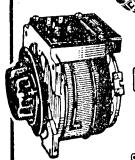
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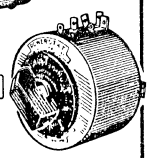
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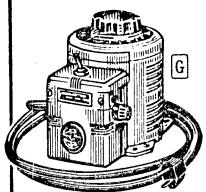
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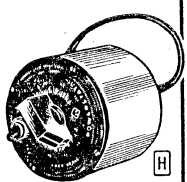
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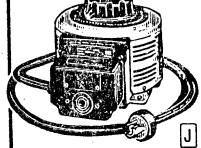
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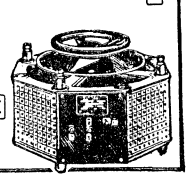
K

POWERSTAT® VARIABLE TRANSFORMERS WITH POWERKOTE™ COILS

Deliver continuously adjustable output voltage from AC line. Zero waveform distortion, good regulation, conservative ratings. All are for 50-60 Hz. (§60 Hz only.) Enclosed for plane-surface mtg. except 10B, 10B-40, 21, 22, and other types with suffix "U" are open types for panel mounting. Mfr's Types 21, 22, 126, 136B, 226, 236B, 1156D and 1256D are for both panel and surface mounting. Suffix "T" indicates terminals enclosed in metal box. †Indicates when mounted on metal panel, for non-metallic panel, or bracket mounting, derate to 1.75 amps with corresponding reduction in maximum kVA.

SINGLE-PHASE TYPES

Portable Types 2PF10, 116B, 216B have 2-wire parallel blade input cord-plug sets and output receptacles. *In table indicates unit is equipped with 3-wire plug and receptacle. Type LW136B is a double-wound assembly with an isolated secondary winding. Type 22 incorporates a unique coil-winding technique designed to provide higher voltage ratings without increase in size or weight of transformer. ††Rating when mounted on metal panel. Derated to 0.5 amp when mounted for non-metallic panel or bracket.

Stock No.	Mfr's Type	Fig.	Input Volts	Output Volts	Output Amps	Output kVA	Max. Size (DWH)	Wt., Lbs.	EACH 1-5	EACH 6-24	EACH 25-99
54 D 2576 X	LW136B	A	120-240	0-30	25.0	0.75	9x7¾x6⅝″	23	98.00	88.20	83.30
54 D 2592	§117BT	B	120	0-120	12.0	1.4	7⅛x5⅛x6½″	12	33.00	29.70	28.05
54 D 1667	§117BU	C	120	0-120	12.0	1.4	5x5⅛x5¾″	11	25.00	22.50	21.25
54 D 4310	§Q117U	C	120	0-120	12.0	1.4	4⅞x4¼x5¹¹⁄₁₆″	11	25.00	22.50	21.25
54 D 1163	21	D	120	0-140	4.5	0.63	3⅜x3¾x4½″	6	18.00	16.20	15.30
54 D 2524	116BU	C	120	0-140	10.0	1.4	5x5⅛x5¾″	11	23.00	20.70	19.55
54 D 4311	Q116U	C	120	0-140	9.0	1.3	4⅞x4¼x5¹¹⁄₁₆″	11	23.00	20.70	19.55
54 D 1970	126	A	120	0-140	15.0	2.1	6¾x6¼x5⅜″	17	48.00	43.20	40.80
54 D 1669	126U	E	120	0-140	15.0	2.1	4¼x6x6¾″	16	43.00	38.70	36.55
54 D 2543 X	136B	A	120	0-140	22.0	3.1	8⅞x7¾x6⅛″	24½	68.00	61.20	57.80
54 D 2531 X	136BU	E	120	0-140	22.0	3.1	4⁵⁄₁₆x7¾x8¹¹⁄₁₆″	24	63.00	56.70	53.55
54 D 2577 X	146	A	120	0-140	30.0	4.2	11x10x6⅜″	38	108.00	97.20	9.80
54 D 2573	216BU	C	240	0-280	3.5	0.98	5x5⅛x5¾″	11	28.00	25.70	23.80
54 D 4316	Q216U	C	240	0-280	3.5	0.98	4⅞x4¼x5¹¹⁄₁₆″	11	28.00	25.70	23.80
54 D 1671	§217BT	B	240	0-240	5.0	1.2	7⅛x5⅛x6½″	12	37.00	33.30	31.45
54 D 1673	§217BU	C	240	0-240	5.0	1.2	5x5⅛x5¾″	11	30.00	27.00	25.00
54 D 4315	§Q217U	C	240	0-240	5.0	1.2	4⅞x4¼x5¹¹⁄₁₆″	11	30.00	27.00	25.20
54 D 3024	22	D	240	0-280	2.25	0.63	4⁹⁄₁₆x3¾x4¹³⁄₁₆″	6	26.00	23.40	22.10
54 D 1675	226	A	240	0-280	7.5	2.1	6¾x6¼x5⅜″	17	48.00	43.20	40.80
54 D 1677	226U	E	240	0-280	7.5	2.1	4¼x6x6¾″	16	43.00	38.70	36.55
54 D 1678 X	236B	A	120-240	0-280	10.0	2.8	8⅞x7¾x6⅛″	23¼	68.00	61.20	57.80
54 D 2520 X	236BU	E	120-240	0-280	10.0	2.8	4⁵⁄₁₆x7¾x8¹¹⁄₁₆″	23¼	63.00	56.70	53.55
54 D 2586 X	246	A	120-240	0-280	15.0	4.2	11x10x6⅜″	38	108.00	97.20	91.80

Stock No.	Mfr's Type	Fig.	Input Volts	Output Volts	Output Amps	Output kVA	Max. Size (DWH)	Wt., Lbs.	EACH 1-11	EACH 12-99
54 D 1663	§10B-40	F	40	0-40	7.0	0.28	2¼x2⅞x3⅛″	3.3	15.00	12.75
54 D 1666	*3PN117B	G	120	0-120	12.0	1.4	7¼x5⅛x6½″	12	41.00	34.85
54 D 2575	§2PF10	H	120	0-132	1.0	0.132	3½x3½x3½″	3.3	23.00	19.55
54 D 2536	§10B	F	120	0-132	†2.25	0.3	2⅛x2⅞x3⅛″	2.4	12.00	10.20
54 D 2525	116B	G	120	0-140	10.0	1.4	7⅛x5⅛x6½″	12	32.00	27.20
54 D 2578	3PN116B	G	120	0-140	10.0	1.4	7⅛x5⅛x6½″	12	37.00	31.45
54 D 1668	*3PN126	J	120	0-140	15.0	2.1	8⅜x6¼x5⅜″	18.5	61.00	51.85
54 D 1670 X	*3PN136B	J	120	0-140	22.0	3.1	10¼x7¾x6⅛″	26½	88.00	74.80
54 D 1682	12	F	240	0-240	††0.7	0.17	2⅛x2⅞x3⅛″	2.5	19.00	16.15
54 D 2527	216B	G	240	0-280	3.5	0.98	7⅛x5⅛x6½″	12	36.00	30.60
54 D 1672	§3PN217B	G	240	0-240	5.0	1.2	7⅛x5⅛x6½″	12	44.00	37.40
54 D 1676	*3PN226	J	240	0-280	7.5	2.1	8⅜x6¼x5⅜″	18.5	61.00	51.85
54 D 1679 X	*3PN236B	J	240	0-280	10.0	2.8	10¼x7¾x6⅛″	25¾	88.00	74.80

Types 1256D-2P and 1256D-3P are single units (Fig. K) ganged and parallel connected. Type 1256D-2P has two units connected in parallel; Type 1256D-3P, three units connected in parallel.

Stock No.	Mfr's Type	Fig.	Input Volts	Output Volts	Output Amps	Output kVA	Max. Size (DWH)	Wt., Lbs.	EACH 1	EACH 2-49
54 D 1680 Z	1156D	K	120	0-140	50.0	7.0	15⅝x13⅞x9⅜″	79	162.00	137.70
54 D 1681 Z	1256D	K	240	0-280	28.0	7.8	15⅛x13⅞x9⅜″	79	162.00	137.70
54 D 1805 Z	1256D-2P	....	240	0-280	56.0	15.7	15⅝x15⅝x16″	158	358.00	304.30
54 D 1806 Z	1256D-3P	....	240	0-280	84.0	23.5	15⅝x15⅝x22⅝″	274	619.00	526.15

THREE-PHASE TYPES (Not Illus.)

Consist of single units ganged together. Types with suffix "-2" are open delta connected; Type Nos. which have suffixes "-3" and "-3Y" are wye connected. All are for 50-60 Hz. (§60 Hz only.) †See note above.

Stock No.	Mfr's Type	Input Volts	Output Volts	Output Amps	Output kVA	Max. Size (DWH)	Wt., Lbs.	EACH 1	EACH 2-49
54 D 1687 X	§117BU-2	120	0-120	12.0	2.5	11⅛x5⅛x5¾″	22	59.40	56.10
54 D 1996 Z	136B-2	120	0-140	22.0	5.3	9⅛x8¾x12½″	52	142.20	134.30
54 D 2588	§10B-3	240	0-240	†2.2	0.94	8⅛x3⅞x3⅞″	8½	49.50	46.75
54 D 1164	§21-3	240	0-280	4.5	2.18	10⅞x4⅝x5″	17	71.10	67.15
54 D 1690 X	§116BT-3	240	0-280	10	4.8	7⅛x5⅛x18⅜″	36	97.20	91.80
54 D 1800 Z	§126-3	240	0-280	15.0	7.27	7⅛x7¼x15⅛″	49	152.10	143.65
54 D 4338 Z	126U-3	240	0-280	15.0	7.27	7⅛x7¼x15⅛″	49	137.70	130.05
54 D 1801 Z	§136B-3	240	0-280	22.0	10.66	9⅛x8¾x17¾″	76	209.70	198.05
54 D 1802 Z	§1156D-3Y	240	0-280	50.0	24.2	15½x13⅞x22⅝″	225	531.00	501.50
54 D 1999 Z	§236B-3	480	0-560	10.0	9.7	9⅛x8¾x17¾″	76	209.70	198.05
54 D 1807 Z	§1256D-3Y	480	0-560	28.0	27.2	15⅛x13⅞x22⅝″	225	531.00	501.50

ATTENTION INDUSTRIAL BUYERS

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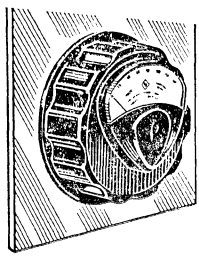
Allied Is the World's Foremost Supplier of Electronic Components to Industry

Superior Electric Variable Transformers

POWERSTAT METERED KNOBS

Accurate Voltmeter Remains Stationary Inside Knob Rim, Does Not Turn with Knob

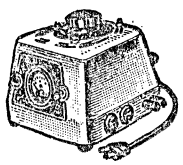


Metered knob assemblies for back-of-panel mounted variable transformers. Feature stationary, direct-reading voltmeter for accurate monitoring of voltage. For standard Powerstat variable transformers: 21-22, 116B-216B, 117B-217B, 126-226, 136B-236B, 146-246. Meter features ±3% accuracy. Type VS 150 for 120 V types; Type VS300 for 240 V types. Av. shpg. wt., 2 lbs.

54 D 2541. VS150 (0-150 V Scale)...43.00
54 D 2542. VS300 (0-300 V Scale)...43.00

TYPE UC1MB VOLTBOX® VARIABLE TRANSFORMER

- Direct-Reading Voltmeter
- Three Output Receptacles

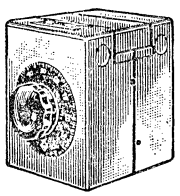


Offers continuously variable 0-140 V output from 120 volt, 50-60 Hz, single-phase AC source. Rated at 10 amps. Has direct reading voltmeter; line switch; line/load meter switch; two five-way binding posts; 3 output receptacles. Fuse protection. Includes 6-ft. 2-wire line cord and plug. 7 3/16x7 7/16x8 1/2".

54 D 2533 X. Shpg wt., 17¾ lbs....92.00

ENCLOSED POWERSTATS

- Lightweight Aluminum Enclosure for Easy Mounting

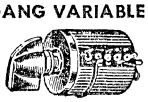


Single-phase variable transformers can be mounted on wall or front of panel, on bench or floor, or back of panel. Lightweight, functional aluminum enclosure permits easy wiring and servicing, excellent circuit protection. *50-60 Hz AC. †60 Hz AC only. Amperage and kVA ratings in table below are given for constant current load. Overall size, 6 1/16x5¾x6". Shpg. wt., 15 lbs.

Stock No.	Mfr's Type	Input Volts	Output Volt	Amp	kVA	EACH 1-5	6-24	25-99
54 D 1808	EN116B	120*	0-140	8	1.1	46.00	39.10	35.00
54 D 1809	EN117B	120†	0-120	10.0	1.2	48.00	40.80	36.00
54 D 1810	EN216B	240*	0-280	3.0	0.84	51.00	43.35	38.25
54 D 1811	EN217B	240†	0-240	4.4	1.1	53.00	45.05	39.75

TYPE 5-1011 SINGLE-GANG VARIABLE TRANSFORMER

- Max. Output Current of 2.6 Amperes

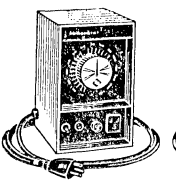


For 115V,400/1600 Hz single-phase. Variable output: 83-113 V, 98-130 V, 116-149 V. Low voltage output: 0.26 V. Line corrector output: 115 V with 90-113 V, 104-133 V, or 117-149 V inputs. 400/1600 Hz. Max. output current, 2.6 A. 1 13/16x1 13/16x3 9/16". 1 lb.

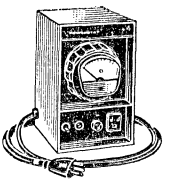
54 D 4353. 1-5.....Each 54.00
6-24.....Each 48.60 25-99...Each 45.90

POWERSTAT ENCLOSED LABORATORY TRANSFORMERS

- Integral Handle for Easy Portability
- Functional Design with Recessed Controls
- Front Panel Pilot Light, Output and Fuse



N10B, N21
N116B(L)



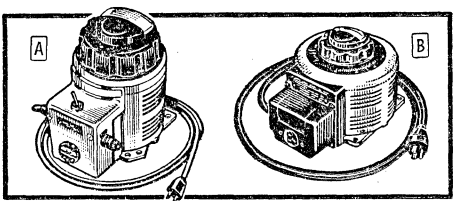
N1116BK
N116BLK

Portable AC voltage source for laboratory applications. With Powerstat variable transformers for zero waveform distortion, smooth control and linear output voltage. All except N10B have Powerkote coils for greater overload resistance and higher current ratings. Integral handle, provision for wall-mounting. Grounded NEMA cord-plug assembly, recessed front-panel controls. *constant impedance load. †metered knob. For single-phase 120 V AC input.

Stock No.	Mfr's Type	INPUT V	Hz	OUTPUT Constant Cur. Load V	Max. A	Max kVA	Size (HxWxD)	Shpg. Wt., Lbs.	EACH 1-11	12-99	100-499
54 D 4328	N10B	120	60	0-132	2.25	0.30	6 1/16x4 1/4x3 23/32"	5	28.00	23.80	21.00
54 D 4329	N21	120	50/60	0-140	4.5	0.63	8 7/16x5x5 9/16"	10	39.00	33.15	29.25
54 D 4330	N116B	120	50/60	0-140	10	1.4	9 5/16x5 3/8x6 3/8"	15	46.00	39.10	34.50
54 D 4331	N116BK†	120	50/60	0-140	10	1.4	9 5/16x5 3/8x7 13/32"	15	84.00	71.40	63.00
54 D 4334	N116BL	120	50/60	0-120	10, *13	1.2, *1.6	9 5/16x5 3/8x6 3/8"	15	46.00	39.10	35.00
54 D 4337	N116BLK†	120	50/60	0-120	10, *13	1.2, *1.6	9 5/16x5 3/8x7 13/32"	15	84.00	71.40	63.00

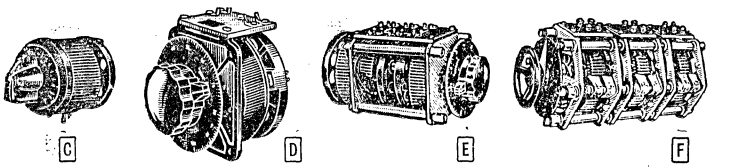
METERED-KNOB POWERSTAT VARIABLE TRANSFORMERS

- Voltmeter Reads 0 to 150 Volts
- Remains Stationary Inside Knob
- Full Scale Accuracy of ±3%



Each Powerstat incorporates a large, easy-to-read voltmeter stationary inside its control knob. Powerstats are especially suited for applications where close voltage control is necessary. Voltmeters have full scale accuracy of ±3%; are insensitive to stray magnetic fields; read from 0 to 150 volts AC. Units listed operate from 120 volt, 50-60 Hz AC input; provide continuously variable AC output of 0 to 140 volts. Have input cord, output receptacle and fuse except *Type VS136B is less cord and receptacle; but has terminals for screw, push-on, or solder connections. Type VS116B has On-Off switch. All have provision for limiting output voltage to line voltage values.

Stock No.	Mfr's Type	Fig.	Constant Current Load Max. Amps	Max. kVA	Dimensions	Wt., Lbs.	EACH 1-11	12-99
54 D 2544	VS116B	A	10.0	1.4	6 13/16x5 1/8x7 1/8"	12	69.00	58.65
54 D 2545 X	*VS136B	B	22.0	3.1	6 3/16x7 3/4x8 13/16"	24 1/4	105.00	89.25
54 D 2546 X	VS3PN136B	B	22.0	3.1	10 7/32x7 3/4x6 3/16"	26	125.00	106.25



400/800-CYCLE POWERSTAT® VARIABLE TRANSFORMERS

- Vibration, Shock, Inclination Resistant
- Operate at Altitudes to 50,000 Feet

High-frequency variable transformers for industrial and military applications. Perform the same task as a comparably rated 60 Hz unit but weigh one-third as much and occupy one-half the space. Meet MIL specs for environmental conditions. Operate at full rated load from —55°C to +50°C, but above +50°C must be derated per specifications. All are knob-operated, open construction except types with †square-frame construction. All types mount behind panel. All except 28-volt types have tap to permit over-voltage output of 17%. Three-phase types wye-connected.

SINGLE-PHASE UNITS

Stock No.	Mfr's Type	Fig.	Input Volts	Output Volts	Amp	Max. Size (HWD)	Wt., Lbs.	EACH 1-5	6-24	25-99
54 D 4317	3HS02UK	C	28	0-28	2.0	2 3/16x2x2 5/8"	1	45.00	40.50	38.25
54 D 4336	1HS01UK	C	120	0-120/140	1.0	2 11/16x2 3/8x3 5/32"	1 1/2	40.00	36.00	34.00
54 D 4339	†1HMQ03UK	D	120	0-120/140	3.0	4 3/4x4 1/4x3"	2 3/4	48.00	43.20	40.80
54 D 4340	†1HMQ07UK	D	120	0-120/140	7.5	4 3/4x4 1/4x3 3/4"	3 3/4	54.00	48.60	45.90
54 D 4343	1HL15UK	....	120	0-120/140	15.0	8 1/16x8 1/16x7 9/32"	14	117.00	105.30	99.45

THREE-PHASE UNITS

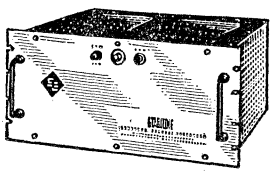
Stock No.	Mfr's Type	Fig.	Input Volts	Output Volts	Amp	Max. Size (HWD)	Wt., Lbs.	EACH 1	2-49
54 D 4348	2HMQ03UK-3Y	E	240	0-240/280	3.0	4 3/4x4 1/4x7 1/2"	8 1/2	140.40	132.60
54 D 4350 U	2HL15UK-3Y	F	240	0-240/280	15.0	8 1/16x8 1/16x16 3/4"	41	265.50	250.75

Variable Transformers and Power Controls

SUPERIOR FLEXIFORMER AND VOLTAGE REGULATORS

AUTOMATIC VOLTAGE REGULATORS

- Highly Reliable
- Solid-State Construction
- Distortion under 3%
- Instant Correction
- Can Be Rack Mounted



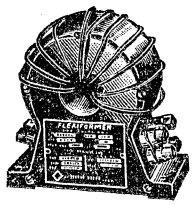
STABILINE

Stabiline Automatic Voltage Regulators of the advanced IES Series are highly accurate, fast correcting units featuring ultra-reliable solid-state circuitry.

Maintain output voltage within a 100 millivolt rms band for any combination of input voltage and load current changes and for changes for load power factor from 1.0 to 0 lagging. Time constant resp., 30 ms. Nom. output volts; 115, *220; input V range; 95-135, *195-255; output V range; 110-120, *220-240. Can be rack mounted.

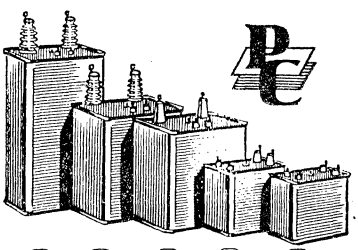
Stock No.	Mfr's Type	Max. Output Amps	Rated Output kVA	Max. Size (DWH)	Shpg. Wt., Lbs.	EACH 1	EACH 2-49
54 D 2537 ZF	IES9101	8.7	1.0	13¼x19x5⅜"	72	475.00	403.75
54 D 2538 ZF	IES9103	26.1	3.0	15⅞x19x8¾"	136	725.00	616.25
54 D 2539 ZF	IES9106	52.2	6.0	15⅞x19x12¾"	181	845.00	718.25
54 D 2540 ZF	IES9206*	26.1	6.0	15⅞x19x12¾"	171	950.00	807.50

FLEXIFORMER® TYPE TP-150 "DO-IT-YOURSELF" TRANSFORMER



Serves as current transformer and multiple source of AC voltages. Primary has high-impact plastic case molded over toroidal coil. User winds secondary to suit. Output, 150 VA max. Input for 110-120 V, 50-60 Hz AC. As current transformer, unit acts as secondary. Permits 1% accuracy ammeter readings up to 400 amps. Intermittent rating of 800 amps with slight decrease in accuracy. Color-coded 5-way binding posts. Reference chart and instructions. Wt., 5½ lbs.

54 D 2599 ....40.00



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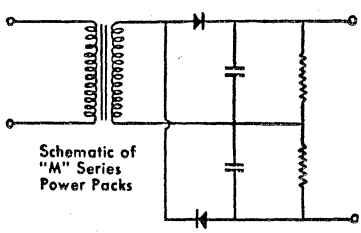


Schematic of "M" Series Power Packs

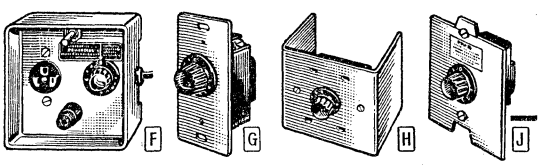
PLASTIC CAPACITORS "M" SERIES HIGH-VOLTAGE PACKS

Compact, hermetically sealed units. Use latest techniques and advanced materials to achieve long operating life and small package size. Selenium rectifiers avoid failure—design life is 40,000 hours at +35°C, 25,000 hours at +65°C. Require no warm-up time, may be mounted in any position. Can be used with a primary voltage input control to adjust output voltage from zero to full rated voltage. Input, 0-118 V AC, 50-500 Hz. Output, 0-1.5, 0-5 or 0-10 mA DC to rated voltage. Ripple, 1% rms or 2.7% peak to peak. Ambient rating, −55°C to +85°C (output at +85°C limited to 4 mA) except. *0 to +85°C. Maximum altitude. 10,000 feet operating, 50,000; feet nonoperating. Vibration, 10-55 cycles with 0.06" excursion for 2 hours in each plane except ‡ for applications not subject to excessive shock. Oil-filled containers are primed and lacquered per MIL-L-7178. Terminals are steatite, solder-seal type with solder lugs, except types rated at 30 kilovolts DC and above have corona spheres with 1¼" dia. holes to accept banana plug. §Have single high-voltage terminal and are furnished to deliver positive output potential relative to ground. Footed mounting brackets.

Stock No.	Mfr's Type	Fig.	DC Output kV	DC Output mA	Case Size H x W x D	Wt. Lbs.	EACH
54 D 4645	HV20-502M	E	2	5	3⅜x2¼x3¾"	2½	51.10
54 D 4750	HV25-103M	D	2.5	10	3¾x2¼x3¾"	3¼	63.90
54 D 4646	HV50-502M	D	5	5	3¾x2¼x3¾"	3¼	64.50
54 D 4751 X	HV50-103M	C	5	10	5⅞x3¾x4 9/16"	11	99.00
54 D 4752	HV100-152M	C	10	1.5	4½x3¾x3 3/16"	4¾	73.50
54 D 4647 X	HV100-502M	C	10	5	5⅞x3¾x4 9/16"	8⅛	99.00
54 D 4753 X	HV100-103M	A	10	10	8x3¾x4 9/16"	12⅛	144.00
54 D 4754	HV150-152M	C	15	1.5	5½x3¾x3 3/16"	5¾	99.00
54 D 4648 X	HV150-502M	B	15	5	6⅛x3¾x4 9/16"	12	125.50
54 D 4755 U	HV150-103M‡	E	15	10	8½x4 11/16x6"	23	192.00
54 D 4756 X	HV200-152M	C	20	1.5	5⅞x3¾x4 9/16"	8⅛	103.70
54 D 4649 X	HV200-502M	A	20	5	8x3¾x4 9/16"	12⅛	144.00
54 D 4757 U	HV250-103M‡*	D	25	10	12 3/16x5 5/8x7 11/32"	27	311.00
54 D 4758 X	HV300-152M	A	30	1.5	7½x3¾x4 9/16"	10½	182.50
54 D 4650 U	HV300-502M‡	E	30	5	8½x4 11/16x6"	23	192.00
54 D 4760 U	HV500-152M‡	E	50	1.5	8½x4 11/16x6"	19	223.00
54 D 4651 ZF	HV500-502M‡*	D	50	5	12 3/16x5 5/8x7 11/32"	45	311.00
54 D 4761 ZF	HV750-152M‡*§	...	75	1.5	12 3/16x5 5/8x7 11/32"	45	352.50

- DC Outputs from 2 to 75 Kilovolts
- Pass 50-Hour MIL-Q-151 Salt Spray Test
- Film-Type Long-Life Filter Capacitors
- Grain-Oriented Iron-Core Transformers
- Long Life-Design Selenium Rectifiers

LUTRON POWERDIAL SCR POWER CONTROLS



F G H J

Positive control of voltage, current, heat, motor speed and more. Precision SCR power controls features solid-state circuit—weigh just 1/10 as much and occupy only ½ the space of typical variable autotransformer controls. Have continuously adjustable output on either AC or DC. No brush burnout or wear. PD series has selector switch for AC, DC or off; fuse, 3-wire cord and receptacle. PDU series is suitable for panel mounting; may be wired for either AC or DC output with 2-wire connection. All units are for 60-Hz AC. All are bench models, except * panel mount.

Stock No.	Mfr's Type	Fig.	rms Amps AC	rms Amps DC	AC Volts Input	AC Volts Output	rms Output Volts DC	Size HxWxD	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-99
54 D 4850	PD-50	F	0-5	0-5	120	0-120	0-85	4½x4½x2½"	2	24.00	21.60	19.15
54 D 4851	PD-75	F	0-7.5	0-7.5	120	0-120	0-85	4½x4½x2½"	2	27.00	24.30	21.55
54 D 4852	PD-100	F	0-10	0-7.5	120	0-120	0-85	4½x6x2½"	2½	30.00	27.00	23.94
54 D 4853	PD-150	F	0-15	0-10	120	0-120	0-85	6x6x2½"	3	60.00	54.00	47.88
54 D 4858	*PDU-50	G	0-5	0-5	120	0-120	0-85	4x2x1⅝"	½	15.75	14.18	12.57
54 D 4859	*PDU-75	J	0-7.5	0-7.5	120	0-120	0-85	4x4x1⅝"	½	18.75	16.88	14.96
54 D 4860	*PDU-100	J	0-10	0-7.5	120	0-120	0-85	4x4x1⅝"	¾	30.00	27.00	23.94
54 D 4861	*PDU-150	J	0-15	0-10	120	0-120	0-85	4½x4½x3¾"	1	60.00	54.00	47.88
54 D 4862	*2PDU-50	H	0-5	0-5	240	0-240	0-170	4x2x1⅝"	½	30.00	27.00	23.94
54 D 4863	*2PDU-75	J	0-7.5	0-7.5	240	0-240	0-170	4x4x1⅝"	½	33.00	29.70	26.33
54 D 4864	*2PDU-100	J	0-15	0-7.5	240	0-240	0-170	4x4x1⅝"	¾	39.00	35.00	31.12

Staco Variable Autotransformers

ISOLATION AND AUTOTRANSFORMERS

Reliable and rugged, offer precise voltage control for today's industrial and laboratory uses with minimum maintenance and longer life due to conservative ratings. New proprietary process bonds commutator to core assembly for secure, stable surface, free of distortion under severe overload; also improves heat transfer away from critical brush contact area. Excellent regulation, no wave shape distortion. For 50-60 Hz except *60 Hz only with overvoltage output. †Factory connected for line voltage output. CSA Approved except§.

120-VOLT SINGLE-PHASE PANEL MOUNTING

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH	
			Volts	Amps	kVA			1-11	12-99
54 D 4307	171	A	*0-120/132	1.75	.23	2 13/16 x 2 9/16"	3	10.50	8.93
54 D 2579	251	A	*0-120/132	2.5	.33	2 13/16 x 2 9/16"	3½	11.25	9.56
54 D 1966	241	B	0-120/140	2.4	.33	3 1/4 x 3 1/4 x 1 5/16"	4	17.50	14.88

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH		
			Volts	Amps	kVA			1-7	8-23	24-99
54 D 4306	371	B	*0-120/140	3.75	.53	3 3/4 x 3 3/4 x 3 1/4"	5	15.75	14.18	13.39
54 D 1614	501	B	0-120/140	5.0	.70	3 3/4 x 3 3/4 x 3 5/16"	5	16.00	14.40	13.60
54 D 1967	601	B	0-120/140	6.0	.84	4½ x 4½ x 3 15/16"	6	21.00	18.90	17.85
54 D 1615	1010	C	0-120/140	10.0	1.4	5 1/16 x 5 x 4 3/16"	11	21.00	18.90	17.85
54 D 1616	1010CT	D	0-120/140	10.0	1.4	6 7/8 x 5 x 4 7/16"	11½	28.00	25.20	23.80

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH		
			Volts	Amps	kVA			1-5	6-23	24-99
54 D 4682 X	1510	E	0-120/140	15.0	2.1	6 1/8 x 6 5/8 x 4 3/8"	20	39.00	35.10	33.15
54 D 3580 X	2510	F	0-120/140	25.0	3.5	8 3/16 x 7 5/8 x 4 1/8"	25	57.00	51.30	48.45
54 D 3579 X	2510CT	G	0-120/140	25.0	3.5	9 5/8 x 7 5/8 x 4 1/8"	25	66.00	59.40	56.10

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH	
			Volts	Amps	kVA			1	2-49
54 D 1631 Z	5010	H	†0-140	50.0	7.0	12½ x 12½ x 6½"	60	140.00	119.00
54 D 3890 Z	5010CT§	H	†0-140	50.0	7.0	15 5/8 x 14 x 6½"	65	155.00	131.75

120-VOLT SINGLE-PHASE PORTABLE OR BENCH MODELS WITH CORD AND RECEPTACLE

Housed in rugged case and include pilot light, switch, fuse, line cord and plug with matching receptacle. 2PF models 2-wire cord, plug, and receptacle; 3PN, 3-wire grounded cord, plug, and receptacle *60 Hz only at over voltage. **60 Hz only. ‡Output voltmeter.

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH	
			Volts	Amps	kVA			1-11	12-99
54 D 0977	2PF171§	J	**0-132	1.75	.23	3 7/8 x 3 7/8 x 3½"	3½	20.00	17.00
54 D 3891	2PF371§	J	*0-120/140	3.75	.53	6½ x 6½ x 6½"	7	22.00	18.70
54 D 1617	2PF1010§	D	0-120/140	10.0	1.4	6 7/8 x 5 x 4 7/16"	12½	29.00	24.65
54 D 1618	3PN1010	D	0-120/140	10.0	1.4	6 7/8 x 5 x 4 7/16"	12½	33.00	28.05
54 D 1619 X	3PN2210§	G	‡0-140	22.0	3.1	10 3/4 x 7 5/8 x 4 1/8"	28	79.00	67.15

240-VOLT SINGLE-PHASE PANEL MOUNTING

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH		
			Volts	Amps	kVA			1-7	8-23	24-99
54 D 1621	1020	C	0-240/280	3.5	.98	5 5/16 x 5 x 4 3/16"	11	24.00	21.60	20.40
54 D 1622	1020CT	D	0-240/280	3.5	.98	6 7/8 x 5 x 4 7/16"	11½	32.00	28.80	27.20

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH		
			Volts	Amps	kVA			1-5	6-23	24-99
54 D 3894 X	1520	E	0-240/280	9.5	2.7	6 1/8 x 6 5/8 x 4 13/16"	23	39.00	35.10	33.15
54 D 3578 X	2520	F	0-240/280	10.0	2.8	8 3/16 x 7 7/8 x 4 1/8"	25	57.00	51.30	48.45

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH	
			Volts	Amps	kVA			1	2-49
54 D 1968 Z	5020	H	0-240/280	28.0	7.8	12½ x 12½ x 6½"	60	140.00	119.00
54 D 3895 Z	5020CT§	H	0-240/280	28.0	7.8	15 5/8 x 14 x 6½"	65	155.00	131.75

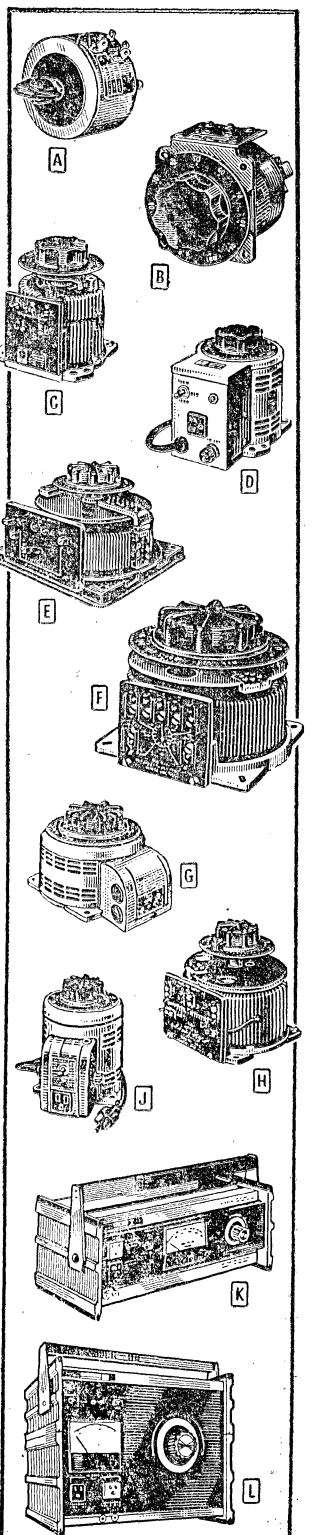
240-VOLT SINGLE-PHASE BENCH MODELS WITH CORD AND RECEPTACLE

Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH	
			Volts	Amps	kVA			1-11	12-99
54 D 1624	2PF1220§	D	**0-240	5.0	1.2	6 7/8 x 5 x 4 7/16"	12½	38.00	32.30
54 D 1625	2PF1020	D	0-280	3.5	.98	6 7/8 x 5 x 4 7/16"	12	33.00	28.05
54 D 1626	3PN1020	D	0-280	3.5	.98	6 7/8 x 5 x 4 7/16"	12	37.00	31.45

DELUXE VARIABLE TRANSFORMERS

Industrial, laboratory, and classroom uses. Diode-protected meters, permanently etched legends. 10 A, 120 VAC convenience outlet on front panel. Voltmeter. Circuit breaker.

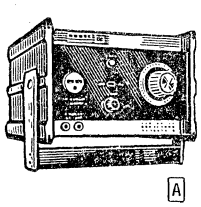
Stock No.	Mfr's Type	Fig.	Output			Size	Wt., Lbs.	EACH			
			Volts	Amps	kVA			1-6	7-24	25-49	50-99
54 D 4916 X	EJ201V	K	0-140	2.0	.28	7 3/8 x 15 7/16 x 5 7/8"	16	79.00	75.05	71.10	67.15
54 D 4917 X	EJ401V	L	0-140	4.0	.56	9½ x 12 15/16 x 6 3/8"	30	89.00	84.55	80.10	75.65
54 D 4918 X	EJ901V	L	0-140	9.0	1.25	11 1/4 x 14 9/16 x 6 5/8"	36	105.00	99.75	94.50	89.25



SEE PAGE 386 FOR STACO VARIABLE TRANSFORMERS

Variable Transformers, Power Supplies, Controls

STACO DELUXE VARIABLE TRANSFORMERS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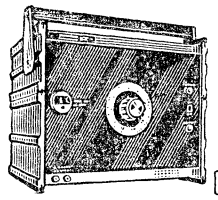
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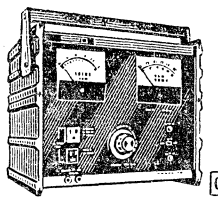
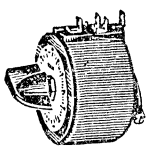

C

For industrial, laboratory and classroom uses. Diode-protected meters, permanently etched legends, positive stops on controls, pilot lights. 120-V input units have 10 A convenience outlet on front panel. Efficiencies up to 98%, accuracies up to ±2%. Better than 5% regulation is attainable. In table below, suffix V indicates front panel voltmeter; A, ammeter. All except E171 and E1010VA are U.L. Listed; all C.S.A. approved. 120 or 240 volts as shown, 50-60 Hz AC. Circuit breakers, except *fused. E1010VA has isolated 1-amp AC and DC outputs.

Stock No.	Mfr's Type	Fig.	Input Volts	Input Amps	Output Volts	Output Amps	Output kVA	Size H x W x D	Wt., Lbs.	EACH 1-6	7-24	25-49	50-99
54 D 1600	E171	A	120	10	*0-132	1.75	.23	4⅜x10³⁄₁₆x3⅝″	9	25.50	24.255	22.95	21.67
54 D 1601	E371	A	120	10	0-120/0-140	3.75	.52	6⅛x11¼x5″	12	27.00	25.65	24.30	22.95
54 D 1603 X	E1010	A	120	15	0-120/0-140	10	1.4	6⅛x11⁵⁄₁₆x5⅞″	19	40.50	38.475	36.45	34.42
54 D 1605 X	E1010VA	C	120	15	0-120/0-140	10	.14	10x15⅛x5⅞″	24	114.00	108.30	102.60	96.90
54 D 1607 X	E1020	A	240	10	0-280	3.5	.98	6⅛x11⁵⁄₁₆x5⅞″	19	47.50	46.075	43.65	41.22
54 D 1608 X	E1710	B	120	20	0-140	16	2.28	10x15⅛x6¼″	31	84.00	79.80	75.60	71.40
54 D 1609 X	E1720	B	240	15	0-280	8	2.24	10x15⅛x6¼″	31	86.00	81.70	77.40	73.10

OHMITE VARIABLE AND POWER TRANSFORMERS

OMITRAN® SMALL VARIABLE TRANSFORMERS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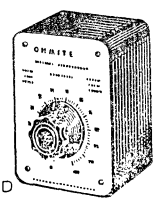

CASED

Low-power variable transformers offering a choice of six current ratings from 1 to 3 amperes. Deliver full rated current at any brush setting. Uniquely designed brushes contact a wide area of collector ring for positive current transfer. Snap-in brush contact assembly for easy replacement. Adjustable shaft (except VT2LN) may extend from brush or opposite side for greater mounting versatility. Three-way terminals for ¼″ push-on connectors or soldering. 60 Hz AC.

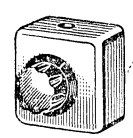
UNCASED STYLE (Mount with ⅜″-32 bushing)

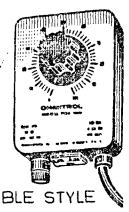
Stock No.	Mfr's Type	Max. Amps	Max. V Input	Output Volts	Dia. x L	Wt., Lbs.	EACH 1-9	10-24	25-49
54 D 3800	VT1	1.0	120	0-120/132	2⅞x1¹³⁄₁₆″	1½	9.00	8.10	7.65
54 D 3801	VT1N	1.2	120	0-120	2⅞x1¹³⁄₁₆″	1½	9.00	8.10	7.65
54 D 3802	VT02	1.75	120	0-120/132	2⅞x2⅝″	2¼	10.00	9.00	8.50
54 D 3803	VT02N	2.0	120	0-120	2⅞x2⅝″	2¼	10.00	9.00	8.50
54 D 1537	VT2LN	5.0	40	0-40	2⅞x2⅝″	2¼	12.25	11.03	10.41
54 D 3804	VT3	2.6	120	0-120/132	2⅞x2¹³⁄₁₆″	3	11.50	10.35	9.78
54 D 3805	VT3N	3.0	120	0-120	2⅞x2¹³⁄₁₆″	3	11.50	10.35	9.78
54 D 3806	6507	Brush Contact Assembly				1 oz.	1.00	.90	.85

CASED STYLE (*Fixed, †Portable)

54 D 1538	VT02E*	1.4	120	0-132	3⅜x2½x4¼″	2½	15.50	13.95	13.18
54 D 1547	VT02F†	1.75	120	0-132	3⅜x2½x4¼″	3¼	17.50	15.75	14.88

OHMITROL® SOLID-STATE POWER CONTROLS


TYPICAL COMPONENT


PORTABLE STYLE

Compact solid-state power controls adaptable to a wide variety of applications in motor control. Built-in trimmer sets starting point of the control voltage anywhere between 0 and 70 volts (for 1 kW models) or 0 and 200 volts (for 2 kW models). Smooth control from start to full line voltage. On-off line switch at end of control knob rotation. Two-way terminals accept quick connectors or soldering. RFI filtered output. Available in two styles: component style for mounting panel in equipment, use ⅜″-32 bushing on aluminum panel for heat sink; and self-contained portable model with grounded line cord and standard grounded AC receptacle. Load ratings: 120 VAC, 1 kW, 8.3 A; 240 VAC, 2 kW, 8.3 A.

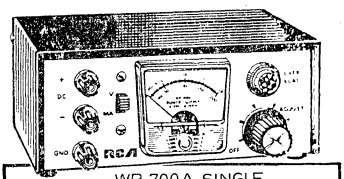
COMPONENT STYLE (L x W x D, 1¾x1¾x1″)¶

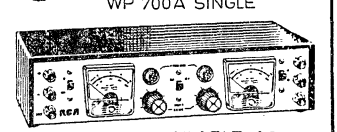
Stock No.	Mfr's Type	Input	Output	Trimmer Range	Shpg. Wt.,	EACH 1-9	10-24
54 D 1539	PCA-1000	120 V,	0-120 VAC	0-70 V	3 oz.	17.14	15.43
54 D 1540	PCD-1000	60 Hz AC	Pulsating 0-120 VDC and Full 120 VDC		3 oz.	31.84	28.66
54 D 1541	PCA-1020	240 V,	0-240 VAC	0-200 V	3 oz.	22.40	20.16
54 D 1542	PCD-1020	60 Hz AC	Pulsating 0-240 VDC and Full 240 VDC		3 oz.	36.70	33.30

PORTABLE STYLE (L x W x D, 4¼x3¼x1¹³⁄₁₆″)

54 D 1543	PCA-1001	120 V,	0-120 VAC	0-70 V	2 lbs.	25.36	22.82
54 D 1544	PCD-1001	60 Hz AC	Pulsating 0-120 VDC and Full 120 VDC		2 lbs.	42.56	38.30
54 D 1545	PCA-1021	240 V,	0-240 VAC	0-200 V	2 lbs.	32.56	29.30
54 D 1546	PCD-1021	60 Hz AC	Pulsating 0-240 VDC and Full 240 VDC		2 lbs.	48.50	43.56

RCA SOLID-STATE DC POWER SUPPLIES


WP 700A SINGLE


ALSO AVAILABLE AS WP 702A DUAL UNIT

- Full Line and Load Regulation for Low Ripple Output of Less Than 500 μV rms
- Continuously Adjustable Voltage

Model WP-700A. Constant-voltage DC power supply, ideally suited for circuit design, servicing, industrial and educational uses. Typical applications include: development of transistor and integrated circuit projects; production line testing of DC operated equipment; battery elimination for radio/phono servicing; component testing. Silicon transistor circuit for excellent stability.

Delivers continuously adjustable 0-20 volts at 0 to 200 mA. Negative feedback regulator circuit for low ripple output of less than 500 μV rms. Line regulation: less than 30 mV change in output voltage for line variation of 105-135 VAC. Load regulation: less than 50 mV change for 200 mA load change. Switchable front panel meter indicates voltage and current levels. Overload indicator. Full short circuit protection—even a dead short across output terminals will not damage unit.

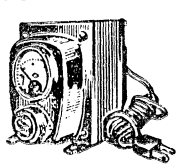
Has front panel five-way output terminals for positive DC, negative DC and ground. Three-wire AC line cord. Compact aluminum case, 4x6½x3″. Handsome blue-gray hammertone finish. For 105-135 V, 50-60 Hz AC. Shpg. wt., 3 lbs.

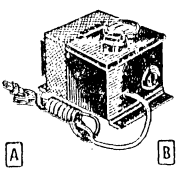
21 D 4560. 1-4 ..... Each 48.00
5-10 ..... Each 40.00

Model WP-702A. As above, but dual unit supply with each section electrically isolated. Has separate controls, output terminals and meter for each section. 6x12x3″. Shpg. wt., 5 lbs.

21 D 4561. 1-4 ..... Each 87.00
5-10 ..... Each 73.00

Voltage Regulators and Power Supplies


A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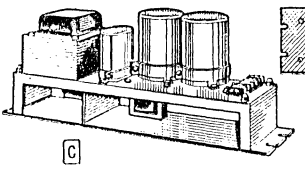
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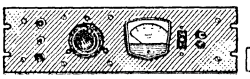

D

- Solid-State—MTBF of 150,000 Hours (minimum)
- Automatic Overload and Short Protection
- Fast Response and Recovery • Rack Mounting
- Barrier Terminal Strip • Convection Cooled

300-WATT VOLTAGE ADJUSTER

A TYPE T8394M. Designed for television sets. Rated 300 watts; can be used as step-up or step-down transformer to correct low or high line-voltage. Easily adjusted by 7-position rotary switch until built-in voltmeter reads 115 volts output. Input switch positions for 95, 100, 105, 110, 115, 120, 125 volts at 50-60 Hz. With 8-ft. cord with plug; output receptacle. Constant-duty type; can be operated for indefinite periods of time. 4¾x4x5". Shpg. wt., 5¼ lbs.

54 D 2514.....13.40

150-WATT VOLTAGE ADJUSTER

B TYPE T10306. 150-watt constant-duty transformer. Rotary tap-switch. Step-up ro step-down to correct low or high-voltage. Voltmeter indicates secondary voltage. Primary tapped for 65, 75, 90, 100, 115, 130 and 145 at 50-60 Hz. Secondary, 115 V. Silicon-steel laminations for low loss. 8-ft. cord, plug; output receptacle. Overall size, 4⅝x4x6¾". Mounting centers. 3¾x5¾". Shpg. wt., 6 lbs.

54 D 2501. 1-9 Ea. 20.80 10-99. Ea. 15.50

C REGULATED DC POWER SUPPLIES

For process control, computers—wherever constant DC voltage is needed. Continuous duty at full rated output, from 0° to 50° C. Single-phase input, 100-130 volts, 60 Hz AC (50 Hz and other ratings on Special Order). Isolation provided by Voltrol® transformer; 600 volts to chassis. Line regulation: ±1% for ±15% voltage change. Load regulation: ±2% for change from half load to full load. Max. ripple, 1% rms. Up to three identical supplies can be connected in series or parallel for higher ratings.

*Type PS-39600 is adjustable; illustrated by Fig. D.

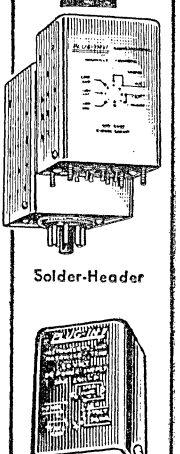
Stock No.	Mfr's Type	Output VDC	Output Amps	Size, Inches W	Size, Inches H	Size, Inches D	Wt., Lbs.	EACH 1-4	EACH 5-9	EACH 10-24
54 D 1289 X	PS-65424	6	10	19	3½	6½	15	149.00	134.35	119.00
54 D 1290 X	PS-47623	12	3	19	3½	7	17	106.10	95.45	84.85
54 D 1302 X	PS-41422	24	2	19	3½	7	12	109.20	98.30	87.35
54 D 4440 X	PS-41423	24	6	19	5¼	7	23	148.70	133.85	119.00
54 D 1291 U	PS-57353	24	10	19	5¼	8½	28	153.90	138.30	126.90
54 D 1303 U	PS-47125	24	15	19	7	7	35	161.20	145.10	128.95
54 D 4441 Z	PS-47173	24	25	19	7	9¾	62	202.80	182.50	162.25
54 D 1304 Z	PS-1-47127	24	50	19	12¼	8	95	332.80	299.50	266.25
54 D 1292 Z	PS-1-47461	24	75	19	21	8	175	442.00	397.30	353.60
54 D 1305 X	PS-47638	28	8	19	5¼	7	31	145.60	131.05	116.50
54 D 1306 Z	PS-47712	28	25	19	7	8¾	63	223.60	201.75	178.90
54 D 1307 X	PS-41424	48	4	19	5¼	7	25	138.30	124.50	110.65
54 D 1308 Z	PS-47519	48	10	19	7	9¾	52	182.00	163.80	145.60
54 D 1309 X	PS-41425	125	2	19	5¼	7	26	148.70	133.85	119.00
54 D 1293 Z	PS-47457	125	6	19	7	9¾	70	283.90	255.55	227.15
54 D 4430 U	PS-39600*	0-50	0-5	19	5¼	7½	21	174.70	167.45	167.45

DC POWER SUPPLIES by ROSEMOUNT PLUG-IN

MINIATURE POWER SUPPLIES WITH SILICON TRANSISTORS AND RECTIFIERS

Transistorized, with electronic overload protection. Plug-in or solder header construction. For transducer excitation, instrument systems. Pot. adjusts output. Line regulation: 2 mV DC or less. Load regulation: 5 mV DC or less. Ripple: 1 mV p-p or less. DC isolation to case exceeds 100 megs @ 200 V DC; Output imp. (DC to 1 kHz): 0-1 ohm. Transient response (full load change): less than 200 mV p-p within 50 μ-sec. Stability better than ±0.1% for 500 hours. Ambient air temperature: 30° to 130° F. Temp. coef.: 0.0008% degrees F. 3⅛x2⅛x2½". Solder type have 1½x1½" spacing. Plug-in type includes socket. For 105-130 V, 50-400 Hz AC. Av. shpg. wt., 3 lbs. **Contact Allied for prices on larger quantities.**

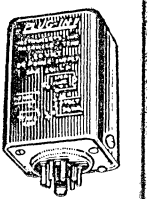
Stock No.	Mfr's Type	Stylo	Volts Range	Output mA	EACH 1-9	EACH 10-24	EACH 25-49
54 D 4388	SPS-2052-P	Plug-In	9-13	0-200	73.00	70.10	67.20
54 D 4389	SPS-2052-S	Solder Header	9-13	0-200	74.00	71.00	68.10
54 D 4390	SPS-2053-P	Plug-In	13-17	0-175	73.00	70.10	67.20
54 D 4391	SPS-2053-S	Solder Header	13-17	0-175	74.00	71.00	68.10
54 D 4392	SPS-2054-P	Plug-In	17-21	0-150	73.00	70.10	67.20
54 D 4393	SPS-2054-S	Solder Header	17-21	0-150	74.00	71.00	68.10
54 D 4394	SPS-2055-P	Plug-In	1-6.5	0-300	68.00	65.30	62.60
54 D 4395	SPS-2055-S	Solder Header	1.6-5	0-300	70.00	67.20	64.40
54 D 4407	SPS-2056-P	Plug-In	5-9	0-250	68.00	65.30	62.55
54 D 4408	SPS-2056-S	Solder Header	5-9	0-250	70.00	67.20	64.40
54 D 4411	SPS-2062-S	Solder Header	1-6.5	0-800	74.00	71.00	68.10
54 D 4417	SPS-2063-S	Solder Header	5-9	0-600	74.00	71.00	68.10


Solder-Header

DUAL MINIATURE POWER SUPPLIES WITH SILICON TRANSISTORS

Similar to above, but with separate positive and negative outputs, each adjustable ±5% by potentiometer. Line regulation, 3 mV; load regulation, 6 mV. Ripple, 1 mV rms. Temp. coeff., .015%/°F. Size, 2⅝x2⅜x3⅛". Wt., 2 lbs. **Contact Allied for prices on quantities larger than those shown.**

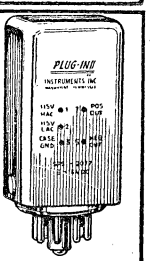
Stock No.	Type SPS-	Stylo	Volts (±)	mA	EACH 1-9	EACH 10-24	EACH 25-49
54 D 4418	2073D-P	Plug-In	12	0-75	83.00	79.70	76.40
54 D 4419	2073D-S	Solder Header	12	0-75	84.00	80.65	77.30
54 D 4420	2074D-P	Plug-In	15	0-65	83.00	79.70	76.40
54 D 4421	2074D-S	Solder Header	15	0-65	84.00	80.65	77.30


Plug-In

REGULATED DC POWER SUPPLIES

Solid-state DC power supplies for small electronic and instrumentation equipment. Output isolated from input, for either positive or negative output. Output impedance, 0.1 ohm. Operating range, 30°F to 120°F. Ripple, 1 mV rms. Slip-on case. Size, less plug, 2x2x3". Plug-in power supply includes octal receptacle. 105-125 V, 60 Hz AC. Av. shpg. wt., 2 lbs. **Contact Allied for prices on quantities larger than those shown.**

Stock No.	Type SPS-	Output VDC	Output mA	Regulation Line%	Regulation Load%	EACH 1-9	EACH 10-24	EACH 25-49
54 D 4356	2017-P	9	0-175	±0.05	±0.1	51.00	48.95	46.90
54 D 4209	2010-P	12	0-175	±0.05	±0.1	51.00	48.95	46.90
54 D 4218	2018-P	15	0-125	±0.04	±0.08	51.00	48.95	46.90
54 D 4357	2019-P	18	0-100	±0.04	±0.08	51.00	48.95	46.90
54 D 4358	2020-P	22.5	0.90	±0.02	±0.05	51.00	48.95	46.90
54 D 4219	2011-P	24	0.90	±0.02	±0.05	51.00	48.95	46.90
54 D 4359	2021-P	28	0.75	±0.02	±0.05	51.00	48.95	46.90



0.6-Watt Plug-In

0.6-WATT PLUG-IN MINIATURE DC POWER SUPPLIES

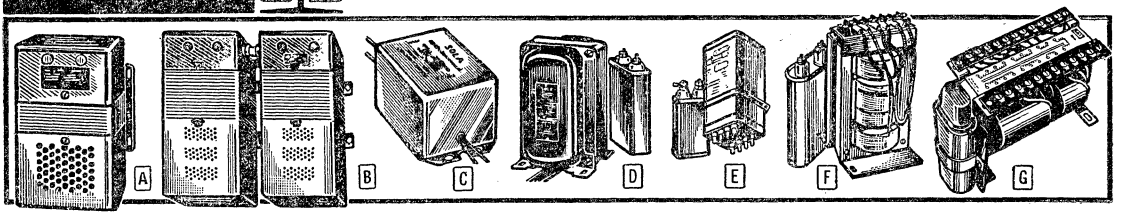
Plug-in DC supplies rated 0.6 watt, with potentiometer output adjustment at top of case. Momentary 5-minute automatic electronic short protection. Transformer is shielded between primary and secondary; AC isolation, 20 pF typ. DC isolation to case, over 100 megohms at 200 VDC. Ambient temperature, 20 to 125° F. Size, 1⅜x1⅜x2⅜". With octal receptacle. Av. wt., 1 lb. **Contact Allied for prices on larger quantities.**

Stock No.	Mfr's Type	Volts Range	Output mA	Regulation Line	Regulation Load	Ripple mV	Temp. Coeff. (%/°F)	EACH 1-9	EACH 10-24	EACH 25-49
54 D 4422	SPS-2077-P	9-13	0-50	3 mV	6 mV	1.5	0.015	48.00	46.10	44.20
54 D 4423	SPS-2078-P	13-17	0-40	3 mV	6 mV	1.5	0.015	48.00	46.10	44.20

Constant-Voltage Transformers

AUTOMATIC INSTANTANEOUS REGULATORS

SOLA ELECTRIC SB



FIVE TYPES OF CV TRANSFORMERS TO SOLVE ANY VOLTAGE PROBLEM

- Ultra-Fast Regulating Action
- Response Time 1½ Hz or Less
- Fully Automatic, Continuous Regulation
- No Manual Adjustments Required
- Self-Protecting Against Short Circuits
- Negligible External Field

Static-magnetic voltage regulators accept input variations up to ±15% and regulate to within ±1%. Completely automatic, no moving parts, no maintenance, no manual adjustment. Fast regulating action response time is usually 1½ Hz (25 milliseconds) or less. Short-circuit and overload protection inherent in design. CVS: Less than 3% harmonic distortion at full load, the newer CVS delivers a sine wave output and is recommended for all AC applications. CVN: Recommended as transformer for DC power supplies, delivers a square wave and average 20% rms harmonic content. CVE: Electronic power type for plate-filament service. Regulates to ±3% of nominal input. CVF: Electronic power type for filament service. 50-Hz models of CVE and CVF available. Figure codes: A—exposed core, end housings, screw-type terminals in outlet box; B—same as A but duplex; C—drawn case, integral capacitor; D—exposed core, end bells, separate capacitor; E—hermetically sealed case, separate capacitor; F—varnished core and coil, epoxy coated; G—Multi-tap™, screw lugs, mtg. plate. *Triplex. *Suffix F in Stk. No.—Shipped FOB whse. Elk Grove, Ill.*

TYPE CVS SINUSOIDAL TRANSFORMERS—60 Hz DUTY

Stock No.	Mfr's Type	Output Volts	Input Volts	VA	Nominal Dimensions (In.) Outline	Nominal Dimensions (In.) Mounting	Fig.	Use Adapter	Wt., Lbs.	EACH 1-4	EACH 5-9	EACH 10-49
54 D 2422	23-13-030-2	118	95-130	30	6 1/16x4x5 3/16	3x3 1/2	A	d	8	28.35	25.52	24.10
54 D 2517	23-13-060-2	118	95-130	60	6 15/16x4x5 3/16	3x3 1/2	A	d	10	33.60	30.24	28.56
54 D 2447	23-23-060-2	118	190-260/380-520	60	6 15/16x4x5 3/16	3x3 1/2	A	d	10	36.75	33.08	31.24
54 D 2518	23-22-112-2	118	95-130/190-260	120	8x4x5 3/16	3x3 1/2	A	d	14	43.05	38.75	36.59
54 D 2448	23-23-112-2	118	190-260/380-520	120	8x4x5 3/16	3x3 1/2	A	d	14	46.20	41.58	39.27
54 D 2646 X	23-22-125	118	95-130/190-260	250	9 5/8x5 3/8x7 7/16	4 1/8x4 3/4	A	b	28	58.80	52.92	49.98
54 D 2449 U	23-23-125	118	190-260/380-520	250	10x5 3/8x7 7/16	4 1/8x4 3/4	A	b	49	63.00	56.70	53.55
54 D 2647 U	23-22-150	118	95-130/190-260	500	12 7/16x9x6 7/16	5 5/8x8 1/8	A	c	45	91.35	82.22	77.65
54 D 2455 U	23-26-150	118/236	190-260/380-520	500	12 7/16x9x6 7/16	5 5/8x8 1/8	A	c	46	97.65	87.89	83.00
54 D 2414 Z	23-25-175	118/236	95-130/175-235 190-260	750	16 13/16x9x6 7/16	5 5/8x8 1/8	A	c	54	126.00	113.40	107.10
54 D 2451 Z	23-25-210	118/236	95-130/175-235 190-260	1000	17 15/16x9x6 7/16	5 5/8x8 1/8	A	c	72	153.30	137.97	130.31
54 D 2452 Z	23-26-210	118/236	190-260/380-520	1000	17 15/16x9x6 7/16	5 5/8x8 1/8	A	c	72	153.30	137.97	130.31
54 D 2412 Z	23-25-215	118/236	95-130/175-235 190-260	1500	19 5/16x10 11/16x9 1/32	3 15/16x11 3/4	A	.....	128	204.75	184.28	174.04
54 D 1991 Z	23-25-220	118/236	95-130/175-235 190-260	2000	19 15/16x12 3/4x10 11/16	4 1/2x11 3/4	A	.....	140	278.25	250.42	236.51
54 D 2453 Z	23-26-220	118/236	190-260/380-520	2000	19 15/16x12 3/4x10 11/16	4 1/2x11 3/4	A	.....	148	278.25	250.43	236.51
54 D 1992 Z	23-25-230-3	118/236	95-130/175-235 190-260	3000	21 7/8x12 3/4x10 11/16	6 7/16x11 3/4	A	.....	194	373.80	336.42	317.73
54 D 2454 Z	23-26-230	118/236	190-260/380-520	3000	21 7/8x12 3/4x10 11/16	6 7/16x11 3/4	A	.....	196	373.80	336.42	317.73
54 D 2458 ZF	23-25-250	118/236	95-130/175-235 190-260	5000	20 9/16x25 13/16x10 11/16	5 7/16x24 13/16	B	.....	335	583.80	525.42	496.23
54 D 1993 ZF	23-26-250	118/236	190-260/280-520	5000	20 7/8x25 13/16x10 11/16	5 7/16x24 13/16	B	.....	342	583.80	525.42	496.23
54 D 1994 ZF	23-28-275	118/236	190-260/280-520	7500	20 9/16x38 1/4x11 1/16	5 7/16x37 1/4	A*	.....	502	867.30	780.57	737.21

TYPE CVS SINUSOIDAL TRANSFORMERS—50 Hz DUTY

Stock No.	Mfr's Type	Output Volts	Input Volts	VA	Nominal Dimensions (In.) Outline	Nominal Dimensions (In.) Mounting	Fig.	Use Adptr. Kit	Wt., Lbs.	EACH 1-4	EACH 5-9	EACH 10-49
54 D 3786 X	23-22-612	118	95-130/190-260	120	8 3/4x5 3/8x7 7/16	4 1/8x4 3/4	A	b	21	49.35	44.42	41.95
54 D 3787 X	23-22-625	118	95-130/190-260	250	11 5/16x9x6 7/16	5 5/8x8 1/8	A	c	35	67.20	60.48	57.12
54 D 3788 Z	23-22-650-1	118	95-130/190-260	500	13x9x6 7/16	5 5/8x8 1/8	A	c	53	105.00	94.50	89.25

TYPE CVS SINUSOIDAL TRANSFORMER—400 Hz DUTY

For 115-V nominal input (95-130). 118-V regulated output. Up to 50° C ambient temperature. With oil-filled capacitor.

Stock No.	Mfr's No.	VA	Transformer Dimensions	Mtg. Ctrs.	Capacitor Dimensions (HWD)	Structure	Wt., Lbs.	EACH 1-4	EACH 5-9	EACH 10-49
54 D 4365	43-13-060	60	5 3/4x3 3/8x3 3/16"	2 3/4x2 3/16"	2 7/8x1 13/16x1 1/16"	F	6	42.00	37.80	35.70
54 D 4366	43-13-112	120	5 3/4x3 3/8x3 7/8"	2 3/4x2 7/8"	4 3/4x2 1/2x1 3/16"	F	8	57.75	51.98	49.09
54 D 4380	43-13-150	500	7 13/16x4 5/8x3 3/4"	3 3/4x2 3/4"	4 3/4x3 3/4x3 3/16"	F	19	98.70	88.83	83.90

TYPE CVN NORMAL HARMONIC TRANSFORMER—60 Hz DUTY

Stock No.	Mfr's Type	Voltage Rating Output	Voltage Rating Input	VA	Nominal Size (Inches) Outline	Nominal Size (Inches) Mounting	Fig.	Use Adapter Kit	Wt., Lbs.	EACH 1-4	EACH 5-9	EACH 10-49
54 D 1978	20-10-015	118	95-130	15	5 5/16x2 5/8x3 1/2	5 1/16x1 1/8	C	.....	4	16.80	15.12	14.28
54 D 2434	20-11-015	118	95-130	15	5 1/4x3 1/2x2 1/4	3x1 1/2	E	.....	4	23.10	20.79	19.64
54 D 2435	20-14-015	118	95-130	15	4 5/16x2 3/8x2 7/16	1 3/4x1 7/8	D	.....	3	15.75	14.18	13.39
54 D 2436	20-14-030	118	95-130	30	4 5/16x2 5/8x3 5/16	1 7/8x2 3/8x	D	.....	5	17.85	16.07	15.17
54 D 2657	20-13-030-2	118	95-130	30	6x4x5 3/16	3x3 1/2	A	d	7	23.10	20.79	19.64
54 D 2658	20-13-060-2	118	95-130	60	6 13/16x4x5 3/16	3x3 1/2	A	d	10	28.35	25.52	24.10
54 D 2438	20-14-060	118	95-130	60	4 13/16x3 1/8x3 7/8	2 1/2x3 7/8	D	.....	8	24.15	21.74	20.53
54 D 2440	20-14-112	118	95-130	120	4 13/16x3 1/8x4 15/16	2 1/2x3 7/8	D	.....	11	32.55	29.30	27.67
54 D 2659	20-13-112-2	118	95-130	120	7 3/8x4x5 3/16	3x3 1/2	A	d	12	37.80	34.02	32.13
54 D 2442	20-21-112-2	236	190-260	120	7 7/8x4x5 3/16	3x3 1/2	A	d	13	37.80	34.02	32.13
54 D 2618 X	20-13-115	118	95-130	150	8 7/8x5 3/8x7 7/16	4 1/8x4 3/4	A	b	22	45.15	40.64	38.38
54 D 2415 X	20-22-125	118	95-130/190-260	250	11 1/16x6 15/16x6 7/16	4 9/16x6 15/16	A	c	25	55.65	50.09	47.30
54 D 2416 X	20-22-150	118	95-130/190-260	500	12 5/16x6 15/16x6 7/16	4 9/16x6 1/8	A	c	36	87.15	78.44	74.08

Provide ± 1% Voltage Regulation

SOLA ELECTRIC SB

TYPE CVN NORMAL HARMONIC TRANSFORMER—60 Hz DUTY (Cont'd)

Stock No.	Mfr's Type	Voltage Rating		VA	Nominal Size (inches)		Fig.	Use Adapter Kit	Wt., Lbs.	EACH		
		Output	Input		Outline	Mounting				1-4	5-9	10-49
54 D 2418 Z	20-22-210	118	95-130/190-260	1000	15 1/8 x 6 15/16 x 6 7/16	4 9/16 x 6 1/8	A	.....	48	144.90	130.41	123.17
54 D 3198 Z	20-25-220	118/236	95-130/175-235/190-260	2000	20 x 10 1/2 x 10 11/16	4 9/16 x 9 1/2	A	.....	128	263.55	237.20	224.02
54 F 1988 ZF	20-25-230	118/236	95-130/175-235/190-260	3000	22 x 10 1/2 x 10 11/16	6 9/16 x 9 1/2	A	.....	170	357.00	321.30	303.45
54 D 1989 ZF	20-27-250	118/236	190-260/380-520	5000	21 x 14 1/2 x 14 3/8	7 x 13	A	.....	290	555.45	499.91	472.13
54 D 1990 ZF	20-26-310	118/236	190-260/380-520	10,000	21 x 29 7/16 x 14 3/8	7 x 27 15/16	B	.....	590	1048.95	944.06	891.61

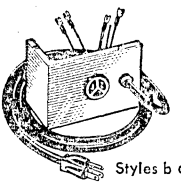
TYPE CVN NORMAL HARMONIC TRANSFORMER—50 Hz DUTY

Stock No.	Mfr's Type	Output Volts	Input Volts	VA	Nominal Dimensions (In.)		Fig.	Adapter Kit	Wt., Lbs.	EACH		
					Outline	Mounting				1-4	5-9	10-49
54 D 3750	20-10-515	118	95-130	15	5 9/16 x 2 5/8 x 3 1/2	5 1/16 x 1 1/8	C	.....	5	18.90	17.01	16.07
54 D 3751	20-14-530	118	95-130	30	4 13/16 x 3 1/8 x 3 7/32	2 1/2 x 2 5/32	D	.....	6	21.00	18.90	17.85

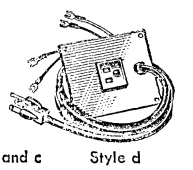
CORD/RECEPTACLE ADAPTER KITS FOR "A" STRUCTURES

Style Code	Stock No.	Mfr's Type	Input Cord	Output Recept	EA.
d	54 D 2673	999-104	2-wire	2-wire	4.75
b	54 D 2677	999-019	3-wire	3-wire	3.75
c	54 D 2675	999-009	2-wire	2-wire	3.25
c	54 D 2678	999-020	3-wire	3-wire	3.75

Provides the convenience of an input plug and output receptacle on CV transformers in "A" type housings. Easily wired to standard terminal arrangement located under top plate of housing. Determine correct part number by noting "Adapter Kit" in tabular lists for CVS and CVN types.



Styles b and c



Style d

TYPE CVE—FOR PLATE-FILAMENT SERVICE—50 TO 250 mA—60 Hz

100-130 V input. *Additional 6.3 V, 8 amp unregulated filament winding.

Stock No.	Mfr's Type	Typical Rectifier Tube	Av. DCV to Filter	Fil. Windings		Nominal Dimensions (In.)		Fig.	Wt., Lbs.	EACH		
				6.3 V	5.0 V	Outline	Mounting			1-9	10-49	50-99
54 D 2669	7104	5Y3	275 @ 50 mA	2.5A; CT	2 A	4 13/16 x 3 1/8 x 3 3/16"	2 1/2 x 2 1/8"	D	6	14.04	12.64	11.23
54 D 2670	7106	5Y3	385 @ 110 mA	3A; CT	2 A	4 13/16 x 3 1/8 x 3 15/16"	2 1/2 x 2 7/8"	D	8	17.28	15.55	13.82
54 D 2671	7107	5U4	380 @ 250 mA	4A*	3 A	7 x 4 1/2 x 4 7/8"	3 5/8 x 3 3/8"	D	19	32.40	29.16	25.92

TYPE CVF—FOR FILAMENT SERVICE—2.5 TO 25 AMPS—60 Hz

Stock No.	Mfr's Type	Output Volts	Input Volts	Amps	Nominal Dimensions (In.)		Fig.	Wt., Lbs.	EACH		
					Outline	Mounting			1-4	5-9	10-49
54 D 1976	20-01-015	6.0	95-130	2.50	5 9/16 x 2 5/8 x 3 1/2"	5 1/16 x 1 1/8"	C	4	16.80	15.12	14.28
54 D 1977	20-02-015	6.3	95-130	2.38	5 9/16 x 2 5/8 x 3 1/2"	5 1/16 x 1 1/8"	C	4	16.80	15.12	14.28
54 D 2445	20-04-015	6.3	95-130	2.38	4 15/16 x 2 3/8 x 2 7/16"	1 3/4 x 1 7/8"	D	3	15.75	14.18	13.39
54 D 3193	20-04-030-2	6.3	95-130/190-260	5.0	4 13/16 x 3 1/8 x 3 1/8"	2 1/2 x 2 1/16"	D	6	17.85	16.07	15.17
54 D 3194	20-04-065	6.3	95-130/190-260	10.0	4 13/16 x 3 1/8 x 3 3/4"	2 1/2 x 2 11/16"	D	8	23.10	20.79	19.64

[G] TYPE CVR MULTI-TAP ™ CV TRANSFORMER FOR PROTOTYPE POWER SUPPLIES (illus. opposite pg.)

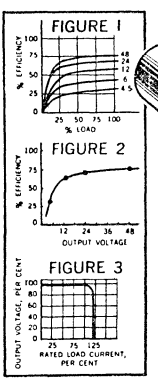
Constant-voltage transformer which provides over 100 regulated output voltages. Designed to operate in full-wave or bridge type circuits with stock silicon rectifiers. Output voltage remains constant within ±1% over input variations from 105 to 125 V. Other characteristics similar to type CVN. Ideal for prototypes, short-run production, and lab work where final required output is unknown.

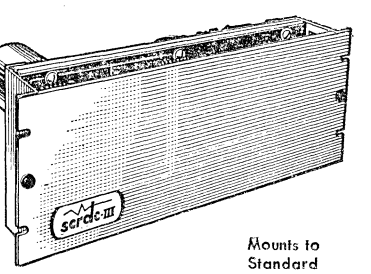
Stock No.	Mfr's Type	VA	Range of AC Volts	DC OUTPUT		Dimensions (H x W x D)	Wt., Lbs.	EACH		
				Resistive	Capacitive			1-4	5-9	10-49
54 D 4434	73-13-040	40	9.3-28.9	3.7V to 12.9V @ 2 amp 7.7V to 26.5V @ 1.25 amp	3.9V to 14.6V @ 2 amp 8.4V to 31.1V @ 1.25 amp	4 1/16 x 3 1/8 x 5 7/8"	6	27.82	25.04	23.65
54 D 4435	73-13-075	75	10.3-30.0	4.0V to 12.8V @ 4 amp 8.6V to 27.6V @ 2 amp	4.2V to 14.6V @ 4 amp 9.6V to 31.6V @ 2 amp	4 1/16 x 3 1/8 x 6 5/8"	8	36.38	32.74	30.92
54 D 4436	73-13-115	115	10.8-31.4	4.0V to 13.0V @ 8 amp 8.8V to 27.8V @ 4 amp	4.1V to 14.5V @ 8 amp 9.5V to 32.9V @ 4 amp	6 13/16 x 4 3/8 x 5 7/8"	13	50.29	45.26	42.75
54 D 4439 X	73-13-145	450	9.4-30.2	3.6V to 13.0V @ 22.5 amp 8.2V to 27.5V @ 12 amp	3.8V to 14.7V @ 22.5 amp 8.8V to 31.3V @ 12 amp	6 13/16 x 4 3/8 x 8 3/16"	30	100.58	90.52	85.49

SCRDC-III LINE AND LOAD REGULATED DC POWER SUPPLIES

Silicon-Controlled-Rectifier DC power supplies for use with logic circuitry or as bulk power source for point-of-use IC regulators. Static line regulation: ±0.1% or 50 mV for 100-130 V, 50-60 Hz single-phase input. Static load regulation: ±0.5% of nominal, zero to full load. Dynamic line regulation: ±1.0% for step line changes of ±10%. Dynamic load regulation: ±2.0% for step load changes of 25%. Frequency range: 47 to 63 Hz. Response: recovers from dynamic changes in less than 250 ms. For convection cooling from 0° to 40° C with variations of less than .05%/°C. Primary and secondary input transformer isolation. Less than 1% rms ripple. Efficiency: Figs. 1 and 2. Current limiting: Fig. 3.

Stock No	Mfr's Type	DC OUT. V	A	W	Panel Ht.	Mtg. Ctrs.	Max. Depth	Wt., Lbs.	EACH 1-4	5-9	10-24
54 D 1350	39312	4.5	10	45	7"	4"	8 1/4"	19	180.00	162.00	144.00
54 D 1351 U	39322	4.5	20	90	7"	4"	8 1/4"	29	210.00	189.00	168.00
54 D 1352 U	39313	6	10	60	7"	4"	8 1/4"	20	185.00	166.50	148.00
54 D 1353 U	39323	6	20	120	7"	4"	8 1/4"	30	215.00	193.50	172.00
54 D 1354 U	39314	12	10	120	7"	4"	8 1/4"	28	190.00	171.00	152.00
54 D 1355 U	39324	12	20	240	7"	4"	8 1/4"	32	225.00	202.50	180.00
54 D 1356 U	39316	24	10	240	7"	4"	8 1/4"	31	215.00	193.50	172.00



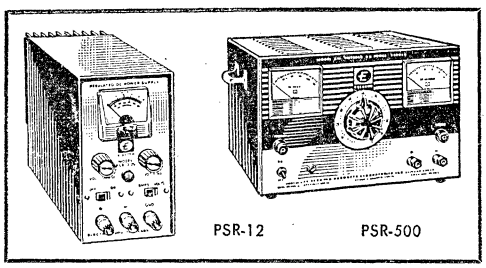


Mounts to Standard 19" Racks

- Static and Dynamic Line Regulation Within 1% of Full Voltage Range
- Current-Limiting with Output Voltage Collapsing on Overload

Heavy-Duty Power Supplies and Battery Chargers

ELECTRO REGULATED DC POWER SUPPLIES



Solid-state regulated power supplies designed for critical applications requiring constant output voltages. Output voltage remains constant at setting regardless of load or AC supply voltage fluctuations. Have adjustable output range with large, D'Arsonval meters to indicate voltage and current. Output terminals are isolated from cabinet. Input, 105-125 volts, 60 Hz AC. With operating instructions, schematic, and performance characteristics. See table below for full specifications.

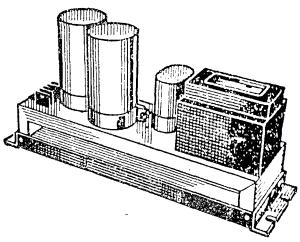
MODELS PSR-12-25 and PSR-12-50 REGULATED SUPPLIES. Line regulation ±0.01% +2mV over 105-125 volt input range. Load regulation 0.01%, no load to full load. Maximum ripple, 100 microvolts. Ideal for transistor circuit development and testing. Front panel controls/include: meter function switch coarse and fine voltage controls. Rack-mount for up to 4 units available.

PSR-500 REGULATED SUPPLY SERIES. Delivers approx. 500 watts of DC power, with line or load regulation of less than ±1%. Maximum ripple is 0.5%. Silicon rectifiers and SCR regulation. Fused input, circuit-breaker output.

*No-load to full load. †Regulation from 105-125 VAC.

Stock No.	Mfr's Type	Output		Line Regulation†	Load Reg.†	Max. Ripple, rms	Meters	DC Imp.* (ohms)	Size (HWD)	Shpg. Wt., Lbs.	EACH
		Volts	Current								
54 D 4487	PSR-12-25	0-25	0-500 mA	0.01% +2 mV	0.01%	100 μV	0-30V/300 mA	.006	5¼x3⅛x10″	7	110.00
54 D 4488	PSR-12-50	0-50	0-250 mA	0.01% +2 mV	0.01%	100 μV	0-60V/600 mA	.02	5¼x3⅛x10″	7	110.00
54 D 4463 Z	PSR-500-32	2-32	0-15A	0.1%	1.0%	0.5%	0-50V, 0-25A	.02	9¾x14¼x14¼″	89	395.00
54 D 4464 Z	PSR-500-55	2-55	0-10A	0.1%	1.0%	0.5%	0-75V, 0-15A	.06	9¾x14¼x14¼″	88	395.00
54 D 4468 Z	PSR-500-125	2-125	0-5A	0.1%	1.0%	0.5%	0-150V, 0-5A	.25	9¾x14¼x14¼″	93	425.00

SOLA CVDC FIXED-OUTPUT DC POWER SUPPLIES



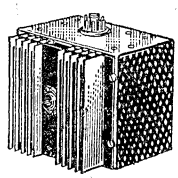
SOLA ELECTRIC SB

- Regulation to ±1%
- Overload Protection
- Dependable, Rugged
- Simple Operation

Designed for intermittent, variable or pulse loads. Excellent for controling line-voltage fluctions. Offers "brute force" DC voltage regulation to ±1% for ±15% input voltage variation. Constant voltage transformer (CVT) provides automatic current limiting in case of overload; short-circuit protection. Overloads cannot damage power supply or equipment. Normal rms ripple, 1% except *½%. Negative or positive DC polarity. Typical efficiency over 75%. Electrical circuits are insulated from ground to permit operation at either polarity. With panel for std. 19″ rack mounting. For 100-130 volts, 60 Hz AC input.

Stock No.	Mfr's Type	Output Ratings			Wt., Lbs.	EACH		
		V	A	W		1-4	5-9	10-49
54 D 4382 X	281513-2	6	10	60	27½	105.00	94.50	84.00
54 D 4383 X	281514-2	12	5	60	21½	105.00	94.50	84.00
54 D 2631 X	282124	12	10	120	31	120.00	108.00	96.00
54 D 4384 X	281515-2	18	5	90	26	110.00	99.00	88.00
54 D 2633 Z	282125	18	10	180	45	145.00	130.50	116.00
54 D 2636 X	281024-1	24	6	144	30	105.00	94.50	84.00
54 D 2634 Z	282126	24	10	240	48	125.00	112.50	100.00
54 D 4386 U	28626-1	28	8	224	41¼	120.00	108.00	96.00
54 D 2644 Z	282128	28	15	420	55	195.00	175.50	156.00
54 D 2637 X	281048	48	4	192	31½	110.00	99.00	88.00
54 D 4387 U	281561	48	10	480	44½	155.00	139.50	124.00
54 D 2645 Z	282129	48	20	960	95	250.00	225.00	200.00
54 D 2638 U	281125	125	2	250	41¾	125.00	112.50	100.00
54 D 2648 U	281200	200	1	200	39	110.00	99.00	88.00
54 D 2641 Z	281250*	250	1	250	54	115.00	103.50	92.00

LECTROTECH MODULE-TYPE SOLID-STATE DC REGULATED POWER SUPPLIES

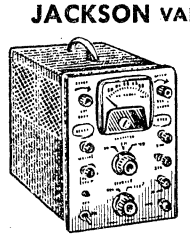


- Electrostatically Shielded Transformer
- Load and Line Voltage Regulation, .005 Volt Maximum
- Ripple and Noise, Less Than 500 Microvolts

Space-saving unit for test equipment, reference sources, bias supplies. Recovery, 50 μsec max. Op. ambient, 50°C max. Storage, −20° to +85°C. 100% overload protection. Isolated input; adjustable output. Overall, 5x5x5¼″; 3¾x2⅛″ mtg. ctrs. For 105/125/210/250 V, 48-440 Hz. 5½ lbs.

Stock No.	Mfr's Type	Output		EACH		
		VDC	Amps	1-5	6-11	12-Up
54 D 0322	1015	10-15	1	95.00	89.00	82.00
54 D 0323	1520	15-20	1	95.00	89.00	82.00
54 D 0324	2025	20-25	1	95.00	89.00	82.00
54 D 0325	2530	25-30	1	95.00	89.00	82.00

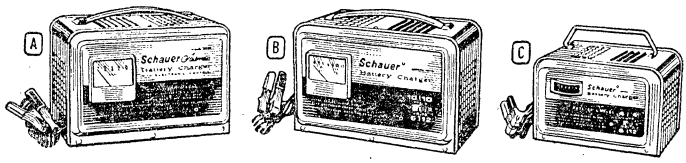
JACKSON VARIABLE REGULATED POWER SUPPLY



- Ripple Content Less Than 0.005%
- Has Heater, Negative and B+ Outputs
- Separate Negative and Regulated Output Controls

Model 607D. An excellent portable power supply furnishing heater, bias and regulated B+ voltages in one compact case. Regulated DC output: low range, 150 to 225 V at 0-100 mA; high, 225-300 V at 0-100 mA. Negative DC output: 30-275 V no-load; 15-150 V at 20 mA max. Heater: 6.3 V at 3 amps max. Ripple content at 100 mA less than 0.005%; less than 0.003% at 20 mA. Separate controls for negative and regulated outputs; built-in meter reads both. Sturdy metal case with chrome handle. Fused. 8¼x5⅜x10¼″. Power consumption, 105 watts. For 105-125 V, 60 Hz AC. 12 lbs.
54 D 4515 X.....78.35

SCHAUER 6 AND 12-VOLT BATTERY CHARGERS



A 6-AMP AUTOMATIC CHARGER

BR-112. Completely automatic. Just connect to battery and turn it on. Charging current automatically shuts off when battery is fully charged. Eliminates danger of battery damage due to overcharging. After battery is fully charged, "trickle" charge is introduced until turned off. Perfect for charging batteries left unattended for long periods of time. For charging 12-volt batteries only. 6-amp rate. Ammeter. Size, 9⅜x6x6½″. For 110-120 volts, 60 Hz AC.
19 D 4004. Shpg. wt., 9 lbs.....19.95

B 10-AMP DELUXE CHARGER

C-6612. Brings 6, 12-V batteries to full charge in 2 to 6 hours. Circuit breaker; voltage selector switch; ammeter. Steel case, 9⅜x6x6″. For 110-120 V, 60 Hz AC.
19 D 4010. Shpg. wt., 11 lbs.....16.95

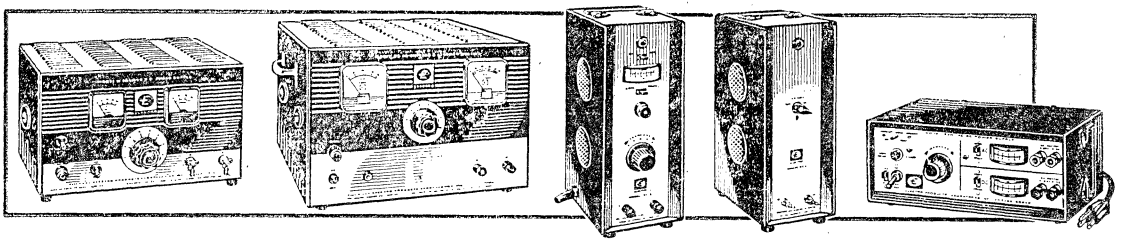
B-6612. 6-AMP CHARGER (Not illustrated).
19 D 4009. Above, but 6 amps. 9 lbs. 11.95

C 4-AMP BATTERY CHARGER

A-6612. Charges 6, 12 volt batteries. 4-amp charging rate recharges battery in 5 to 14 hours. Circuit breaker; ammeter; voltage selector switch. Steel case with carrying handle. 7¼x4½x5″. For 117 VAC.
19 D 4008. Shpg. wt., 6¼ lbs.....9.95

Electro Industrial Power Supplies

GENERAL-PURPOSE POWER SUPPLIES



D-612T, H PS-30 EC-2 EC-1 3301-U

Adjustable output supplies are rugged, versatile and reliable. Excellent for servicing transistorized mobile equipment; production line applications; research and development in industry, schools, labs. Space-saving design; low ripple. For 117 V, 50/60 Hz AC.

Model D-612T, Model H. D-612T boasts low-ripple output of less than 0.5% rms up to 5 amps—the maximum output in this price range. Excellent for servicing transistor radios, CB transceivers, battery charging, solenoids requiring up to 16 VDC. Model H is ideal as storage battery replacement in school labs and other high-current, low-voltage applications. Both types have voltage and current output meters. See table below for specifications.

Model PS-30. Adjustable 12-volt supply for servicing communications equipment. Useful in industrial and educational labs, thermoelectric cooling, electro-plating applications. Low ripple at maximum current. PS-30 has 30-amp output capacity. Constructed with easy-to-read voltage and current output meters. See table below for specifications.

Model EC-1. Low-cost source for school labs, industrial research, production testing, similar uses. Provides 12 VDC at 5 amps output. Less than 0.5% rms ripple at 5 amps. Four-position voltage adjustment switch: off, low, medium and high. Patented EPL rectifier conduction cooling. Pilot light. Has convenient wing-nut output terminals. Space-saving design operates in vertical or horizontal position. See table below for specifications.

Model EC-2. Excellent for many applications in research and development work. Also for tape deck, auto and transistor radio servicing. Low ripple—only 0.5% rms at 5 amps. Output, 0 to 16 VDC. Combination voltmeter/ammeter edge-view meter. Meter function switch. Pilot light, on-off switch. Insulated binding posts. Operates vertically or horizontally. See table below.

Model 3301-U. Specially designed for experiments in high school and college science labs. Provides both AC and DC low-voltage outputs, adjustable and metered. Isolated transformer. Line input fused; output circuit breaker. With 48-page manual. U.L. Listed.

*No load to full-load unless otherwise specified. †Output volts change for each amp of output current change.

Stock No.	Mfr's Type	Output Volts	Output Amps	Load Reg.* (V/A)†	Max. Ripple	Meters	DC Imp.* (ohms)	Size (HWD)	Shpg. wt., Lbs.	EACH
54 D 4462 X	D-612T	0-16 0-8	0-10 0-10	.44 (3-10A) .3 (3-10A)	.5%@5A 2%@10A	0-20V, 0-10A	.44 (3-10A) .3 (3-10A)	7x12x8½"	22	79.50
54 D 4467 X	H	12 (adj.) 6 (adj.)	0-10 0-20	.23 (3-10A) .15 (3-20A)	5% 5%	0-20V, 0-30A	.23 (3-10A) .15 (3-20A)	7x12x8½"	30	99.50
54 D 4479 Z	PS-30	12 (adj.)	0-30	.12 (6-30A)	1%	0-20V, 0-50A	.27	9¾x14¼x14¼"	68	198.00
54 D 4561	EC-1	12 (adj.)	0-5	1.4	.5%	None	1.4	10¾x4⅜x6½"	12	39.50
54 D 4560	EC-2	0-16	0-5	1.8	.5%	0-20V/10A	1.8	10¾x4⅜x6½"	11	49.50
54 D 4473	3301-U	0-16 DC 0-20 AC	0-3	1.8 (1-5A)	.5%	0-20V/0-5A DC 0-20V/0-5A AC	2.4 DC 0.5 AC	4¾x10¾x6½"	11	89.50

FILTERED HEAVY-DUTY POWER SUPPLIES

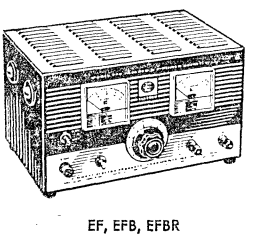
Non-regulated or semi-regulated power supplies. 2% accuracy meters. Supply well-filtered DC up to 125 volts, at 5 amps. For 117 volts, 50/60 Hz AC. Low ripple output. See table below for full data.

Model EF Dual Range DC Supply. Provides variable voltage 0-28 V or 0-14 V, at 5 amps continuous, 10 amps intermittent load. Uses selenium rectifiers. Panel-mounted voltmeter and ammeter.

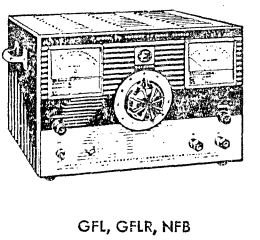
Models EFB and EFBR. Designed to meet the very-low-ripple requirements of transistor work. Continuously variable voltage control. Selenium rectifiers. Ripple filter. Model EFBR has standard EIA rack panel. Model EFB Federal Stock Number 6130-957-1450.

Model NFB. For continuous heavy-duty operation. Continuously variable output from 0 to 32 volts for loads to up to 15 amps. Ripple is less than 0.75% at 15 amps. Ripple filter circuit uses chokes and capacitors. Variable autoformer provides smooth voltage control. Bridge type silicon rectifiers.

Models GFL and GFLR. Low-cost semi-regulated, low ripple higher voltage supplies. Ideal for designing and testing DC appliances, telephone circuits, relays and solenoids, laboratory work. Continuously variable output 0-125 VDC to 5A. Silicon rectifiers. Overload protection. Model GFLR has standard EIA rack panel.



EF, EFB, EFBR



GFL, GFLR, NFB

Models PS-5 and PS-5R. Specially designed for 48-V applications. Delivers 550 watts well-filtered DC output continuously variable 0-55 volts, Ripple 0.5% at 10A. Silicon rectifiers. Model PS-5R has standard EIA rack panel.

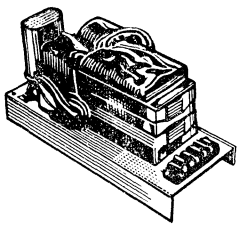
Model PS-1000. Similar to Models NFB, PS-5 and GFL, but has approximately twice the output power. Excellent load regulation and ripple characteristics for such powerful units. Rugged cabinet, voltage and current meters.

*No-load to full-load unless otherwise specified. †Output volts change for each amp of output current change at full load.

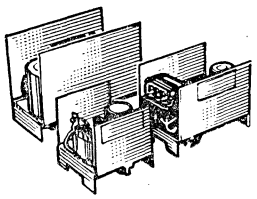
Stock No.	Mfr's Type	Output Volts	Output Amps	Load Reg.* (V/A)†	Max. Ripple	Meters	DC Imp.* (ohms)	Size (HWD)	Shpg. Wt., Lbs.	EACH
54 D 4461 X	EF	0-28 0-14	0-5 0-5	0.9 0.6	1% 1%	0-50V, 0-6A	.9 (1-5A) .6 (1-5A)	7x12x8½"	25	125.00
54 D 4452 U	EFB	0-32 0-16	0-4 0-8	1.25 1.0	0.1% 0.1%	0-40/20V, 0-10A	1.25 1.0	7x12x8½"	36	165.00
54 D 4454 Z	EFBR	0-32 0-16	0-4 0-8	1.25 1.0	0.1% 0.1%	0-40V/20V, 0-10A	1.25 1.0	8¾x19x8½"	47	185.00
54 D 4482 Z	GFL	0-125	0-5	1.5	0.5%	0-150V, 0-5A	1.5	9¾x14¼x14¼"	88	325.00
54 D 4483 Z	GFLR	0-125		1.5	0.5%	0-150V, 0-5A	1.5	10½x19x14¼"	100	345.00
54 D 4476 Z	NFB	0-32	0-15	0.4	0.75%	0-50V, 0-25VA	0.4	9¾x14¼x14¼"	84	300.00
54 D 4480 Z	PS-5	0-55	0-10	0.8	0.5%	0-75V, 0-15A	.8	9¾x14¼x14¼"	70	325.00
54 D 4481 Z	PS-5R	0-55	0-10	0.8	0.5%	0-75V, 0-15A	.8	10½x19x14¼"	89	345.00
54 D 4489 Z	PS-1000-125	0-125	0-8	1.0	1%	0-150V, 0-10A	1.0	9¾x14¼x19¼"	120	425.00

WANLASS Paraformer™ and Voltage Regulators

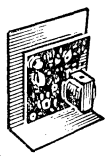
AC & DC VOLTAGE REGULATORS



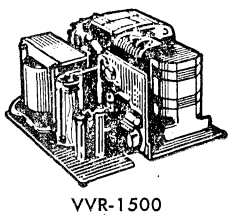
Model PEC-60
60 VA



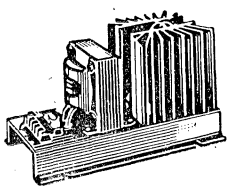
30, 60 and 120
OEM Power Supplies



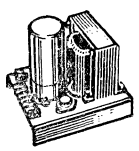
CVR-120



VVR-1500



C-3025



111 OEM 12-5

PARAFORMER . . A NEW CONCEPT IN AC POWER CONDITIONING

AC power transformer operates on new concept of parametric coupling—eliminates mutual inductance and flux coupling for greatly increased energy transfer. Provides voltage regulation and noise rejection of over 50 dB, over a frequency range of 0 to 1 MHz. Removes SCR-type switching transients, noise and other interference. Completely isolates line noise from the load and load noise from line. Entire unit consists only of primary winding, secondary winding, magnetic core and AC capacitor—no other components are used. Primary winding modulates inductance of the secondary transferring electrical power to sustain secondary oscillations and deliver power to the load. This results in far more efficient energy transfer than ferroresonant transformers. Also provides line voltage regulation of ±½%; overload protection and low-line voltage protection; over 50 dB attenuation for line and load noise. For 115 VAC, single-phase 60 or 400 Hz input, 60 or 400 Hz output. Numbers in Mfr's Type indicate output capacity in Volt-Amperes. **Contact Allied for quantity prices from 50-99.**

60 Hz UNITS

Stock No.	Mfr's Type PEC-	Size (HxWxD)	Wt., Lbs.	EACH 1-9	10-24	25-49
54 D 0475	60	4¼x4x9″	10	95.00	90.25	85.50
54 D 0476 U	150	5½x4x12″	21	150.00	142.50	135.00
54 D 0477 Z	500	7½x5x17″	50	225.00	213.75	202.50
54 D 0478 ZF	1000	7½x10x17″	85	425.00	403.75	382.50

400 Hz UNIT

Stock No.	Mfr's Type PEC-	Size (HxWxD)	Wt., Lbs.	EACH 1-9	10-24	25-49	50-99
54 D 0479	75	4¼ x5x6″	7	105.00	99.75	94.50	89.25

ECONOMY REGULATED DC POWER SUPPLIES

Regulated DC power supplies for a wide variety of uses. Voltage adjustment potentiometer facilitates selection of any output voltage from 3.6 to 60 VDC (voltage ranges in table at right). Line regulation: ±1% change in output for ±10% change in line voltage. Load regulation: ±1%, no load to full rated load. Low ripple output of 0.1%, 10 mV rms. Automatic short circuit protection. Floating output permits positive or negative grounding. Transformer taps. Open chassis construction for use in Manufacturer's Original Equipment Systems. Type 30-OEM: 30 watt power rating. 5x5x5″. Shpg. wt., 5 lbs. Type 60-OEM. 60-watt power rating. 7x5x7″. Shpg. wt., 7 lbs. Type 120-OEM: 120 watt power rating. Shpg. wt., 12 lbs.

Stock No.	Mfr's Type	Volt. Range V	EACH 1-9	10-24	25-49	50-99
54 D 0482	30-OEM-1	3.6-9	46.00	43.75	41.50	39.00
54 D 0483	30-OEM-2	9-17	46.00	43.75	41.50	39.00
54 D 0484	30-OEM-3	17-30	46.00	43.75	41.50	39.00
54 D 0496	30-OEM-4	30-60	46.00	43.75	41.50	39.00
54 D 0497	60-OEM-1	3.6-9	57.50	54.50	51.75	49.00
54 D 0498	60-OEM-2	9-17	57.50	54.50	51.75	49.00
54 D 0499	60-OEM-3	17-30	57.50	54.50	51.75	49.00
54 D 0850	60-OEM-4	30-60	57.50	54.50	51.75	49.00
54 D 0851	120-OEM-1	3.6-9	86.25	82.00	77.75	73.50
54 D 0852	120-OEM-2	9-17	86.25	82.00	77.75	73.50
54 D 0853	120-OEM-3	17-30	86.25	82.00	77.75	73.50
54 D 0854	120-OEM-4	30-60	86.25	82.00	77.75	73.50

FREQUENCY-INSENSITIVE AC VOLTAGE REGULATORS

Series VVR Variable Inductor Voltage Regulators. Frequency insensitive AC voltage regulators designed to replace ferroresonant type constant voltage transformers and silicon-controlled rectifier type AC regulators. Feature high reliability—no SCR's or other solid-state devices in power circuits. Particularly suited for remote and unattended locations. Provide true rms regulation with rms sensor and closed loop control. Provides line transient suppression by inherent characteristics of series inductor in the line. Ideal power source for high-starting or linear loads. Produces no spikes or conducted RFI. AC input, 105-130 V, 47-63 Hz AC single-phase. AC output: 120 volts rms, 1.5 kVA (maximum 2.8 kVA at 80% duty cycle). Line regulation, ±1% for 105-130 volt line change. Load regulation: ±1% for 400 watt to 1500 watt load change. Inherent short-circuit protection. Inherently suppresses 200 volt transients protecting both regulator and load. Operating temperature: 0° to +55° C, to +85° C with 200 CFM of forced-air cooling. Efficiency, 90% at full rated load. Overall size, 10x10x4.5″. Shpg. wt., 32 lbs. Order from table at right.

Model CVR-120 AC Voltage Regulator. Solid-state completely static voltage regulator priced considerably lower than ferroresonant-type constant voltage transformers. Small size and light weight (approximately 10% of comparably rated units). Frequency and power factor insensitive. Peak regulated—ideal for DC power supply pre-regulator applications. AC input, 100 to 130 volts, 47 to 420 Hz, single-phase. AC output: peak, 135 volts; rms, 105 volts typical at 130 volts input and full load. Peak regulation: line, ±1% for ±10% line voltage fluctuation; load, ±1% for no load to full rated load. Operating temperature: up to 40° C ambient at full load, higher with derating. Overall size, 4x4½x2½″. Shpg. wt., 10 oz. **Contact Allied for quantity prices from 50-99.**

Stock No.	Mfr's Type	Output VA	EACH 1-9	10-24	25-49
54 D 0486 U	VVR-1500	1500	172.50	164.00	155.25
54 D 0487 U	VVR-1501	1500	172.50	164.00	155.25
54 D 0488 U	VVR-1502	2000	172.50	164.00	155.25
54 D 0485	CVR-120	120	26.50	25.00	24.00

C-3000 SERIES SOLID-STATE RMS CLIPPING REGULATORS

True rms clipping regulators hold output voltage constant under varying conditions of line, load, frequency and power factor. Peak clipping regulation technique. Line regulation of ±½% rms for ±10% line change; load regulation of ±½% rms for load changes from 10% to full rated load. AC input: 100-130 V, 47-420 Hz single-phase. AC output: 115 V nominal (see VA ratings in Table). Response time, less than 50 μsec. Line transient suppression; excellent surge loading characteristics. Silicon transistor circuit. Temp. range, —20° C to +50° C. Efficiency, 75% minimum at nominal input voltage and full rated load. Type C-3003. 3x4x2.8″. Shpg. wt., 1½ lbs. Type C-3006. 3x4.12x3.75″. Shpg. wt., 2½ lbs. Type 3012. 3x 4.15x4.5″. Shpg. wt., 3.2 lbs. Type 3025. 5.5x6.12x 9.5″. Shpg. wt., 6½ lbs. Type 3050. 7.25x10.88x 6.12″. Shpg. wt., 10¼ lbs. Type C-3100. 7.25x 6.12x16″. Shpg. wt., 17½ lbs. **Contact Allied for quantity prices from 50-99.**

Stock No.	Mfr's Type	Output VA	EACH 1-9	10-24	25-49
54 D 0489	C-3003	30	39.00	37.00	35.00
54 D 0490	C-3006	60	46.00	43.75	41.50
54 D 0491	C-3012	120	51.00	48.50	46.00
54 D 0492	C-3025	250	89.50	85.00	80.50
54 D 0493	C-3050	500	125.00	118.75	112.50
54 D 0494 T	C-3100	1000	210.00	199.50	189.00

MARK III HIGH-PERFORMANCE DC POWER SUPPLIES

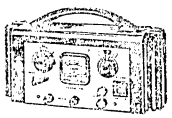
Low priced supplies for OEM applications. Feature ±0.1% line and load regulation; built-in automatic over-voltage and over-current protection. AC input, 115-230 V, 50-60 Hz single-phase. Output voltage adjustable 2%. Ratings are 5 V at 5 A; 12 V at 5 A; 24 V at 2.5 A. Overall size, 5½ 5x6″. Shpg. wt., 7 lbs.

Stock No.	Mfr's Type III-	Output Volts	EACH 1-9	10-24	25-49	50-99
54 D 0480	OEM-5-5	5	89.50	85.00	80.50	76.00
54 D 0481	OEM-12-5	12	89.50	85.00	80.50	76.00
54 D 0495	OEM-24-2-5	24	89.50	85.00	80.50	76.00

Allied Can Supply the Entire Line of Wanlass Products

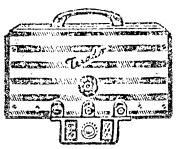
DC-to-AC Power Inverters and Power Supplies

MARK I INVERTER/CHARGER



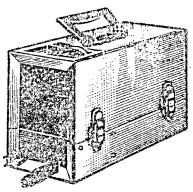
Delivers 117-VAC from 12-V battery; charges batteries at 10A, 20A or low trickle. Filtered AC output: 450 W cont., 500 W intermittent. Meter reads −50 to +50 A. 12½x6x6". Not for frequency sensitive equipment.
21 D 4265 U. Shpg. wt., 21 lbs.....104.50

"SUPREME" DC-TO-AC INVERTER



MODEL 50-153 Converts 12-VDC input to 117-volt, 60 Hz output at 175 watts (200 watts intermittent). Automatic frequency control. Remote control. Steel case. With battery cables. Size, 10¾x6x6".
21 D 4488 U. Shpg. wt., 25 lbs.....84.07

"TRAV-ELECTRIC" INVERTER



MODEL 50-160 A portable source of regular household electrical power, always ready to go. Has built-in battery and charger. Battery can be recharged from any AC outlet, or from auto cigarette lighter. Includes storage battery, inverter, charger, battery condition meter and copper-clad steel case. 125 watts AC continuous, 175 watts intermittent. 12x5½x8".
21 D 4503 U. Shpg. wt., 30 lbs....74.19

SOLID-STATE POWER/INVERTERS

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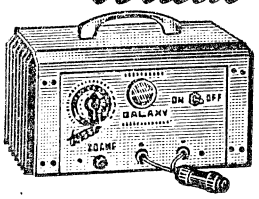
- Convert 12 VDC to 117 VAC
- Solid-State Dependability



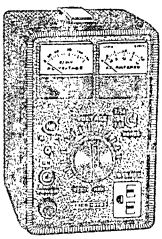
Operate 117-volt electrical appliances from a 12-volt storage battery. For car, trailers, boats, buses, mobile homes. *Automatic frequency control keeps output within ½ cycle for operating tape recorders and phonographs. Other models are for equipment not sensitive to frequency change. †Includes remote control. With cables. Heavy-duty copper-clad steel cases.

Stock No.	Mfr's Type	Capacity, Watts Cont.	Capacity, Watts Intr.	Size HxWxD	Wt., Lbs.	EACH
21 D 4499	50-205	140	175	6x10¾x6"	10½	46.94
21 D 4500	50-170	125	150	6x10¾x6"	10½	39.87
21 D 4501 U	50-129	275	300	6x12½x6"	20	78.15
21 D 4502 U	50-128	450	500	6x12½x6"	20	97.17
21 D 4383 U	*50-201	150	175	6x10¾x6"	20	100.51
21 D 4384 U	*50-200	175	200	6x10¾x6"	21	114.53
21 D 4382 U	*50-191	275	300	6x10¾x6"	30	158.40
21 D 4381 Z	†*50-202	550	600	6x10¾x13"	60	327.74

AC AND DC POWER SUPPLIES, BATTERY ELIMINATOR

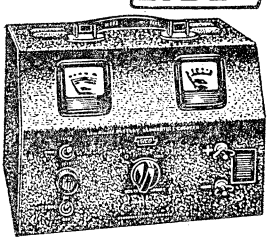
EICO

DELUXE CHARGER/ELIMINATOR



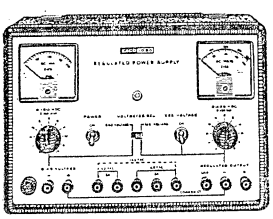
MODEL 1064-W. Delivers low-ripple DC for transistorized equipment; charges 6 or 12-V batteries; powers small appliances. Heavy-duty silicon rectifiers for low-ripple output. L-C filter with iron core choke. Front panel meters for DC voltage (0-20 V) and DC current (0-10 A or 0-20 A). Ammeter range switches as the voltage is selected. Output: 0-8 V at 10 A continuous, 20 A intermittent; 0-16 V at 6 A continuous, 10 A intermittent. 8½x5¾x7½". 105-125 V, 50-60 Hz AC. 16 lbs.
21 D 4119 X. Factory Assembled.....69.95
21 D 4120 X. 1064-K Kit Form..... 49.95

CHARGER/ELIMINATOR



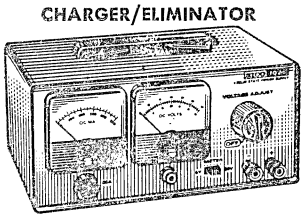
MODEL 1060-W. Provides electrolytically filtered, low-ripple DC output for 6 and 12-V auto radios. Output: 0-8 V at 10 A continuous, 20 A intermittent; 0-16 V at 6 A continuous, 10 A intermittent. Front panel voltmeter (0-20 V) and ammeter (0-20 A). Enclosed in rugged steel case. Size, 8¾x10½x7¾". 105-125 V, 60 Hz AC. 19 lbs.
21 D 4125 X. Assembled 59.95
21 D 4126 X. Kit Form..45.95

DUAL POWER SUPPLY



MODEL 1030-W. Dual independent, variable regulated DC outputs, plus dual unregulated filament voltages. Reg. B+: 0-400 VDC. Reg. Bias: 0 to −150 VDC. Filament V, 6.3 and 12.6 VAC at 3 A. DC voltmeter, milliammeter and standby switch. 13x8½x7". 110-120 V, 50-60 Hz. AC. 21 lbs.
21 D 4491 X. Factory Assembled.....99.95
21 D 4492 X. 1030-K. Kit Form.....69.95

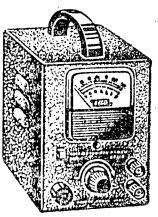
CHARGER/ELIMINATOR



MODEL 1025-W. Solid-state 0-30 VDC power supply. Output current: 150 mA (0-12 V); 200 mA (12-14 V); 300 mA (24-30 V) all with 0.005% maximum ripple. Front panel voltmeter and ammeter. With pilot lamp. Fuse protected. Size, 3¾x8x4¾". For 110-130 V, 60 Hz AC. Shpg. wt., 5 lbs.
21 D 4547 Factory Assembled.....49.95
21 D 4548. 1025-K. Kit Form.....34.95

SOLID-STATE 0-30 VDC POWER SUPPLY

- Ideal Power Supply for Transistorized Equipment
- Recharges Small Batteries
- Maximum Ripple at Full Load Is Only 0.005%

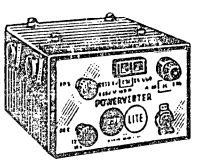


MODEL 1020-W. Features dual-range 0-6 V and 0-30 front panel voltmeter with positive and negative binding posts. Output: 0-12 V at 150 mA; 12-24 V at 200 mA; 24-30 V at 300 mA. Front panel fuse holder; power transformer for line isolation. Steel case, 5x4x5½". 117 V, 60 Hz AC. Shpg. wt., 5 lbs.
21 D 4121. Factory Assembled.....34.95
21 D 4122. 1020-K. Kit Form.....25.95

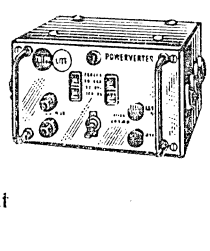
TRIPP-LITE SOLID-STATE POWER SUPPLIES

TRIPP LITE

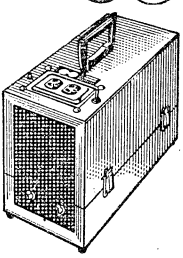
MODEL PV-200B. Dependable 200-watt solid-state power inverter and DC power supply continuously delivers 200 watts AC; intermittantly delivers 250 watts. Features four power transistors and exclusive "power boost" circuit that permits higher bursts of power for short-duration, heavy-duty jobs such as starting motor-type appliances. Unit includes battery charger. Mounts under or on top of dashboard, or in any convenient place inside vehicle. With fuse. Size, 3½x5x5" deep. For 12 VDC. Shpg. wt., 6 lbs.
21 D 4433.....49.95



MODEL PV-450 FC. For hash-free TV, FM, AM reception. DC-to-AC power inverter features 10 power switching transistors to meet exacting heavy-duty power requirements. Frequency control for constant 60 Hz AC. 450 W cont., 500 W intr.; 550 W instantaneous power surge. Includes front panel battery charge indicator. Handsome aluminum extrusion case gives inverter professional appearance and greater durability. Fused output protection assures dependable operation. With fuses. Size, 4x7x6" deep. For 12 VDC. Shpg. wt., 15¼ lbs.
21 D 4354 U.....149.50



MODEL PV-800-FC. Solid-state design eliminates reeds—no moving parts to wear out. High operating efficiency with frequency stability of ±1 Hz from 11 to 14 V. Output: 800 watts continuous; up to 900 watts intermittently; surges to 1000 watts. Neon light gives instant overload warning. Deluxe circuit includes 22 transistors, plus a zener diode for frequency regulation. Corrosion resistant case has carrying handle. Shpg. wt., 38 lbs.
21 D 4360 U.....290.00



Dearborn Wire and Cable

MADE TO RIGID INDUSTRIAL AND MILITARY SPECIFICATIONS

SINGLE CONDUCTOR HOOK-UP WIRE

Top-quality hook-up wire designed for use as internal wiring in all types of electrical and electronic equipment. Single-conductor, with white insulation, single-color stripe. Available from stock in 100′ or 1000′ spools. Type MW wire conforms to MIL-W-76B; is suitable for continuous operation between —40° and +80° C. Resistant to acids, alkalis, oils, flame, moisture, and solvents. Types B and E conform to MIL-W-16878D. Type B, plastic insulated, for continuous operation between —55° and +105° C. Type E, Teflon insulation; for continuous operation to +200° C. Available in these color combinations: white/black; white/brown; white/red; white/orange; white/yellow; white/green; white/blue; white/purple; white/gray. Specify desired color combination. Av. wt. per 100; 1½ lbs.

MIL-W-16878/D TYPE B STRIPED HOOK-UP WIRE

Conductor AWG	MIL Type	100′ Spools		1000′ Spools	
		Stock No.	EA.	Stock No.	EACH
#24 (7x32)	B-24	55 D 9668 C	1.47	55 D 9679 C	10.08
#22 (7x30)	B-22	55 D 9806 C	1.58	55 D 9681 C	10.86
#20 (7x28)	B-20	55 D 9807 C	1.77	55 D 9686 C	12.00
#18 (19x30)	B-18	55 D 9808 C	1.91	55 D 9687 C	14.68
#16 (19x29)	B-16	55 D 9809 C	2.30	55 D 9688 C	18.09

MIL-W-16878/D TYPE E STRIPED HOOK-UP WIRE

Conductor AWG	MIL Type	100′ Spools		1000′ Spools	
		Stock No.	EACH	Stock No.	EACH
#24 (7x32)	E-24	55 D 7404 CF	5.40	55 D 7405 CF	40.50
#22 (7x30)	E-22	55 D 7415 CF	6.23	55 D 7502 CF	47.25
#20 (7x28)	E-20	55 D 7443 CF	7.35	55 D 7444 CF	56.70
#18 (19x30)	E-18	55 D 7468 CF	10.35	55 D 7469 CF	81.75
#16 (19x29)	E-16	55 D 7500 CF	12.60	55 D 7501 CF	100.00

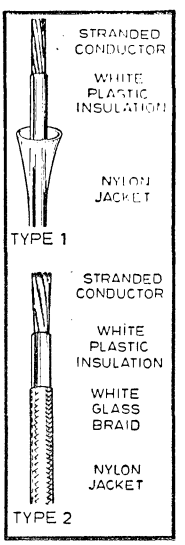
MIL-W-76B TYPE MW STRIPED HOOK-UP WIRE

Conductor AWG	MIL Type	100′ Spools		1000′ Spools	
		Stock No.	EA.	Stock No.	EACH
#24 (7x32)	MWC-24(7)	55 D 9662 C	1.41	55 D 9663 C	9.59
#24 (solid)	MWC-24(1)	55 D 9656 C	1.37	55 D 9657 C	8.03
#22 (7x30)	MWC-22(7)	55 D 9800 C	1.53	55 D 9664 C	11.01
#22 (solid)	MWC-22(1)	55 D 9804 C	1.32	55 D 9658 C	8.87
#20 (10x30)	MWC-20(10)	55 D 9801 C	1.73	55 D 9665 C	12.21
#20 (solid)	MWC-20(1)	55 D 9805 C	1.55	55 D 9659 C	10.71
#18 (16x30)	MWC-18(16)	55 D 9802 C	2.13	55 D 9666 C	16.25
#18 (solid)	MWC-18(1)	55 D 9660 C	1.91	55 D 9661 C	14.06
#16 (19x29)	MWC-16(19)	55 D 9803 C	2.81	55 D 9667 C	22.20

MIL-W-5086A UNSHIELDED AIRCRAFT WIRE FOR ELECTRICAL SYSTEMS

Type I (Mfr's Type 102219 through 101219). Single-conductor stranded tinned copper, white polyvinyl chloride insulation, clear nylon (polyamide) jacket overall. —55° to +105° C. Resists abrasives and chemicals. Type II (Mfr's Type 112219 through 111219). Same as Type I, but with white glass braid, clear nylon jacket overall. Type II (Mfr's Type 111049 through 110004). Same, but clear nylon (polyamide) jacket is replaced with flame retardent nylon lacquered braid overall. Available in 100′ or 1000′ Spools.

Mfr's Type	MIL Type Designation	Conductor Size	Conductor Strand	Nominal O.D.	Nom. Wt. Lbs. Per 100-Ft.	100′ SPOOLS Stock No.	100′ SPOOLS EACH	1000′ SPOOLS Stock No.	1000′ SPOOLS EACH
102219	AN-22	22	19/34	.068″	½	55 D 9089	2.51	55 D 9090	18.05
102019	AN-20	20	19/32	.078″	1	55 D 9091	2.69	55 D 9092	19.62
101819	AN-18	18	19/30	.088″	1	55 D 9093	3.14	55 D 9094	23.80
101619	AN-16	16	19/29	.098″	1¼	55 D 9095	3.66	55 D 9096	28.93
101419	AN-14	14	19/27	.117″	1¾	55 D 9097	4.70	55 D 9098	40.76
101219	AN-12	12	19/25	.137″	2½	55 D 9099	6.27	55 D 9101	54.86
112219	AN-22	22	19/34	.075″	¾	55 D 9102	3.33	55 D 9103	23.51
112019	AN-20	20	19/32	.085″	1	55 D 9104	3.66	55 D 9105	27.46
111819	AN-18	18	19/30	.095″	1¼	55 D 9107	4.09	55 D 9108	32.78
111619	AN-16	16	19/29	.105″	1½	55 D 9109	4.70	55 D 9111	37.62
111419	AN-14	14	19/27	.125″	1½	55 D 9112	5.70	55 D 9113	48.45
111219	AN-12	12	19/25	.143″	2¾	55 D 9114	7.27	55 D 9115 F	62.70
111049	AN-10	10	49/27	.189″	5	55 D 9116	12.54	55 D 9117 F	112.58
118133	AN-8	8	133/29	.240″	8	55 D 9118	25.08	55 D 9119 F	240.00
116133	AN-6	6	133/27	.293″	12	55 D 9121 F	32.78	55 D 9122 F	313.65
114133	AN-4	4	133/25	.355″	18	55 D 9123 F	43.18	55 D 9124 F	413.18
112665	AN-2	2	665/30	.425″	29	55 D 9135 F	63.41	55 D 9136 F	606.81
111817	AN-1	1	817/30	.470″	35	55 D 9137 F	80.22	55 D 9138 F	729.30
110001	AN-0	0	1045/30	.525″	42	55 D 9139 F	91.77	55 D 9140 F	888.18
110002	AN-00	00	1330/30	.590″	53½	55 D 9141 F	108.30	55 D 9144 F	1036.35
110003	AN-000	000	1661/30	.645″	66	55 D 9150 F	166.31	55 D 9152 F	1514.17
110004	AN-0000	0000	2104/30	.715″	81	55 D 9153 F	211.36	55 D 9154 F	1930.50



FLEXIBLE RUBBER SERVICE CORD AND POWER CABLE

Quality constructed. Have black rubber jackets, rubber insulation. All are U.L. Listed. For appliances, power tools, as extension cords. Specify standard spool length desired. Shpg. wt., 100′, 3 lbs.

Mfr's Type	U.L. Type	AWG Size	No. Cond.	Amps Cap.	Voltage Rating	O.D.	50′ Spools Stock No.	50′ Spools EACH	100′ Spools Stock No.	100′ Spools EACH	250′ Spools Stock No.	250′ Spools EACH
1182V	SV	18	2	5	300	.250″	55 D 8337	2.65	55 D 8349	5.29	55 D 8352	11.01
1182C	SJ	18	2	7	300	.300″	55 D 8322	4.43	55 D 8323	8.44	55 D 8324	14.32
1183C	SJ	18	3	7	300	.340″	55 D 8381	5.04	55 D 8382	10.08	55 D 8383	21.03
1184C	SJ	18	4	7	300	.360″	55 D 8402	8.95	55 D 8403	17.76	55 D 8404 X	37.26
1162C	SJ	16	2	10	300	.325″	55 D 8354	4.57	55 D 8361	9.14	55 D 8723	19.04
1163C	SJ	16	3	10	300	.355″	55 D 8438	7.15	55 D 8450	14.30	55 D 8566 X	29.45
1164C	SJ	16	4	10	300	.395″	55 D 9318	10.08	55 D 9323	20.16	55 D 9324 U	41.69
2142	S	14	2	15	600	.530″	55 D 8517	8.05	55 D 8508	16.10	55 D 8509 U	34.02
2143	S	14	3	15	600	.560″	55 D 8629	11.37	55 D 8630	22.74	55 D 8724 U	47.39
2144	S	14	4	15	600	.605″	55 D 9328	15.04	55 D 9329 U	30.08	55 D 9333 U	63.45
2122	S	12	2	20	600	.605″	55 D 8716	11.61	55 D 8717 U	23.22	55 D 8718 U	48.37
2123	S	12	3	20	600	.635″	55 D 9335	15.03	55 D 9337 U	30.06	55 D 9358 U	63.44
2102	S	10	2	25	600	.640″	55 D 8720	15.25	55 D 8721 U	30.49	55 D 8722 U	63.52
2103	S	10	3	25	600	.690″	55 D 8632	19.58	55 D 8633 U	39.15	55 D 8725 U	82.75

MTW TYPE PLASTIC INSULATED MACHINE TOOL HOOK-UP WIRE

600-volt. +90°C. Stranded copper conductor. U.L. Listed. Supplied in 500-ft. spools. *Available in black, red, green or white color. †Black, red and white only. ‡Black only. Be sure to specify choice of color when ordering.

Stock No.	Mfr's Type	Conductor AWG	Wt. Lbs.	EACH
55 D 7127C	461816*	#18(16x30)	5	7.91
55 D 7128C	461626*	#16(26x30)	7.1	11.42
55 D 7129C	461419*	#14(19x27)	10.5	15.51
55 D 7131C	461219*	#12(19x25)	14.5	22.35
55 D 7132CX	461019*	#10(19x.0234)	27.5	35.52
55 D 7133C	521419*	#14(19x27)	12.5	17.37
55 D 7134C	521219*	#12(19x27)	15.5	24.40
55 D 7135CX	521019*	#10(19x.0234)	25.5	37.80
55 D 7149CX	520819†	#8(19x.0295)	37	53.75
55 D 7340CU	530819†	#8(19x.0295)	43	57.30
55 D 7341U	530619‡	#6(19x.0372)	58.5	86.79
55 D 7344Z	530419‡	#4(19x.0469)	85	126.68
55 D 7345Z	530219‡	#2(19x.0591)	123	195.60

Order by Mail, Phone or Wire for Same-Day Shipment at OEM Prices

Dearborn Hook-Up Wire; Lamp and Power Cord

MANUFACTURED TO RIGID INDUSTRIAL AND MILITARY SPECIFICATIONS

MIL-W-76B HOOK-UP WIRE

Type MW. Uncovered. Rated 1000 volts. +80°C. Tinned copper conductor, polyvinylchloride insulation. Wall thickness, .016". In brown, red, orange, yellow, green, white, black, blue, gray and violet—specify color.

Mfr's Type	Conductor AWG	MIL Type	Nom. O.D.	100' Spools Stock No.	100' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
302407	#24 (7x32)	MWC24(7)U	.058"	55 D 9371 C	1.26	55 D 9372 C	8.08
302401	#24 (solid)	MWC24(1)U	.055"	55 D 9368 C	1.22	55 D 9369 C	6.52
302207	#22 (7x30)	MWC22(7)U	.065"	55 D 9724 C	1.39	55 D 9725 C	9.50
302201	#22 (solid)	MWC22(1)U	.059"	55 D 9735 C	1.17	55 D 9736 C	7.37
302010	#20 (7x28)	MWC20(10)U	.073"	55 D 9727 C	1.58	55 D 9728 C	10.72
302001	#20 (solid)	MWC20(1)U	.066"	55 D 9737 C	1.40	55 D 9738 C	9.22
301816	#18 (16x30)	MWC18(16)U	.080"	55 D 9730 C	1.98	55 D 9731 C	14.75
301801	#18 (solid)	MWC18(1)U	.074"	55 D 9374 C	1.76	55 D 9375 C	12.55
301619	#16 (19x29)	MWC16(19)U	.091"	55 D 9733 C	2.66	55 D 9734 C	20.70

MIL-W-16878/D TEFLON HOOK-UP WIRE

Type E. 600-volt. +200°C. Silver-plated copper conductor; Teflon insulation. Resistant to heat, moisture, solvents. In black, white, brown, red, orange, yellow, blue, green, gray, violet—specify color.

SPECIFICATIONS

Gauge	Stranding	O.D.	Gauge	Stranding	O.D.
#32	(7x40)	.029"	#22	(7x30)	.052"
#30	(7x38)	.032"	#22	(19x34)	.052"
#28	(7x36)	.035"	#20	(7x28)	.061"
#26	(7x34)	.041"	#20	(19x32)	.061"
#24	(7x32)	.046"	#18	(19x30)	.070"
#24	(19x36)	.046"	#16	(19x29)	.080"

Mfr's Type	Gauge Strand	100' Spools Stock No.	100' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
13207	32(7)	55 D 9401 C	3.60	55 D 9402 C	23.55
13007	30(7)	55 D 9404 C	3.60	55 D 9405 C	23.55
12807	28(7)	55 D 9748 C	3.75	55 D 9436 C	24.90
12607	26(7)	55 D 9750 C	4.13	55 D 9437 C	28.35
12407	24(7)	55 D 9752 C	4.35	55 D 9439 C	30.00
12419	24(19)	55 D 9407 C	5.18	55 D 9408 C	36.75
12207	22(7)	55 D 9754 C	5.18	55 D 9441 C	36.75
12219	22(19)	55 D 9411 C	5.70	55 D 9413 C	41.48
12007	20(7)	55 D 9756 C	6.30	55 D 9444 C	46.20
12019	20(19)	55 D 9416 C	6.90	55 D 9417 C	49.50
11819	18(19)	55 D 9758 C	9.30	55 D 9448 C	71.25
11619	16(19)	55 D 9419 C	11.55	55 D 9434 C	89.50

U.L. SEMI-RIGID PLASTIC INSULATED WIRE

300-volt. +80°C. Tinned copper conductor. Available in black, red green or white—specify color.

Mfr's Type	Conductor AWG	Wt., Lbs. 1000'	500' Spools Stock No.	500' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
422601	#26(1x26)	1.5	55 D 7347 C	4.41	55 D 7364 C	7.60
422401	#24(1x24)	2.2	55 D 7350 C	3.90	55 D 7365 C	6.61
422201	#22(1x22)	3	55 D 7351 C	4.47	55 D 7366 C	7.74
422001	#20(1x20)	4.5	55 D 7352 C	5.45	55 D 7367 C	9.67
421801	#18(1x18)	5.5	55 D 7353 C	6.95	55 D 7368 C	12.55
422607	#26(7x34)	1.5	55 D 7354 C	4.79	55 D 7369 C	8.38
422407	#24(7x32)	2.2	55 D 7355 C	4.34	55 D 7371 C	7.47
422207	#22(7x30)	3	55 D 7356 C	4.85	55 D 7373 C	8.49
422007	#20(7x28)	4.6	55 D 7357 C	5.91	55 D 7374 C	10.67
422010	#20(10x30)	4.6	55 D 7358 C	6.11	55 D 7375 C	11.01
421807	#18(7x26)	5.5	55 D 7359C	7.25	55 D 7376 C	13.18
421816	#18(16x30)	7	55 D 7361C	7.53	55 D 7377 C	13.84
421626	#16(26x30)	9	55 D 7363C	9.32	55 D 7378 C	17.41

MIL-W-16878/D VINYL HOOK-UP WIRE

Type B. 600-volt. +105°C. Tinned copper conductor; vinyl insulation. Excellent dielectric characteristics. In black, white, brown, red, orange, yellow, blue, green, gray and violet—specify color.

Mfr's Type	Conductor AWG	100' Spools Stock No.	100' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
173207	#32 (7x40)	55 D 9378 C	1.53	55 D 9385 C	11.06
173007	#30 (7x38)	55 D 9386 C	1.29	55 D 9387 C	8.79
172807	#28 (7x36)	55 D 9388 C	1.28	55 D 9389 C	7.97
172607	#26 (7x34)	55 D 9392 C	1.32	55 D 9393 C	9.21
172407	#24 (7x32)	55 D 9394 C	1.32	55 D 9395 C	8.59
172207	#22 (7x30)	55 D 9739 C	1.43	55 D 9740 C	9.36
172007	#20 (7x28)	55 D 9741 C	1.62	55 D 9742 C	10.49
171819	#18 (19x30)	55 D 9743 C	1.76	55 D 9744 C	13.18
171619	#16 (19x29)	55 D 9745 C	2.14	55 D 9746 C	16.58

MIL-W-16878D POLYVINYLCHLORIDE HOOK-UP WIRE

Type D. 3000-volt. +105°C. Stranded copper. White only.

Mfr's Type	Conductor AWG	100' Spools Stock No.	100' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
231419	#14 (19x27)	55 D 7251	4.05	55 D 9252	40.40
231219	#12 (19x25)	55 D 7254	6.60	55 D 7255 U	65.91
231036	#10 (36x26)	55 D 7257	8.73	55 D 7258 U	87.18
238133	#8 (133x29)	55 D 7274	23.11	55 D 7268 Z	222.55
236133	#6 (133x27)	55 D 7270	29.06	55 D 7271 Z	279.25

U.L. PLASTIC INSULATED HOOK-UP WIRE

600-volt. +105°C. Stranded tinned copper conductor; polyvinylchloride insulation. B after part no. indicates bonded Tinned Copper. Available in black, red, green or white—specify color.

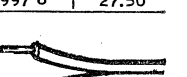
Mfr's Type	Conductor AWG	Wt., Lbs 1000'	500' Spools Stock No.	500' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
412207	#22(7x30)	6	55D7379C	6.08	55D7397C	10.95
412207B	#22(7x30)	6	55D7380C	6.83	55D7408C	12.45
412010	#20(10x30)	7.5	55D7381C	7.50	55D7413C	13.80
412010B	#20(10x30)	7.5	55D7383C	8.25	55D7418C	15.30
411816	#18(16x30)	9.8	55D7384C	9.20	55D7419C	17.18
411816B	#18(16x30)	9.8	55D7385C	9.95	55D7421C	18.68
411626	#16(26x30)	14	55D7386C	12.30	55D7422C	23.40
411441	#14(41x30)	20.3	55D7389C	16.65	55D7423CX	32.10
411265	#12(65x30)	29	55D7392C	27.35	55D7439CX	53.45
411000	#10(105x30)	55	55D7393CX	40.67	55D7463CU	80.30
418133	#8(133x29)	74	55D7396CX	51.45	55D7464CZ	99.90

RUBBER (SP) AND PLASTIC (SPT) LAMP CORD

Consist of two parallel #18 stranded copper wires. All types are polarity-ribbed. U.L. Listed. Available in 25, 100, 500 and 1000 foot spools. Specify spool length desired from table below. Shpg. wt. per 100', 3 lbs.

Mfr's Type	Type	Jacket	Color	100' Spools Stock No.	100' Spools EACH	500' Spools Stock No.	500' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
1182S	SP	Rubber	Brown	55 D 7984	3.91	55 D 7986	18.00	55 D 7987 U	36.00
1182S	SP	Rubber	Black	55 D 7999	3.91	55 D 8266	18.00	55 D 8267 U	36.00
1182T	SPT	Vinyl Plastic	Brown	55 D 7989	3.21	55 D 7991	13.75	55 D 7992 U	27.50
1182T	SPT	Vinyl Plastic	Black	55 D 7979	3.21	55 D 7981	13.75	55 D 7982 U	27.50
1182T	SPT	Vinyl Plastic	Gray	55 D 8289	3.21	55 D 8347	13.75	55 D 8348 U	27.50
1182T	SPT	Vinyl Plastic	*White	55 D 7994	3.21	55 D 7996	13.75	55 D 7997 U	27.50

"JUKE BOX" SPEAKER CABLE



Type A has two parallel 24-gauge conductors, both stranded—one tinned, one bare. Plastic insulation. Has .058x.115" O.D. Available in gray or clear—specify color when ordering. Type B has two parallel 18-gauge conductors, 41x34 stranded. Has .115x.215" O.D. Available in brown, black, white or gray—specify color desired when ordering. Shpg. wt. per 100 feet: 24 gauge, 1 lb.; 18 gauge, 2½ lbs.

Mfr's Type	Type	Gauge	100' Spools Stock No.	100' Spools EACH	500' Spools Stock No.	500' Spools EACH	1000' Spools Stock No.	1000' Spools EACH
1242T	A	24	55 D 9912 C	1.56	55 D 9913 C	5.18	55 D 9919 C	10.35
1182T	B	18	55 D 8318 C	3.21	55 D 8319 C	13.75	55 D 8320 CX	27.10

Dearborn RG Cable . . Magnet and Test Prod Wire

RG COAXIAL CABLES

MIL-C-17C POLYETHYLENE DIELECTRIC

Coaxial cable for use as RF transmission line, antenna lead-in, test equipment lead. Low-loss polyethylene dielectrics. Meet MIL-C-17C specs. Outer jacket safe from most acids, oils, chemicals. †Push-on connector.

RG No.	Imp. Ohms	Cond. AWG	O.D.	Cap. pF	Uses Connector Series	Lbs. 100′	100′ Spools Stock No.	100′ Spools EACH	500′ Spools Stock No.	500′ Spools EACH	1000′ Spools Stock No.	1000′ Spools EACH
5B/U	50	16 (Solid)	.335″	29.5	N, C	8¼	55 D 8922 F	31.50	55 D 8923 F	151.20	55 D 8924 F	302.40
8/U	50	13 (7x21)	.405″	29.5	N, C, HN, and UHF	12	55 D 9300	12.98	55 D 9301 X	55.13	55 D 9302 X	110.25
8A/U	52	13 (7x21)	.415″	29.5	N, C, HN, and UHF	12	55 D 8925 F	14.00	55 D 8926 F	68.00	55 D 8927 F	135.00
9/U	50	13 (7x21)	.420″	30.0	N, C, HN and UHF	14	55 D 9847 F	34.98	55 D 9890 F	176.70	55 D 9891 F	329.93
9B/U	50	13 (7x21)	.430″	30	N, C, HN, and UHF	12½	55 D 8941 F	44.42	55 D 8942 F	210.98	55 D 8943 F	421.94
10A/U	52	13 (7x21)	.415″	29.5	N, C, HN, and UHF	13	55 D 8944 F	23.24	55 D 8945 F	111.77	55 D 9143 F	221.45
11/U	75	18 (7x26)	.405″	20.5	N, C, HN, and UHF	12	55 D 9303	11.20	55 D 9304 X	47.43	55 D 9305 X	94.87
11A/U	75	18 (7x26)	.412″	20.5	N, C, HN, and UHF	12	55 D 9142 F	12.27	55 D 8948 F	55.00	55 D 8949 F	109.99
13A/U	74	18 (7x26)	.430″	20.5	N, C, HN, and UHF	12	55 D 8955 F	28.35	55 D 8956 F	133.88	55 D 8957 F	267.75
14A/U	52	10 (Solid)	.558″	29.5	N, C, UHF	20½	55 D 8961 F	39.17	55 D 8962 F	179.52	55 D 8963 F	326.40
17A/U	52	5 (Solid)	.885″	29.5	N, C, HN, LC	47	55 D 8958 F	63.70	55 D 8959 F	209.01	55 D 8960 F	577.50
18A/U	52	5 (Solid)	.885″	29.5	N, C, HN, LC	53	55 D 8964 F	80.33	55 D 8965 F	389.81	55 D 8966 F	799.63
55B/U	53.5	20 (Solid)	.206″	28.5	TNC, BNC, BN, C, UHF	3½	55 D 8967 F	12.60	55 D 8968 F	61.43	55 D 8969 F	122.85
58/U	53.5	20 (Solid)	.195″	28.5	TNC, BNC, BN, C, UHF, N, †	3	55 D 9307	4.68	55 D 9308 X	18.26	55 D 9309 X	36.51
58A/U	50	21 (19x33)	.199″	29.5	TNC, BNC, BN, C, UHF, N, †	3	55 D 8970	5.53	55 D 8971	21.25	55 D 8972 U	42.49
58C/U	50	21 (19x33)	.199″	29.5	TNC, BNC, BN, C, UHF, N, †	3	55 D 8973	4.88	55 D 8974 F	24.02	55 D 8975 F	47.25
59/U	73	22 (Solid)	.242″	21.0	TNC, BNC, BN, C, UHF, N, †	4½	55 D 9310	5.45	55 D 9311 X	19.91	55 D 9316 X	39.81
59A/U	75	.023CW	.246″	20.5	TNC, BNC, BN, C, UHF, N, †	4¼	55 D 8976 F	6.30	55 D 8977 F	28.98	55 D 8978 F	57.96
59B/U	75	.023CW	.246″	20.5	TNC, BNC, BN, C, UHF, N, †	4	55 D 8992 F	5.20	55 D 8993 F	25.99	55 D 8994 F	51.98
62/U	93	22CW	.250″	13.5	TNC, BNC, BN, C, UHF, N, †	4½	55 D 8995	6.10	55 D 8996 F	24.02	55 D 8997 F	48.04
62A/U	93	22CW	.249″	13.5	TNC, BNC, BN, C, UHF, N, †	4¼	55 D 9007 F	6.30	55 D 9008 F	29.93	55 D 9009 F	59.85
63B/U	125	22CW	.415″	10	N, C, HN, UHF	8	55 D 9010 F	15.75	55 D 9011 F	70.88	55 D 9012 F	141.75
71/U	95	22CW	.250″	13.5	N, C, HN and UHF	4½	55 D 9892 F	9.45	55 D 9893 F	39.66	55 D 9895 F	79.31
71A/U	95	22CW	.250″	13.5	N, C, HN and UHF	4½	55 D 9717 F	9.45	55 D 9718 F	42.00	55 D 9719 F	82.50
71B/U	93	22CW	.250″	13.5	TNC, BNC, BN, C, UHF, N, †	4½	55 D 9013 F	8.66	55 D 9014 F	38.59	55 D 9015 F	77.18
79B/U	125	22CW	.415″	10	N, C, HN, UHF	12	55 D 9016 F	26.78	55 D 9017 F	121.28	55 D 9018 F	242.55
108A/U	75	2—(7x28)	.235″	24.5	Twin	3	55 D 9841 F	14.18	55 D 9845 F	58.67	55 D 9846 F	117.34
174/U	50	7/34CW	.105″	30	BNC, Subminax 5116,-27	1½	55 D 9025	3.55	55 D 9026	13.77	55 D 9027	27.56
212/U	50	.0556S	.336″	29.5	N, C	9	55 D 9028 F	31.50	55 D 9029 F	151.20	55 D 9030 F	302.40
213/U	50	13 (7x21)	.412″	30.5	N, C, HN, UHF	10	55 D 9032 F	14.00	55 D 9033 F	65.50	55 D 9034 F	130.00
214/U	50	13 (7x21)	.432″	30.5	N, C, HN, UHF	13	55 D 9035 F	44.42	55 D 9036 F	210.98	55 D 9037 F	421.94
215/U	50	13 (7x21)	.412″	30.5	N, C, HN, UHF	14	55 D 9039 F	25.20	55 D 9040 F	111.20	55 D 9041 F	222.39
218/U	50	.195C	.880″	30	N, C, HN, LC	47	55 D 9042 F	60.00	55 D 9043 F	296.00	55 D 9044 F	588.00
219/U	50	.195C	.880″	30	N, HN	53	55 D 9045 F	70.88	55 D 9046 F	313.43	55 D 9047 F	626.85
223/U	50	.035S	.216″	30	TNC, BNC, BN, C, UHF, N, †	4	55 D 9048 F	17.33	55 D 9049 F	78.75	55 D 9050 F	157.50

LOW-LOSS FOAM COAXIAL CABLE

Ideal for use in community TV installations; offer much lower loss than regular RG coaxial cables. Cellular polyethylene reduces signal attenuation as much as 35%. RG59/U ideal as color-TV antenna lead-in. Bare copper, except *bare copperweld. †Push-on.

8/U	50	13 (7x21)	.405″	26	N, C, HN, UHF	12	55 D 9342 X	14.30	55 D 9343 X	58.12	55 D 9346 X	116.24
58/U	53.5	20 (Solid)	.195″	28.5	TNC, BNC, BN, C, UHF, N, †	3	55 D 9347	5.67	55 D 9348 X	22.05	55 D 9349 X	43.94
59/U	73	22 (Solid)*	.242″	21	TNC, BNC, BN, C, UHF, N, †	4½	55 D 9352	5.67	55 D 9353	22.82	.....	.....

MIL-C-17C TEFLON DIELECTRIC COAXIAL CABLE

RG No.	Imp. Ohms	Conductor AWG	O.D.	Cap. pF	Uses Connector Series	Lbs. 100′	50′ Spools Stock No.	50′ Spools EACH	100′ Spools Stock No.	100′ Spools EACH
141/U	50	19/9 (Solid)	.195″	29	TNC, BNC, N, C, UHF, Push-on	4	55 D 9320	26.85	55 D 9321	53.64
178B/U	50	30 (7x28)	.072″	29	Subminax	1	55 D 9996	7.88	55 D 9670	13.88
180B/U	95	30 (7x38)	.142″	15	BNC, Subminax, TNC	1½	55 D 9997	19.93	55 D 9669	37.50
187/U	75	7x38	.110″	19.3	BNC, Subminax 5116, 27	1¼	55 D 9330	14.18	55 D 9331	25.37
188/U	50	7x.0067	.110″	29	BNC, Subminax 5116, 27	1½	55 D 9336	14.10	55 D 9338	23.63
188A/U	50	26 (7x.0067)	.106″	29	BNC, Subminax	1¼	55 D 9998	14.18	55 D 9672	23.64
195/U	95	7x38	.155″	15.2	BNC, TNC, Subminax 5116, 27	2½	55 D 9340	25.20	55 D 9341	47.25
196A/U	50	30 (7x38)	.076″	29	Subminax	8	55 D 9999	9.84	55 D 9671	18.14
115A/U	50	7x21	.415″	29.5	N, C, HN	15.9	55 D 9840 F	2.70 PER FOOT ONLY		

HIGH-GRADE MAGNET WIRE

Copper wire covered with tough, abrasion resistant Formvar. Takes up less winding space, provides infinite moisture resistance. Has exceptional ability to resist petroleum solvents; impervious to acids and all forms of chemical solutions.

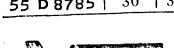
HEAVY FORMVAR MAGNET WIRE ON 1-LB. SPOOLS

Stock No.	Size	Feet	EACH	Stock No.	Size	Feet	EACH
55 D 8258	20	313	2.38	55 D 8834	31	4410	4.02
55 D 8259	21	397	2.48	55 D 8836	32	4900	4.08
55 D 8265	22	501	2.64	55 D 8838	33	6441	4.28
55 D 8341	23	628	2.68	55 D 8863	34	7950	4.46
55 D 8365	24	798	2.84	55 D 8872	35	9002	5.01
55 D 8371	25	194	3.17	55 D 8873	36	12,800	6.56
55 D 8661	26	1200	3.30	55 D 8876	37	15,898	6.29
55 D 8751	27	1583	3.43	55 D 8884	38	20,000	7.01
55 D 8770	28	1999	3.56	55 D 8946	39	25,188	7.52
55 D 8771	29	2780	3.64	55 D 8947	40	31,700	9.28
55 D 8785	30	3200	3.72	.....	.....	.....	.....

PLAIN ENAMELED MAGNET WIRE ON 1-LB. SPOOLS

Stock No.	Size	Feet	EACH	Stock No.	Size	Feet	EACH
55 D 9978	18	198	1.56	55 D 9992	30	3200	2.27
55 D 9979	20	313	1.61	55 D 9914	31	4410	2.36
55 D 9907	21	397	1.69	55 D 9993	32	4900	2.39
55 D 9986	22	501	1.69	55 D 9915	33	6441	2.51
55 D 9908	23	628	1.82	55 D 9994	34	7950	2.60
55 D 9989	24	798	1.89	55 D 9916	35	9002	2.89
55 D 9909	25	194	1.97	55 D 9995	36	12,800	3.17
55 D 9990	26	1200	2.02	55 D 9917	37	15,898	3.56
55 D 9910	27	1583	2.11	55 D 9918	38	20,000	3.90
55 D 9991	28	1999	2.21	55 D 9922	39	25,188	4.34
55 D 9911	29	2780	2.24	55 D 9923	40	31,700	5.12

TEST PROD WIRE



Rugged, rubber-covered wire designed to withstand extremely high voltages. Offers extreme flexibility and limpness to facilitate testing. Breakdown voltage, 12kV for 20 AWG; 20kV for 18 AWG. Wt. per 100′, 2 lbs.

Color	AWG	Stranding	Insul. Thkns.	O. D.	Stock No.	100′ Spools, EA.	Stock No.	500′ Spools, EA.	Stock No.	1000′ Spools, EA.
Red	#20	41x36	.046″	.137″	55 D 9474	3.35	55 D 9415	13.78	55 D 9472	26.25
Black	#20	41x36	.046″	.137″	55 D 9475	3.35	55 D 9463	13.78	55 D 9473	26.25
Red	#18	65x36	.045″	.144″	55 D 8314	3.54	55 D 8451	14.88	55 D 9481	28.05
Black	#18	65x36	.045″	.144″	55 D 8315	3.54	55 D 8452	14.88	55 D 9477	28.05

BELDEN HANDY INDEX

Type	Pg.	Type	Pg.	Type	Pg.	Type	Pg.	Type	Pg.	Type	Pg.	Type	Pg.	Type	Pg.	Tyep	Pg.	Type	Pg.
8011	404	8243	402	8408	400	8445	400	8473	399	8520	403	8627	400	8689	400	8743	399	8768	398	8871	403
8012	404	8254	402	8409	400	8446	400	8475	401	8521	403	8628	400	8700	399	8744	399	8769	398	8878	401
8013	404	8259	402	8410	400	8447	400	8475	404	8522	403	8629	400	8718	397	8745	399	8770	397	8879	401
8019	404	8262	402	8411	399	8448	400	8476	404	8523	403	8641	397	8719	397	8746	399	8771	397	8890	401
8020	404	8263	402	8412	400	8449	400	8477	399	8524	403	8643	397	8720	397	8747	399	8772	397	8892	403
8021	404	8265	402	8413	400	8450	398	8478	401	8525	403	8649	401	8722	398	8748	399	8774	398	8893	403
8022	404	8266	402	8416	401	8451	398	8479	401	8527	403	8660	403	8723	398	8749	399	8775	398	8894	403
8201	400	8269	402	8417	401	8452	401	8481	399	8528	403	8661	403	8724	398	8750	399	8776	398	8896	403
8205	397	8270	402	8418	400	8453	401	8482	399	8529	403	8662	403	8725	399	8751	399	8777	398	8898	401
8208	399	8275	404	8419	401	8454	401	8483	399	8530	403	8663	403	8726	398	8752	399	8778	398	8899	401
8212	402	8279	402	8420	399	8455	401	8486	399	8531	403	8668	403	8727	398	8753	399	8780	397	8916	403
8213	402	8280	402	8421	401	8456	400	8487	399	8582	403	8669	403	8728	398	8754	399	8782	401	8917	403
8214	402	8281	402	8422	399	8457	400	8489	400	8583	403	8670	403	8729	398	8755	399	8783	401	8918	403
8216	402	8282	402	8426	400	8458	400	8490	400	8584	403	8671	403	8730	398	8756	399	8786	401	8919	403
8219	402	8283	402	8427	400	8459	400	8491	400	8585	403	8672	403	8731	397	8757	399	8790	397	8920	403
8221	402	8284	402	8428	400	8460	399	8494	400	8597	403	8673	404	8732	398	8758	397	8794	399	8969	403
8225	404	8285	404	8429	401	8461	399	8495	400	8598	403	8675	404	8733	398	8759	397	8795	399	8970	403
8226	404	8286	402	8430	401	8465	400	8497	400	8605	400	8677	404	8734	398	8760	397	8816	404	8971	403
8230	404	8290	404	8431	401	8466	400	8499	400	8618	397	8679	404	8735	397	8761	397	8817	400	83001	403
8235	404	8401	399	8434	398	8467	400	8500	403	8619	400	8680	404	8737	397	8762	397	8822	404	83002	403
8237	402	8402	400	8437	398	8468	400	8501	403	8620	400	8681	404	8738	397	8763	398	8824	404	83003	403
8238	402	8403	399	8441	398	8469	400	8502	403	8621	400	8682	404	8739	397	8764	398	8866	402	83006	403
8240	402	8404	399	8442	399	8470	399	8503	403	8622	400	8683	404	8740	399	8765	398	8868	402	83007	403
8241	402	8405	399	8443	401	8471	399	8504	403	8623	400	8684	404	8741	399	8766	398	8869	402	83009	403
8242	402	8407	400	8444	400	8472	401	8505	403	8624	400	8685	404	8742	399	8767	398	8870	403	83010	403

WIRE-CABLE FINDER CHART

*Shielded †Solid conductors, all others stranded conductors

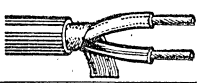
Conductor Size	2 Cond. Type No.		3 Cond. Type No.		4 Cond. Type No.		5 Cond. Type No.	6 Cond. Type No.	7 Cond. Type No.	8 Cond. Type No.
25 AWG or Smaller	8430	*8429	*8419		*8434					
24 AWG	8782	*8413								
	*8420	*8641								
22 AWG	†8481	*8441	8794		8741	*8729	8445	*8742	8447	8757
	†8740	†*8738	*8735		8444	*8724		8446		8448
	8795	†*8450	*8734		8494			†*8767		
	*8422	*8451	*8771		*8732			*8777		
	†*8437	*8761	*8733		*8723			*8786		
20 AWG	8649	*8750	8783	*8772	*8404		8455	*8426	*8427	*8418
	8205	*8762	*8403	*8763	*8722		*8405			*8725
	*8412									
18 AWG	8452	†8486	8453		8454		8465		8467	
	8478	*8428	†8483							
	8460	*8208	†8487							
	8461	*8760	*8770							
	†8482									
16 AWG	8470	8677	8475		8476				8621	
	8471	*8719			8620					
	8472				*8407					
14 AWG	8473	8675			8627				8628	
	8474	*8720								

TWO-CONDUCTOR SHIELDED CABLE

Vinyl insulation and jackets, except 8738 and 8758, copper braided jackets. Tinned conductors. *Tinned copper spiral-wrapped shield. Cables black and red color-coded for sure identification.

Mfr's Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	100-Ft. Std. Spool Stock No.	100-Ft. Std. Spool EACH	500-Ft. Std. Spool Stock No.	500-Ft. Std. Spool EACH	1000-Ft. Std. Spool Stock No.	1000-Ft. Std. Spool EACH
8737*	2	22 (7x30)	.170"	2¼	55 D 7644	4.05	55 D 7447	17.85	55 D 7448 U	35.70
8738	2	22 solid	.130"	1½	.....	.....	.....	.....	55 D 8882 U	32.40
8739*	2	22 solid	.160"	2	55 D 7645	3.85	55 D 7449	16.20	55 D 7450 X	32.40
8758	2	20 (7x28)	.165"	2	55 D 7647	4.70	55 D 7648	19.05	55 D 7410 X	38.10
8759*	2	20 (7x28)	.195"	2¾	55 D 7649	5.05	55 D 7666	21.00	55 D 7411 U	42.00

SHIELDED AUDIO CABLE



Tinned copper conductors; polyethylene ins. conds., aluminum "Mylar"-wrapped shield, stranded tinned copper gnd. wire. 8208 has rubber ins. cond., copper shield. 8643 has tinned braid shield. *Vinyl ins. cond. 8735—plastic ins., copper shield. Chrome vinyl jackets. †Spiral-wrapped tinned shield.

TWO-CONDUCTOR

8208	2	18 (16x30)	.255"	4¼	55 D 7555	7.90	55 D 7315 X	34.80	55 D 7316 U	69.60
8760	2	18 (16x30)	.222"	3¼	.....	.....	55 D 7398	24.00	55 D 7399 U	48.00
8641	2	24 (7x32)	.160"	2½	55 D 7676	3.75	55 D 7677	15.00	.....	.....
8761	2	22 (7x30)	.167"	1¾	.....	.....	55 D 7568	15.60	55 D 7400	31.20
8762	2	20 (7x28)	.196"	2¾	55 D 7575	4.80	55 D 7577	19.90	55 D 7420 U	39.75
8718	2	12 (19x25)	.400"	10	.....	.....	55 D 7096 U	69.00	55 D 7097 Z	138.00
8719	2	16 (19x29)	.274"	4½	.....	.....	55 D 8491 U	33.60	.....	.....
8720	2	14 (19x27)	.340"	6½	.....	.....	55 D 8493 U	52.50	.....	.....
*†8780	2	16 (19x29)	.266"	5	.....	.....	55 D 7430 X	34.45	55 D 7431 U	68.85
*†8790	2	18 (7x26)	.231"	4¼	55 D 7572	6.25	55 D 7573 U	26.70	55 D 7412 U	53.40

THREE-CONDUCTOR

8618	3	16 (19x29)	.300"	6	.....	.....	55 D 7080 U	43.90	55 D 7081 U	87.75
8643	3	30 (7x38)	.086"	1	55 D 7078	6.30	.....	.....	.....	.....
*†8731	3	22 (Solid)	.178"	2¼	.....	.....	55 D 7559	18.70	55 D 7560 U	37.35
8735	3	22 (7x30)	.199"	3	55 D 7563	5.70	55 D 7565	24.30	55 D 7566 U	48.60
8770	3	18 (18x30)	.236"	4¼	.....	.....	55 D 7401 U	30.40	55 D 7402 U	60.75
8771	3	22 (7x30)	.175"	2¼	.....	.....	55 D 7442	19.65	55 D 7403 X	39.30
8772	3	20 (7x28)	.200"	3	.....	.....	55 D 7489	24.75	55 D 7406 U	49.50

STRAIN GAUGE CABLE

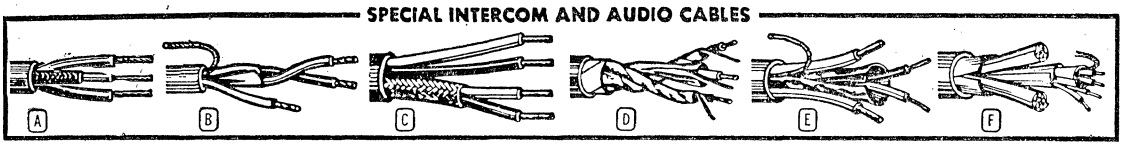
8434, 8723

8728, 8729

Type 8434: Conductors consist of 3 strands of tinned copper, and 4 strands of copperweld; 8723: conductors consist of 7 strands of tinned copper. Both types polyethylene insulated conductors, aluminized Mylar shields, chrome vinyl jacket. Type 8729: Conductors of tinned copper, polyethylene insulated, under Beldfoil aluminum Mylar shield, tinned drain wire, chrome vinyl jacket. Type 8728: Tinned copper, polypropylene insulated, cabled in pairs, each pair Beldfoil aluminum-polyester shielded with stranded copper drain wire, polyester film over each shield, overall Beldfoil shield and tinned drain wire, chrome vinyl jacket.

Mfr's Type	Size	Strands	O. D.	Wkg. Volts	Wt./100' Lbs.	Stock No.	100' Spool	Stock No.	500' Spool	Stock No.	1000' Spool
8434	25	7x33	.179"	400	2	55 D 7789	6.10	55 D 7482	27.60	55 D 7484	55.20
8723	22	7x30	.165"	400	2½	55 D 7790	5.85	55 D 7791	25.90	55 D 7335 U	51.75
8728	22	7x30	.188"	400	2¾	.....	.....	55 D 7075	38.25	55 D 7119 U	76.50
8729	22	19x34	.250"	600	4¼	.....	.....	55 D 7022 X	42.75	55 D 7023 U	85.50

SPECIAL INTERCOM AND AUDIO CABLES



Type 8722. 4 vinyl insulated conductors; 2 shielded with aluminum-"Mylar" wrapping; 2 unshielded. #20 stranded, tinned copper ground wire; chrome vinyl jacket.

Type 8724. Same as Type 8722 above, except has #22 gauge wire.

Type 8726. 12 conductors cabled in 3 quads. "Beldfoil" shield over 2 conductors of each quad, and clear "Mylar" shield over entire quad. Color-coded shields. Ground wire. Chrome vinyl jacket overall.

Type 8727. 28 conductor cable. Construction and all other specifications are identical with Type 8726 above.

Type 8730. 4 cond., polypropylene ins., Beldfoil shield over one pair, ground wire.

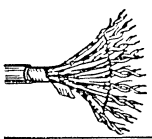
Type 8732. 4 polyethylene insulated cond. 1 pair tinned copper shielded, 1 pair unshielded. Chrome vinyl plastic jacket.

Type 8733. 3 conductors separately aluminum-"Mylar" shielded. Ground wire for each conductor is tinned, cadmium bronze ribbon under "Beldfoil" Z fold.

Type 8734. 3 vinyl insulated conductors. One conductor has a tinned copper shield. The other two conductors are unshielded. Has chrome vinyl jacket overall.

Type 8763. 3 polyethylene insulated conductors; aluminum-"Mylar" shield over 2 conductors; 1 unshielded. No 20 stranded ground wire. Chrome vinyl jacket overall.

Mfr's Type	Fig.	Cond.	AWG (Stranding)	O. D.	Wt./100' Lbs.	100-Ft. Std. Spool		500-Ft. Std. Spool		1000-Ft. Std. Spool	
						Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8722	E	4	20 (7x28)	.260"	3¾	.....	.....	55 D 7675	30.75	55 D 7001 U	61.50
8724	D	4	22 (7x30)	.165"	2¼	.....	.....	55 D 7014	25.95	55 D 7015 U	51.90
8726	F	12	22 (7x30)	.330"	7¼	55 D 8495	18.15	.....	.....	.....	.....
8727	E	28	22 (7x30)	.450"	14½	55 D 7016	37.20	.....	.....	.....	.....
8730	E	4	22 (7x30)	.250"	3¼	.....	.....	55 D 7125	32.65	55 D 7126 U	65.25
8732	C	4	22 (7x30)	.188x.296"	3	55 D 7684	6.55	55 D 7465	27.60	55 D 7466 U	55.20
8733	D	3	22 (7x30)	.205"	2½	55 D 7687	6.55	55 D 7329	27.60	55 D 7330 U	55.20
8734	A	3	22 (7x30)	.194"	2	55 D 7685	5.05	55 D 7445	21.00	55 D 7446 U	42.00
8763	B	3	20 (7x28)	.210"	3	.....	.....	55 D 7471	24.30	55 D 7472 U	48.60



INSTRUMENTATION CABLE (Multiple Pair Individually Shielded)

Heavy-duty, low-loss multi-conductor cable. Color-coded for quick, easy identification. Consists of pairs of tinned, solid and stranded copper conductors. Each pair has Beldfoil aluminum-Mylar tape shield that eliminates noise and crosstalk between pairs. Chrome vinyl jacket fights water, sun, oil and grease. Tear-resistant. All conductors are 22-gauge tinned copper. 300 volts suggested working voltage. Polypropylene insulation; maximum operating temperature, 105°C. *Vinyl insulation; maximum operating temperature, 80°C.

Mfr's Type	Pairs	O. D.	Wt./100' Lbs.	100-Ft. Std. Spool		500-Ft. Std. Spool		1000-Ft. Std. Spool	
				Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8767*	3	.270"	5	55 D 7336	9.90	55 D 7337 U	45.30	55 D 7338 Z	90.60
8768*	6	.394"	8½	55 D 7339	19.50	.....	.....	.....	.....
8764*	9	.440"	13	55 D 7343	27.25	.....	.....	.....	.....
8765*	11	.485"	14½	55 D 7346	32.25	.....	.....	55 D 7348 Z	313.50
8766*	15	.540"	19½	55 D 7349	43.50	55 D 7360 Z	210.00	.....	.....
8769	19	.620"	26	55 D 7370 X	69.30	.....	.....	.....	.....
8777	3	.270"	5	55 D 7713	11.40	55 D 7714 X	54.00	55 D 7417 Z	108.00
8778	6	.394"	8½	55 D 7725	22.50	55 D 7726 Z	110.55	55 D 7727 Z	210.00
8774	9	.440"	13	55 D 7715	33.00	.....	.....	.....	.....
8775	11	.485"	15½	55 D 7716	38.70	.....	.....	.....	.....
8776	15	.540"	19	55 D 7717	51.45	55 D 7424 Z	249.00	55 D 7426 Z	498.00

STANDARD CABLE

MINIATURE CABLE

STANDARD AND MINIATURE BROADCAST AUDIO CABLES

Two-conductor, color-coded broadcast audio cables come in standard and miniature size. Types 8437 and 8441 have braided, tinned copper shields; Types 8450 and 8451 have spiral-wrapped aluminum-Mylar shields. All types have tinned drain wires. Available in 100, 500 or 1000 foot spools. Average shpg. wt., per 100 feet, 2½ lbs. Type 8451 available in Black Vinyl or Gray jacket.

Mfr's Type	AWG (Stranding)	Cap. pF	O. D.	Wkg. Volts	Mfr's Type	AWG (Stranding)	Cap. pF	O. D.	Wkg. Volts
8437	22 Solid	48	.200"	200	8450	22 Solid	40	.118"	200
8441	22 (16x34)	49	.210"	200	8451	22 (7x30)	34	.135"	200

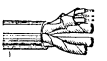
PRICE PER SPOOL

Mfr's Type	Cable Size	Jacket	Wt./100' Lbs.	Stock No.	100' Spool	Stock No.	500' Spool	Stock No.	1000' Spool
8437	CBS	Black Vinyl	2½	.....	.....	55 D 7451	22.65	55 D 7452 K	45.30
8441	CBS	Black Vinyl	3	55 D 7893	5.85	55 D 7474	25.90	55 D 7475 K	51.75
8450	Miniature	Black Vinyl	1½	55 D 7894	3.85	55 D 7895	14.20	55 D 8567	28.35
8451	Miniature	Black Vinyl	1½	55 D 8562	4.38	55 D 7898	17.85	55 D 7470	35.70
8451	Miniature	Gray	1½	55 D 7902	4.38	55 D 7903	17.85	55 D 7904	35.70

SPECIAL INSTRUMENTATION CABLES

Type 8700. Miniature coax cable #28 solid tinned copper. Polypropylene insulation, black vinyl jacket. Insulation thickness .005"; jacket thickness .008"; 80% shield coverage; 48 pF per ft. capacitance between conductors. O.D. .054". May be steam sterilized for medical research.

50'		100'			250'	
Stock No.	EACH	Stock No.	Lbs.	EACH	Stock No.	EACH
55 D 7030	2.95	55 D 7019	½	5.25	55 D 7020	12.15



Type 8725. Four pairs No. 20 (7x28) tinned copper cable is Beldfoil shielded. Chrome vinyl outer jacket. 105°C maximum operating temperature. Rated at 400 WV. Only 27 pF capacitance per foot between conductors. O.D. .360". Conductors are color-coded in the following combinations: Black, Red, Green, White, White/Red, White/Black, White/Green, and White/Yellow.

55 D 7021 U. 500' Spool. Shpg. wt., 37 lbs..... 117.75

55 D 7033 Z. 1000' Spool. Shpg. wt., 77 lbs..... 235.50

PAIRED VINYL INTERCOM AND TELEPHONE UNSHIELDED CABLE

Color-coded conductors cabled in pairs. Free from crosstalk and interference. Vinyl insulation for high dielectric strength. Weather and tear-resistant. "F" in Stock No. suffix—shipped from factory in Chicago.

Mfr's Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	100-Ft. Spool		500-Ft. Spool		1000-Ft. Spool	
					Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8442	2	22 (7x30)	.165"	1¾	.....	.....	55 D 7690	10.05	55 D 7331	20.10
8740	2	22 solid	.150"	1½	55 D 7691	2.40	55 D 7692	8.55	55 D 7454	17.10
8741	4	22 solid	.201"	3	55 D 7693	4.05	55 D 7455	16.20	55 D 7457 U	32.40
8742	6	22 solid	.240"	4	55 D 8565	5.35	55 D 7458	22.75	55 D 7459 U	45.45
8743	12	22 solid	.305"	5	55 D 8572	8.40	55 D 7460 K	38.85	55 D 7461 Z	77.70
8744	18	22 solid	.354"	7	55 D 8552	12.00	55 D 8553U	56.25	55 D 8554 Z	112.50
8745	30	22 solid	.420"	11	55 D 7696	20.65	55 D 7462 Z	95.25	55 D 7414 Z	190.50
8747	12	22 (7x30)	.340"	6	55 D 7697	10.45	55 D 7698 X	48.00	.....	.....
8748	18	22 (7x30)	.389"	8	55 D 7699	14.70	55 D 7002 U	70.50	55 D 7003 Z	141.00
8749	30	22 (7x30)	.425"	14	55 D 7017	25.50	55 D 7008 Z	121.50	55 D 7099 Z	243.00
8753	22	22 solid	.384"	9½	55 D 7700	14.85	55 D 7467 U	71.25	55 D 7701 Z	142.50
8754	26	22 solid	.409"	11	55 D 8555	16.80	55 D 7476 Z	81.00	55 D 7477 Z	162.00
8755	38	22 solid	.480"	14½	.....	.....	55 D 7478 Z	123.75	55 D 7479 Z	247.50
8756	46	22 solid	.510"	18	.....	.....	55 D 7480 Z	145.50	55 D 7481 Z	291.00
8757	8	22 solid	.255"	4	.....	.....	55 D 7407 X	28.90	55 D 7409 Z	57.75

Mfr's Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	Length Desired (Minimum 25 ft.)	Stock No.	Price Per Foot	
							Under 100'	Over 100'
8746	54	22 Solid	.550"	17¼	Cut to customers specified length.*	55 D 7718 F	.41	.35
8750	54	22 (7x30)	.595"	20½	Maximum continuous 1500'.	55 D 7719 F	.54	.46

38 AND 51 PAIR CABLE

For intercom, PA, and balanced-line sound systems. Provide quiet circuit, no crosstalk or interference. Type 8751 vinyl insulated, 8752 polypropylene insulated. Color-coded, cabled in pairs. Beldfoil aluminum-Mylar shield over cabled pairs. Chrome vinyl jacket. Shipped from factory in Chicago, Ill.

8751	102	22 Solid	.725"	33	Cut to customers specified length.*	55 D 7720 F	1.10	.944
8752	76	22 Solid	.600"	25	Maximum continuous 1500'	55 D 7018 F	1.06	.907

TWO-CONDUCTOR UNSHIELDED CABLE

For PA and intercoms, speaker extensions. Copper, vinyl-insulated, tinned conductors, except Types 8481, 8482 and 8486—untinned. Cabled, chrome vinyl jackets, except Type 8795—rose gray vinyl jacket, polyethylene insulated. Resists water, oil, grease, sun and ozone. †Twisted-pair types without jacket.

Mfr's Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	100-Ft. Spool		500-Ft. Spool		1000-Ft. Spool	
					Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8205	2	20 (10x30)	.190"	2¼	55 D 7597	3.10	55 D 7600	11.40	55 D 7601 U	22.80
†8460	2	18 (7x26)	.175"	2¼	55 D 7602	3.45	55 D 7603	13.35	55 D 7432	26.70
8461	2	18 (7x26)	.226"	3¼	55 D 7610	4.40	55 D 7434	17.85	55 D 7435 U	35.70
†8470	2	16 (19x29)	.195"	2½	.....	.....	55 D 7436	17.85	55 D 7437 U	35.70
8471	2	16 (19x29)	.256"	4	.....	.....	55 D 7611	22.30	55 D 7438 U	44.55
8473	2	14 (19x29)	.332"	6	.....	.....	55 D 7327 U	36.75	55 D 7328 Z	73.50
8477	12	19x25	.384"	8¾	.....	.....	55 D 7054 U	49.50	55 D 7055 Z	99.00
†8481	2	22 Solid	.112"	1	55 D 7612	1.95	55 D 7614	6.25	55 D 7615	12.45
†8482	2	19 Solid	.130"	1½	55 D 7616	2.45	55 D 7631	8.80	55 D 7632	17.55
8486	2	19 Solid	.162"	2	.....	.....	55 D 7636	11.35	55 D 7637	22.65
8795	2	22 Solid	.160"	1¾	.....	.....	55 D 7688	10.05	.....	.....

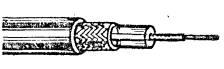
THREE-CONDUCTOR UNSHIELDED CABLE

Types 8483 and 8487 are copper, vinyl-insulated, untinned conductors. 8483 without jacket. 8487, chrome vinyl jacket. Type 8794 has polyethylene insulation, rose gray vinyl jacket. All are cabled.

8483	3	19 Solid	.132"	2	55 D 7633	3.15	55 D 8563	12.45	55 D 8564 X	24.90
8487	3	19 Solid	.180"	2½	.....	.....	55 D 7638	15.40	55 D 7641 U	30.75
8794	3	22 Solid	.168"	2	.....	.....	55 D 7642	12.15	.....	.....

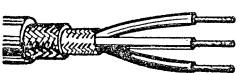
VINYL PLASTIC-COVERED MICROPHONE AND SHIELDED POWER-SUPPLY CABLE

Lightweight, small-diameter cable with low loss, low capacitance. Resists ozone deterioration and chemical solvent action. Tinned copper-braid shield. 8411 is ideal for lapel or lavalier mikes. 8420 is miniature.



SINGLE

MINIATURE

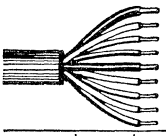


MULTIPLE

Mfr's Type	No. Cond.	AWG (Stranding)	Cap. pF	O.D.	Wkg. Volts	Wt./100' Lbs.	Stock No.	50' Spool	Stock No.	100' Spool	Stock No.	250' Spool	Stock No.	500' Spool
8401	1	25 (7x33)	25	.200"	5000	2¾	55 D 7863	2.91	55 D 7864	5.35	55 D 7865	11.35	55 D 7311	22.65
8411	1	25 (7x33)	34	.144"	3500	1¾	55 D 7868	2.25	55 D 7869	4.20	55 D 7870	8.95	55 D 7871	17.90
8422	2	22 (16x34)	18	.231"	1000	4	55 D 7874	4.50	55 D 7875	7.85	55 D 7876	17.40	55 D 7047	34.80
8403	3	20 (26x34)	25	.244"	600	5	55 D 7878	5.60	55 D 7879	10.35	55 D 7880	23.25	55 D 7309 K	46.50
8404	4	20 (26x34)	25	.255"	600	5½	.....	.....	55 D 7882	11.40	55 D 7883	26.25	55 D 7313 K	52.50
8405	5	20 (26x34)	25	.275"	600	5¾	.....	.....	.....	.....	55 D 7884	31.00	55 D 7199 K	62.00
8420	2	24 (45x40)	22	.185"	500	2½	55 D 7888	4.00	55 D 7889	7.45	55 D 7890	17.50	55 D 7891	34.95

*Cut to customer's specified length subject to available stock lengths—minimum length 25'; 25' to 199', plus 25', minus 0; 200' or over, plus 50', minus 0.

BELDEN Wire and Cable



MULTIPLE-CONDUCTOR CABLE (Not Paired)

Conductors are made of flexible, tinned copper stranded wire, with color-coded vinyl plastic insulation. Conductors are cabled together and enclosed overall in a chrome-vinyl plastic jacket. Resist oil, gasoline and weather. Waterproof jacket is also tear-resistant. Can be easily stripped for use. New types: 8489 for long runs, up to 180', of rotor control cable; 8619 for sound systems, control wiring, remote control. Suggested working voltages: 22-gauge, 200 volts; 18-gauge, 400 volts; 16- and 14-gauge, 600 volts.

Mfr's Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	100-Ft. Spool		500-Ft. Spool		1000-Ft. Spool	
					Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8443	3	22 (7x30)	.150"	2	55 D 7498	3.10	55 D 7499	12.15	55 D 7007	24.30
8444	4	22 (7x30)	.168"	2½	55 D 7504	4.15	55 D 7506	16.95	55 D 7026 U	33.90
8445	5	22 (7x30)	.180"	2¾	55 D 7510	4.80	55 D 7515	20.25	55 D 7028 U	40.50
8446	6	18, 22 (16x30)	.222"	4¼	55 D 7524	7.15	55 D 7526	31.05	55 D 7528 U	62.10
8447	7	18, 22 (16x30)	.246"	4¾	55 D 7529	7.95	55 D 7531 U	35.10	55 D 7004 U	70.20
8448	8	18, 22 (16x30)	.250"	5	55 D 7536	8.55	55 D 7537 U	38.40	55 D 7005 Z	76.80
8449	9	18, 22 (16x30)	.261"	5¼	55 D 7539	9.25	55 D 7543 U	42.00	55 D 7006 Z	84.00
8456	10	22 (7x30)	.260"	5¼	55 D 7544	9.40	55 D 7545 U	42.90	55 D 7546 U	85.80
8457	12	22 (7x30)	.260"	5½	55 D 7547	10.05	55 D 7317 X	46.50	55 D 7318 Z	93.00
8458	15	22 (7x30)	.320"	8	55 D 8488	17.40	55 D 8489 X	78.00	.....	.....
8459	25	22 (7x30)	.370"	11½	55 D 8405	26.40	55 D 8406 Z	122.25	.....	.....
8465	5	18 (16x30)	.272"	5¾	55 D 7819	8.80	55 D 7319 U	40.05	55 D 7320 Z	80.10
8466	12	18 (16x30)	.402"	13½	55 D 8408	21.90	55 D 8409 Z	107.25	.....	.....
8467	7	18 (16x30)	.320"	8½	55 D 7553	11.70	55 D 7321 U	53.65	55 D 7324 Z	107.25
8468	15	18 (16x30)	.490"	18¼	55 D 8411	29.70	55 D 8412 Z	140.25	55 D 8413 Z	280.50
8469	9	18 (16x30)	.375"	10¼	55 D 7554	15.70	55 D 7325 Z	73.50	55 D 7326 Z	147.00
8489	4	18 (16x30)	.250"	5¼	55 D 7170	7.15	55 D 7171 U	31.50	55 D 7172 U	63.00
8619	19	18 (16x30)	.505"	19	.....	.....	55 D 7178 Z	157.50	55 D 7179 Z	315.00
8620	4	16 (19x29)	.375"	8¼	55 D 8414	11.55	55 D 8415 X	53.65	55 D 8416 Z	107.25
8621	7	16 (19x29)	.455"	13	55 D 8417	19.65	55 D 8418 Z	87.75	.....	.....
8622	12	16 (19x29)	.600"	21¼	55 D 8420 U	33.00	55 D 8421 X	153.00	55 D 8422 X	306.00
8623	15	16 (19x29)	.650"	26¾	55 D 8423 U	46.50	.....	.....	.....	.....
8624	19	16 (19x29)	.715"	42¼	55 D 8426 U	56.10	.....	.....	.....	.....
8627	4	14 (19x27)	.495"	14¼	55 D 8429	19.80	.....	.....	.....	.....
8628	7	14 (19x27)	.630"	23	55 D 8432	34.65	.....	.....	.....	.....
8629	12	14 (19x27)	.770"	38½	55 D 8435X	56.10	.....	.....	.....	.....

RUBBER, HYPALON AND NEOPRENE MICROPHONE AND SHIELDED POWER-SUPPLY CABLE

MULTIPLE

SINGLE

MINIATURE

Recommended for high abrasion resistance and for installations where cable must make tight bends or lie perfectly flat. Tinned conds. tinned copper-braid shield. Rubber-covered, except 8407 and 8428, heavy-duty neoprene jacket; 8402 and 8408 heavy-duty brown Hypalon jacket. 8413 is a miniature size.

Mfr's Type	No. Cond.	AWG (Stranding)	Cap. pF	O.D.	Wkg. Volts	Wt./100' Lbs.	Stock No.	50' Spool	Stock No.	100' Spool	Stock No.	250' Spool	Stock No.	500' Spool
8402	2	20 (26x34)	42	.268"	600	6	.....	.....	55 D 7229	12.15	55 D 7230	28.35	55 D 7231 U	56.70
8408	2	16 (65x34)	50	.385"	600	10½	.....	.....	55 D 7607	20.85	55 D 7608 U	48.75	55 D 7609 U	97.50
8410	1	25 (7x33)	33	.245"	3000	4¼	55 D 7798	5.25	55 D 7799	9.75	55 D 7814	22.65	55 D 7046 K	45.30
8412	2	20 (26x34)	42	.268"	600	5¼	55 D 7827	5.80	55 D 7828	10.75	55 D 7829	24.70	55 D 7066 K	49.45
8426	6	20 (26x34)	40	.349"	600	9¼	.....	.....	55 D 7843	20.65	55 D 7844 U	51.00	.....	.....
8427	7	20 (26x34)	40	.360"	600	10¼	.....	.....	55 D 7845	22.20	.....	.....	.....	.....
8418	8	20 (26x34)	42	.386"	600	11½	.....	.....	55 D 7846	25.50	55 D 7847 K	61.80	.....	.....
8428	2	18 (41x34)	47	.295"	600	6¾	.....	.....	55 D 7848	14.65	.....	.....	55 D 7067 K	68.25
8413	2	24 (45x40)	38	.190"	300	2¾	55 D 7853	5.50	55 D 7855	10.15	.....	.....	55 D 7857 K	46.95
8407	4	16 (65x34)	37	.422"	600	15	.....	.....	55 D 7850	25.50	55 D 7068 U	61.50	.....	.....

RETRACTILE (COILED) MICROPHONE AND TELEPHONE CABLE

TELEPHONE

MICROPHONE

Microphone Cables: Types 8409 and 8490 are unshielded cords; 8499 has spiral wrap copper shield, others have aluminum Mylar tape shields. Type 8499 is single-conductor shielded cord; 8497 has one of its 3 conductors shielded; 8491 has two of its 4 conductors shielded. Neoprene jackets. Telephone Cords: 8494 and 8495 are unshielded. Spade term., strain relief, vinyl jackets. Av., ¼ lb. *except 3½ lbs.

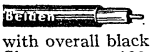
Mfr's Type	For	No. Cond.	AWG (Stranding)	O.D.	Extends		Jacket	Stock No.	EACH
					From	To			
8409	Microphone	4	28(7x36)	.165"	12"	6'	Neoprene	55 D 7181	1.14
8490*	Microphone	5	23(21x36)	.265"	11½"	6'	Neoprene	55 D 7613	1.62
8491	Microphone	4	23(21x36)	.300"	12"	6'	Neoprene	55 D 7180	1.86
8497	Microphone	3	23(21x36)	.250"	11½"	6'	Neoprene	55 D 7279	1.56
8499	Microphone	1	24(45x40)	.160"	7½"	4'	Neoprene	55 D 7286	1.05
8494	Telephone	4	23(21x36)	.245"	10"	4½'	Vinyl	55 D 7276	1.80
8495	Telephone	3	23(21x36)	.220"	10"	4½'	Vinyl	55 D 7277	1.41
8605	Microphone	1	24 (19x36)	.160"	21½"	12'	Vinyl	55 D 7621	1.47

MARINE RADIO ANTENNA WIRE

Tinned copperweld, with brown weather resistant polyethylene insulation. Not affected by sun, moisture or salt spray. Shpg. wt. per 100-ft. spool, 3¾ lbs.

Mfr's Type	AWG Stranding	O.D. In.	Stock No.	100-Ft. Spool	Stock No.	500-Ft. Spool
8201	20(7x28)	.278	55 D 7663	4.50	55 D 7664	18.60

7mm IGNITION WIRE



For all cars, light trucks and tractors. Tinned copperweld, high dielectric rubber insulation with overall black neoprene sheath for maximum cable protection. Shpg. wt. per 100-ft. spool, 4¾ lbs.

Mfr's Type	AWG Stranding	O.D. In.	Color	Stock No.	100-Ft. Spool
8689	20(7x28)	.278	Black	55 D 7130	6.15

INSULATED LITZ WIRE

Type 8817. Celenamel insulated 5x44 stranded copper, with one nylon wrap. Excellent for winding antenna primaries. Also for hand-wiring RF coils and IF coils. Outside diameter .008". 100-ft. spool. Shpg. wt., ¼ lb.

55 D 8981 ..... .71

HEAVY-POLYTHERMALEZE MAGNET WIRE

- Dual Polyester Film Insulated Magnet Wire
- Features 180 C Temperature Rating
- Exceptional Ability to Resist Solvents
- Complies with MIL-W-583 Specifications

Polythermaleze is a dual polyester film insulated magnet wire with 180 C temperature rating. Especially valuable where heat (as in transformers) is a problem. Has exceptional ability to resist water, oil, acids, and other solvents. Withstands mechanical abrasion equally well. Complies with MIL-W-583 specifications.

½-lb. Spool				1-lb. Spool				½-lb. Spool				1-lb. Spool			
Stock No.	Size	Feet	EACH	Stock No.	Size	Feet	EACH	Stock No.	Size	Feet	EACH	Stock No.	Size	Feet	EACH
55 D 8036	14	40	1.29	55 D 8086	14	80	2.16	55 D 8043	28	995	1.61	55 D 8093	28	1990	2.87
55 D 8037	16	63	1.29	55 D 8087	16	126	2.25	55 D 8044	30	1570	1.79	55 D 8094	30	3140	3.23
55 D 8038	18	100	1.32	55 D 8088	18	199	2.37	55 D 8045	32	2440	1.94	55 D 8095	32	4880	3.56
55 D 8039	20	157	1.35	55 D 8089	20	315	2.37	55 D 8046	34	3930	2.19	55 D 8096	34	7860	4.14
55 D 8040	22	250	1.37	55 D 8090	22	501	2.37	55 D 8047	36	6200	2.63	55 D 8097	36	12400	5.13
55 D 8041	24	396	1.41	55 D 8091	24	793	2.45	55 D 8048	38	9700	3.11	55 D 8098	38	19400	6.18
55 D 8042	26	630	1.49	55 D 8092	26	1260	2.61	55 D 8049	40	16050	3.83	55 D 8099	40	32100	8.04

AUDIO CABLES FOR HI-FI, STEREO AND PHONO APPLICATIONS

Stranded, tinned copper, vinyl or rubber insulation. 8421: Hi-Fi cable, spiral wrap. 8430 and 8431: Mono phono pickups. 8419 and 8429: Stereo phono pickups. 8416: for stereo and language labs. 8417: Single, miniature audio connecting cable, 100% shield. *Use two cables for maximum channel separation. †.106x.213".

Hi-Fi Cable

Phono Cable

Dual Channel

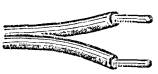
Mfr's Type	Jacket	No. Cond. & AWG	O.D.	Wt./100' Lbs.	25 Ft.		50 Ft.		100 Ft.		250 Ft.	
					Stock No.	EACH	Stock No.	EACH	Stock No.	EACH	Stock No.	EACH
8421	Clr. Vinyl	1-25 (7x33)	.180"	2¼	55 D 8781	1.71	55 D 8782	3.10	55 D 8783	5.05	55 D 8784	11.20
8431	Rubber	1-24 (16x36)	.095"	¾	55 D 9930	1.38	.....	.....	55 D 9931	4.38	.....	.....
*8430	Vinyl	2-32 (7x40)	.050"	¼	55 D 9927	.87	.....	.....	.....	.....	55 D 9928	4.80
8416	Clr. Vinyl	2-25 (7x33)	†	2½	55 D 9382	1.86	55 D 9390	3.40	55 D 9391	5.95	55 D 9412	13.65
*8429	Vinyl	2-32 (7x40)	.057"	¼	55 D 9933	1.47	.....	.....	.....	.....	55 D 9934	10.05
8419	Vinyl	3-32 (7x40)	.067"	½	55 D 8330	1.71	.....	.....	.....	.....	55 D 8333	12.25
8417	Clr. Vinyl	1-25 (7x33)	.140"	1⅓	55 D 7671	1.41	55 D 7672	2.27	55 D 7673	4.30	55 D 7674	9.30

VINYL "JUKE BOX" CABLE

Cable for juke box use. Vinyl inner insulation, vinyl outer jacket, and stranded, color-coded, tinned copper conductors. All shields are aluminum Mylar. Type 8783, unshielded; 8786, 4 shielded, 2 unshielded.

Type	Cond.	AWG (Stranding)	O.D.	Wt./100' Lbs.	Stock No.	100' Spool	Stock No.	500' Spool
8783	3	1—20 (10x30) 2—16 (26x30)	.250"	4½	55 D 7775	6.45	55 D 7776 U	28.90
8786	6	2—22 (7x30) 4—24 (7x32)	.256"	4	55 D 7777	7.65	55 D 7778	34.50

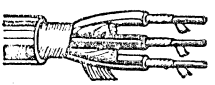
VINYL "JUKE BOX" SPEAKER CABLE



8782 has two parallel conductors No. 24 stranded (7x32) copper, one bare, one tinned. In chrome, white or clear vinyl. O.D., .058x.115". 8649 same except No. 20 stranded (7x28) Specify chrome or clear. O.D., .073x.146".

Mfr's Type	Wt./100' Lbs.	Stock No.	50' Spool	Stock No.	100' Spool	Stock No.	500' Spool	Stock No.	1000' Spool
8782	¾	55 D 8828 C	1.11	55 D 8829 C	1.65	55 D 7051 C	5.50	55 D 7052 C	10.95
8649	1½	.....	.....	55 D 7678 C	2.43	55 D 7628 C	8.75	55 D 7629 C	17.55

RUBBER-JACKETED SERVICE CORDS AND MULTIPLE-CONDUCTOR CABLES



Cords and cables for use on appliances, power tools, Public Address systems, speakers, remote control circuits, extension cords, test equipment, press-to-talk intercom circuits, etc. Maximum voltage rating, 300 V at −60°C. Stranded copper conductors have rubber insulation, cabled with fillers, with black rubber jackets. Color-coded for fast, easy identification.

Mfr's Type	U. L. Type	No. Cond.	AWG (Stranding)	Cond.	O.D.	Wt./100' Lbs.	Stock No.	100' Spool	Stock No.	250' Spool	Stock No.	500' Spool	Stock No.	1000' Spool
8452	SV	2	18 (41x34)	Bare	.245"	3¾	.....	.....	.....	.....	55 D 7032 X	28.35	55 D 7038 K	56.70
8478	SJ	2	18 (41x34)	Bare	.298"	5½	55 D 7911	7.15	55 D 7912	17.05	.....	.....	.....	.....
8472	SJ	2	16 (65x34)	Bare	.325"	6¾	55 D 8887	9.90	55 D 8888	23.55	.....	.....	.....	.....
8474	.....	2	14 (41x30)	Bare	.360"	8¼	55 D 7913	11.55	.....	.....	.....	.....	.....	.....
8479	.....	3	14 (41x30)	Bare	.380"	10¼	55 D 7206	13.20	55 D 7207 U	32.10	.....	.....	.....	.....
8453	SV	3	18 (41x34)	Tinned	.265"	4½	55 D 7917	8.25	.....	.....	55 D 7040 X	40.50	.....	.....
8454	.....	4	18 (41x34)	Tinned	.265"	5½	55 D 7920	9.55	.....	.....	55 D 7043 X	43.80	55 D 7045 K	87.60
8455	.....	5	3—20(26x34); 2—18(41x34)	Tinned	.280"	5½	55 D 7921	9.70	55 D 7922	24.15	.....	.....	.....	.....

BELDEN TEST-PROD WIRE

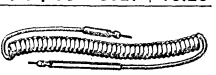
STANDARD. Rubber-covered limp, flexible conductor withstands extremely high voltages. No. 18 stranded tinned copper, with cotton wrapping. Puncture voltage: Type 8898, 29,000 volts; Type 8899, 20,000 volts.

Mfr's Type	Color	AWG (Stranding)	O.D.	Rubber Insul.	Working Voltage	Wt./100' Lbs.	STANDARD SPOOLS					
							Stock No.	25'	Stock No.	100'	Stock No.	500'
8898	Red	18 (65x36)	.230"	.088"	10,000	3¾	55 D 7737	2.10	55 D 7738	5.40	55 D 7739	22.65
8898	Black	18 (65x36)	.230"	.088"	10,000	3¾	55 D 7744	2.10	55 D 7750	5.40	55 D 7751	22.65
8899	Red	18 (65x36)	.144"	.045"	5000	1¾	55 D 7759	1.23	55 D 7760	3.90	55 D 7761	14.05
8899	Black	18 (65x36)	.144"	.045"	5000	1¾	55 D 7763	1.23	55 D 7764	3.90	55 D 7765	14.05
8899	Green	18 (65x36)	.144"	.045"	5000	1¾	55 D 7660	1.23	55 D 7624	3.90	55 D 7626	14.05
8899	Yellow	18 (65x36)	.144"	.045"	5000	1¾	55 D 7659	1.23	55 D 7623	3.90	55 D 7625	14.05

MINIATURE. Similar to above. Puncture voltage, 10,000 volts.

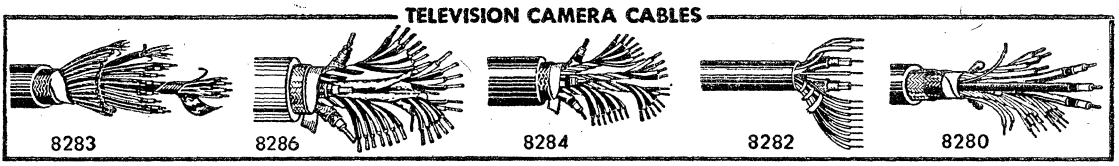
8890	Red	24 (45x40)	.066"	.019"	1000	½	55 D 8622	.98	55 D 8623	2.45	55 D 8624	10.20
8890	Black	24 (45x40)	.066"	.019"	1000	½	55 D 8625	.98	55 D 8626	2.45	55 D 8627	10.20

COILED CORD. Pair of tinned copper cables with red and black rubber insulation. Retract to 8 inches; stretch to 5 feet. No. 20 AWG (42x36). O.D., .173". Handles 5000 volts working, 20,000 volts puncture. Type 8878 has prods. Av. shpg. wt. per pair, ½ lb.



55 D 7037. Type 8878....Per Pair 3.45 55 D 7050. Type 8879. Without Prods.....Per Pair 1.49

TELEVISION CAMERA CABLES



Type 8283. 82-conductor color camera cable. Tinned-copper, color-coded vinyl-insul. conductors. Tinned copper braid shield. Chrome vinyl plastic jacket. 1.22″ nom. O.D. 94 lbs. per 100-ft.
55 D 8609 F. Minimum 25-ft.....Per Ft. 3.38
100′ or More.....Per Ft. 2.90

Type 8286. 28-conductor Hypalon TV camera cable, rated 75 ohms, designed to remain flexible in cold weather. Ideal for transistorized cameras. Tinned copper braid shield with black Hypalon jacket. Similar to 8280. .730″ nom. O.D. Per 100-ft., 38 lbs.
55 D 7024 F. Minimum 25-ft.....Per Ft. .96
100′ or More.....Per Ft. .825

Type 8280. 28-conductor camera cable. Tinned-copper, color-coded vinyl-insul. conductors. Tinned copper braid shield. Chrome vinyl jacket, .750″ nom. O.D. Per 100-ft., 34 lbs.
55 D 8610 F. Minimum 25-ft.....Per Ft. .93
100′ or More.....Per Ft. .80

Type 8282. 13-conductor TV-eye cable. Tinned-copper, color-coded, vinyl insulated conductors. Chrome vinyl jacket, .470″ nom. O.D. 15½ lbs. per 100-ft.
55 D 8612 F. Minimum 25-ft.....Per Ft. .42
100′ or More.....Per Ft. .35

Type 8284. 24-conductor camera cable. Tinned-copper, color-coded vinyl-insul. conductors. Tinned copper braid shield. Chrome vinyl plastic jacket, .800″ nom. O.D. 41 lbs. per 100-ft.
55 D 8611 F. Minimum 25-ft.....Per Ft. 1.15
100′ or More.....Per Ft. .98

TV CABLE ORDERING INFORMATION. Cut to customer's specified length subject to available stock lengths—minimum length 25′; 25′ to 199′, plus 25′, minus 0; 200′ or more, plus 50′, minus 0. Shipped from factory in Richmond, Indiana. No C.O.D.

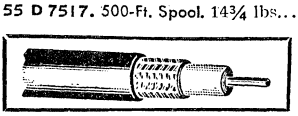
MINIATURE 75-OHM SHIELDED LOW-CAPACITY VIDEO CABLE

Type 8279. Miniature version of Type 8281 (at right). Tinned compacted conductor No. 23 AWG (7x31), polyethylene insulated, with tinned copper braid shield, black ploy ethylene jacket. 100% sweep tested. Capacitance, 21 pF/per foot. Attenuation: 4.9 dB at 100 MHz. Nominal impedance, 75 ohms. Nominal outside diameter: 0.220″.

55 D 7558. 100-Ft. Spool. 3½ lbs.....Per Spool 9.45
55 D 7516. 250-Ft. Spool. 8¼ lbs.....Per Spool 22.05
55 D 7517. 500-Ft. Spool. 14¾ lbs.....Per Spool 40.95

75-OHM VIDEO CABLE

Type 8281. Finds many applications in the transmission of video signals in TV studios. Provides superior picture definition (color or black-and-white), ends periodicity problems. Inner conductor is #20 solid tinned copper, polyethylene insulated. Tinned-copper double braid shield. Jacket is black polyethylene. Nominal capacitance of 21 pF. Attenuation 2.7 dB at 100 MHz. For UHF TV and other high-frequency uses. Nominal outside dia: 0.304″. Velocity of propagation: 66%. 100% sweep.
55 D 8613 X. 500-Ft. Spool. 37 lbs.....Per Spool 82.90
55 D 8614 Z. 1000-Ft. Spool. 77 lbs.....Per Spool 165.75



RG HIGH-FREQUENCY COAXIAL CABLE

MIL-C-17A. Low-loss, flexible polyethylene inner jacket, covered with copper-braid shield, black plastic outer jacket, except RG9/U, gray plastic outer jacket, silver-coated copper shielding. Impervious to weather, corrosives. RG8/U and RG9/U are medium-size video and communications cable. RG11/U is medium-sized 75-ohm video and communications cable. RG58/U ideal for RF transmission, test equipment.

Mfr's Type	RG No.	AWG (Stranding)	O.D (In.)	Imp. Ohms	Cap. pF	Conductors	Wt./100′ Lbs.	Stock No.	100′ Spool	Stock No.	500′ Spool	Stock No.	1000′ Spool
8237	8/U	13 (7x21)	.405	52	29.5	Bare Copper	11¼	55 D 7923	13.75	55 D 7261 X	55.20	55 D 7262 X	110.40
8242	9/U	13 (7x21)	.420	51	30.0	Silvered Copper	14¼	55 D 7924	35.85	.....	.....	55 D 7263 X	330.75
8243	9B/U	13 (7x21)	.420	50	20	Silvered Copper	13¾	.....	.....	55 D 8486 Z	211.50	.....	.....
8238	11/U	18 (7x26)	.405	75	20.5	Tinned Copper	10¼	55 D 7264	11.85	.....	.....	55 D 7266 Z	95.10
8259	58A/U	20 (19x.007)	.195	50	30.8	Tinned Copper	3	55 D 7925	5.85	55 D 7926	21.30	55 D 7297 U	42.60
8240	58/U	20 (Solid)	.195	53.5	28.5	Bare Copper	3¼	55 D 7927	4.95	55 D 7267	18.30	55 D 7287 U	36.60
8262	58C/U	20 (19x.007)	.195	50	28.5	Tinned Copper	2¾	.....	.....	55 D 7492	23.25	55 D 7494 X	46.50
8263	59B/U	23 (Solid)	.242	75	20.5	Bare Copperweld	4	.....	.....	55 D 7495	25.65	55 D 7496 X	51.30
8241	59/U	22 (Solid)	.242	73	21.0	Bare Copperweld	4	55 D 7928	5.75	55 D 7307 X	19.95	55 D 7308 U	39.90
8254	62/U	22 (Solid)	.242	93	13.5	Bare Copperweld	4	55 D 7929	6.45	55 D 7298 X	24.00	55 D 7306 U	48.00
8216	174/U	26 (7x34)	.100	50	30.4	Bare Copperweld	1	55 D 7931	3.75	55 D 7932	13.80	55 D 7934	27.60

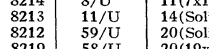
TEFLON—MIL-C-17D. All have silver coated copperweld conductors and one silver coated copper shield. Operate from —50° to +200°C ambient temperature. Extremely low loss. High voltage breakdown. Meet Navy drawing RE49B716.

Mfr's Type	RG No.	AWG (Stranding)	O.D. (In.)	Imp. Ohms	Cap pF/ft.	Jacket Type	Wt./100′ Lbs.	Stock No.	100-Ft. Spool	Stock No.	500-Ft. Spool
8266	180B/U	30 (7x38)	.142	95	15	BROWN FEP	2¼	55 D 8504	38.25	55 D 8505	171.00
8265	178B/U	30 (7x38)	.072	50	29	BROWN FEP	¾	55 D 8506	13.90	55 D 8507	68.25
8270	196A/U	30 (7x38)	.076	50	29	WHITE TFE	¾	55 D 8556	19.20	55 D 8557	80.25
8269	188A/U	26 (7x.0067)	.106	50	29	WHITE TFE	1½	55 D 8558	28.35	55 D 8559	128.62

SPECIAL-PURPOSE LOW-LOSS COAXIAL CABLE. Low attenuation and low capacitance. Suitable for community TV cable systems. Stable electrical characteristics even with changes in temperature and frequency. Types 8214 and 8219 are very well-suited for Amateur Radio and Citizens Band antenna use. All types listed have black polyethylene jackets.

Mfrs Type	RG No.	AWG (Stranding)	Material	O.D.	Imp., Ohms	Cap. pF	Wt./100′ Lbs.	Stock No.	100-Ft. Spool	Stock No.	500-Ft. Spool	Stock No.	1000′ Spool
8214	8/U	11(7x19)	Copper	.403″	50	26	11¾	55 D 7387	15.30	55 D 7388 Z	61.50	.....	.....
8213	11/U	14(Solid)	Copper	.405″	75	17.3	9½	.....	.....	55 D 7390 U	62.25	55 D 7391 Z	124.50
8212	59/U	20(Solid)	Copperweld	.242″	75	17.3	3¾	.....	.....	55 D 7394	23.65	55 D 7395 U	47.30
8219	58/U	20(19x32)	Copper	.195″	50	26	3	55 D 7579	6.00	.....	.....	.....	.....
8221	59/U	22(Solid)	Copperweld	.242″	75	16.3	4½	55 D 7201	6.30	55 D 7202 U	21.30	55 D 7203 U	42.60

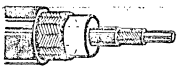
CATHODE-RAY-TUBE LEAD



High-dielectric, corona-resistant, minimum-surface-leakage, CRT cables. Conductive polyethylene bonded to conductor to provide uniform voltage stress distribution, polyethylene insulated, vinyl jacket.

Mfr's Type	AWG (Stranding)	O.D.	Working Voltage	Wt./100′ Lbs.	100-Ft. Std. Spool		500-Ft. Std. Spool	
					Stock No.	EACH	Stock No.	EACH
8866	18 (41x34)	.208″	40,000	2¾	55 D 7187	5.55	55 D 7188	23.40
8868	22 (7x30)	.150″	25,000	1¼	55 D 7770	2.93	55 D 7771	11.35
8869	22 (7x30)	.120″	17,000	1¼	55 D 7773	2.43	55 D 7774	9.10

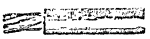
HIGH-VOLTAGE CABLE



High voltage cables for use by R&D organizations and power companies. Recommended for steady state DC voltages and pulse discharge systems. 8870 copperweld, cond. polyethylene, polyeth. ins., tinned copper braid. 8871 polyeth. rod, copper braid, cond. polyeth., polyeth. ins., copper braid. Both blk. polyeth. jkt.

Mfr's Type	AWG (Stranding)	O.D.	Working Voltage	Breakdown Voltage	Wt./100' Lbs.	25' Spool Stock No.	25' Spool EACH	100' Spool Stock No.	100' Spool EACH
8870	22 (Solid-Copperweld)	.440"	80,000	160,000	8	.....	.....	55 D 7441	34.80
8871	16 (Braided-Copper)	.830"	200,000	400,000	25	55 D 7191	40.50	55 D 7192U	162.00

MIL 16878D—VINYL, 600 VOLT, 105° C



Type B. Tinned, stranded copper. In brown, red, orange, yellow, green white, black and blue. Specify color desired.

Mfr's Type	Gauge (Strand)	O.D.	Wt./100' Lbs.	100' Spools Stock No.	100' Spools EA.	1000-Ft. Spools Stock No.	1000-Ft. Spools EA.
8598	30 (7x38)	.032"	¼	55 D 7299 C	1.37	.....	.....
8597	28 (7x36)	.035"	¼	55 D 7300 C	1.35	.....	.....
8505	26 (7x34)	.039"	¼	55 D 7301 C	1.40	55 D 7542 C	9.75
8504	24 (7x32)	.044"	¼	55 D 7302 C	1.40	55 D 7548 C	9.10
8503	22 (7x30)	.050"	½	55 D 7303 C	1.52	55 D 7550 C	9.90
8502	20 (7x28)	.058"	½	55 D 7304 C	1.71	55 D 7551 C	11.10
8501	18 (7x26)	.068"	¾	55 D 7305 C	1.86	55 D 7570 C	13.95
8500	16(19x29)	.077"	1	55 D 7323 C	2.27	55 D 7571 C	17.55

MIL 16878D—VINYL INSULATION, 3000 VOLTS, 105° C

TYPE D. Tinned, stranded copper. In brown, red, orange, yellow, green, white, black, blue. Specify color.

8971	22 (7x30)	.090"	¾	55 D 7651 C	2.28	.....	.....
8970	20 (7x28)	.098"	¾	55 D 7652 C	2.67	.....	.....
8969	18 (7x26)	.108"	1¼	55 D 7653 C	3.00	.....	.....

MIL 16878D—TEFLON-INSULATED, 600 VOLTS, 200° C

TYPE E. Stranded, silver-coated copper wire. In brown, red, orange, yellow, green, white, black, and blue. Specify color. Av. wt./100' ¾ lb.

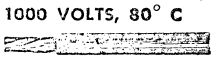
Mfr's Type	AWG (Strand)	O.D.	100-Ft. Spools Stock No.	100-Ft. Spools EACH	500-Ft. Spools Stock No.	500-Ft. Spools EACH
8301	28 (7x36)	.036"	55 D 7702 C	3.75	55 D 7582 C	13.20
8302	26 (7x34)	.041"	55 D 7703 C	4.15	55 D 7583 C	14.93
8303	24 (19x36)	.046"	55 D 7704 C	5.20	55 D 7584 C	19.13
8306	22 (19x34)	.052"	55 D 7705 C	5.70	55 D 7585 C	21.50
8307	20 (19x32)	.060"	55 D 7706 C	6.90	55 D 7586 C	25.50
8309	18 (19x30)	.071"	55 D 7679 C	9.33	55 D 7587 C	36.38
8310	16 (19x29)	.080"	55 D 7686 C	11.55	55 D 7588 C	45.53

MIL-W-76B—VINYL INSULATION, 600 AND 2500 V., 80° C

TYPE HW. Tinned stranded copper wire with heavy-wall insulation. 8585, 2500 V, all other 600 V; Wall thickness is .048" except Type 8585, .034". Available in red, white and black. Specify color wanted.

Stock No.	Mfr's Type	Gauge	Wt., O.D.	Wt., Lbs.	100-Ft. Spool
55 D 7210 C	8585	16 (26x30)	.128"	1¾	3.30
55 D 7211 C	8584	14 (14x30)	.171"	3	5.70
55 D 7212 C	8583	12 (65x30)	.191"	3¾	7.60
55 D 7213 C	8582	10 (105x30)	.220"	5¼	11.55

MIL-W-76B—VINYL INSULATION, 1000 VOLTS, 80° C

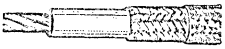


TYPE MW. In brown, red, orange, yellow, green, white, black and blue—specify choice when ordering.

Mfr's Type	Gauge	O.D.	Wt./100' Lbs.	100-Ft. Spools Stock No.	100-Ft. Spools EACH
8525	24 (7x32)	.058"	½	55 D 7244 C	1.34
8530	22 (Solid)	.059"	½	55 D 7218 C	1.23
8524	22 (7x30)	.064"	½	55 D 7219 C	1.47
8529	20 (Solid)	.066"	½	55 D 7220 C	1.47
8523	20 (10x30)	.070"	½	55 D 7221 C	1.67
8522	18 (16x30)	.080"	¾	55 D 7110 C	2.10
8528	18 (Solid)	.074"	¾	55 D 7112 C	1.86
8531	16 (Solid)	.085"	1	55 D 7246 C	2.33
8521	16 (26x30)	.098"	1	55 D 7114 C	2.81
8520	14 (41x30)	.111"	1¾	55 D 7116 C	4.00
8527	12 (65x30)	.130"	3	55 D 7118 C	5.70

Mfr's Type	1000-Ft. Spools Stock No.	1000-Ft. Spools EACH	Mfr's Type	1000-Ft. Spools Stock No.	1000-Ft. Spools EACH
8525	55 D 7245 C	8.55	.....	.....	.....
8530	55 D 7222 C	7.80	8522	55 D 7111 C	15.60
8524	55 D 7223 C	10.05	8528	55 D 7113 C	13.30
8529	55 D 7224 C	9.75	8521	55 D 7115 C	21.90
8523	55 D 7225 C	11.35	8520	55 D 7117 C	33.75

MIL-W-76B—SHIELDED, NYLON JACKET, 1000 V., 80 °C

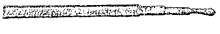


TYPE MW. Cable with tinned copper inner conductor and shield. Vinyl insulation between inner conductor and shield with nylon jacket over all. White only. *100-ft.

Type	Gauge	*Lbs.	O.D.	Type	Gauge	*Lbs.	O.D.
8893	22 (7x30)	1	.096"	8892	18 (16x30)	1¾	.114"
8896	20 (10x30)	1	.105"	8894	16 (26x30)	2¼	.132"

Mfr's Type	100-Ft. Spools Stock No.	100-Ft. Spools EACH	1000-Ft. Spools Stock No.	1000-Ft. Spools EACH
8893	55 D 7136	4.90	55 D 7146	39.75
8896	55 D 7137	4.90	55 D 7147	43.80
8892	55 D 7138	5.55	55 D 7148	45.30
8894	55 D 7139	7.00	.....	.....

TYPE 8885 SHIELDED GRID-WIRE



Single-conductor copper braid shield. 300 volts suggested working voltage.

Stock No.	O.D.	Stranding	Spool Lgth.	Lbs.	EACH
55 D 7780	.117"	20 (10x30)	25'	½	1.50
55 D 7781			100'	1½	4.50

U.L.-LISTED HOOKUP WIRE 105° C (CSA 600-V TYPE TEW)

Vinyl insulated hookup and lead wire. Tinned copper conductor. Available in eight insulation colors: brown, red, orange, yellow, green, white, black, and dark blue. When ordering, specify insulation color wanted.

Mfr's Type	AWG (Stranding)	O.D.	Wt./100' Lbs.	STANDARD SPOOLS Stock No.	100'	Stock No.	500'	Stock No.	1000'
8920	22 (7x30)	.095"	¾	55 D 8221 C	1.62	.....	.....	55 D 8224 C	10.95
8919	20 (10x30)	.102"	1	55 D 8226 C	1.86	.....	.....	55 D 8230 C	13.80
8918	18 (16x30)	.112"	1¼	55 D 8240 C	2.28	.....	.....	55 D 8241 C	17.20
8917	16 (26x30)	.126"	1¾	55 D 8242 C	3.10	55 D 8243 C	12.30	.....	.....
8916	14 (41x30)	.141"	2½	55 D 8255 C	4.05	55 D 8256 C	16.65	.....	.....

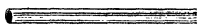
FLEXIBLE COPPER BRAID SHIELDING AND BONDING CABLE

Flexible tinned copper braiding for shielding conductors and cables of all sizes. Provides approximately 90% shield coverage when applied over recommended dia. Braided in tubular form for easy shielding of any wiring. Stranding column below indicates number of AWG tinned solid copper wires braided together to form complete shield.

Mfr's Type	AWG Stranding	Approx. Cir Mil Area	Oval MAX. I.D. (Inch)	Flat Width (Inch)	Wt./100' Lbs.	50-Ft. Spool Stock No.	50-Ft. Spool EACH	250-Ft. Spool Stock No.	250-Ft. Spool EACH
8660	96x34	3800	5/32	7/32	1½	55 D 9350	2.25	55 D 7060	10.20
8668	120x34	4700	3/16	5/16	2	55 D 9355	3.06	55 D 7061	13.35
8661	192x34	7600	1/2	9/16	3	55 D 9360	3.65	55 D 7062	16.80
8669	336x34	13,300	5/8	11/16	5	55 D 9365	7.60	55 D 7063	36.30
8662	576x34	22,900	—	19/32	7½	55 D 9380	10.75	55 D 7064	52.00
8663	168x34	6700	5/16	7/16	3	55 D 9843	3.80	55 D 7065	17.85
8670	480x30	48,000	—	3/4	15	55 D 7753	16.50	55 D 7754 K	79.20
8671	864x36	21,600	—	11/16	7½	55 D 7756	12.40	55 D 7757	61.05
8672	528x36	13,200	—	9/16	5	55 D 7784	8.80	55 D 7785	39.60

BELDEN Wire and Shrinkable Tubing

TINNED BUS BAR WIRE



Highest-quality solid tinned copper bus-bar wire, 24 to 12 gauge. Excellent wire for switchboards, power plants, and other heavy current requirements. Meets rigid government specification requirement QQ-W-343.

Mfr's Type	AWG	O. D.	100-Ft. Spool			1000-Ft. Spool		
			Stock No.	Oz.	EACH	Stock No.	Lbs.	EACH
8022	24	.020″	55 D 8520	4	.77	55 D 8561	1¼	3.96
8021	22	.025″	55 D 8521	5	.78	55 D 8570	2	4.65
8020	20	.032″	55 D 8522	6	.93	55 D 8571	3½	6.40
8019	18	.040″	55 D 8530	8	1.20	55 D 8577	5½	9.00
8013	16	.050″	55 D 8531	14	1.73	55 D 8578	8½	14.50
8012	14	.064″	55 D 8532	24	2.55	55 D 8579	13	21.45
8011	12	.080″	55 D 8540	40	3.85	.....	....	.....

PRIMARY WIRE

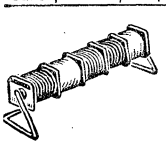
For all wiring on cars, boats and trailers other than ignition. Weather, oil and heat resistant. SAE type GPT. Vinyl insulated.

Mfr's Type	AWG (Stranding)	O.D. In.	Color	100′ Spool		
				Stock No.	Wt. Lbs.	EACH
8685	16 (19x29)	.102	Black	55 D 7100	1¼	2.60
8684	14 (19x27)	.117	Green	55 D 7101	2	3.40
8683	12 (19x25)	.142	Red	55 D 7106	2¾	4.80
8682	10 (19x23)	.175	White	55 D 7107	4¼	6.75
8681	8 (19x21)	.219	Chrome	55 D 7120	6½	13.80
8680	6 (37x21)	.290	Chrome	55 D 7121	12	21.45
8679	4 (61x22)	.350	Chrome	55 D 7122	16	24.00

BONDED PRIMARY WIRE

3 and 4-cond., parallel-bonded primary wire. Tinned copper, vinyl insulated. O.D.: 8475, .102x.295″; 8476, .012x400″. Color-coded. Wt. per 100′ spool: 8475, 3½ lbs.; 8476, 4¾ lbs.

Mfr's Type	Con-ductors	AWG (Stranding)	Stock No.	100′ Spool	Stock No.	500′ Spool
8475	3	16 (19x29)	55 D 7732	6.45	55 D 7427	29.10
8476	4	16 (19x29)	55 D 7733	9.60	.....	.....



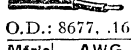
ASSORTED HOOK-UP WIRE KITS

Type 8822. Contains ten 25-ft. spools of Type 8529 #20 solid wire and dispenser rack. Popular assortment of most common colors: black, blue, green, red, white, yellow, orange, brown, gray, violet. 2½ lbs.
55 D 7226.....6.60

Type 8824. Eight 25-ft. spools of 8523 #20 stranded wire, dispenser. Colors: black, blue, green, red, wht., yellow, orange, brown.
55 D 7227. Shpg. wt., 2¼ lbs.....5.76

Type 8816. Same as 8824, except 8522 #18 stranded wire.
55 D 7168. Shpg. wt., 2.7 lbs.....6.72

DUPLEX LIGHTING CABLE



Outdoor 2-cond. stranded tinned copper. Brown and red vinyl insulated. Chrome vinyl overall. O.D.: 8677, .164x.276″; 8675, .189x.326″; 8673, .213x.384″.

Mfr's Type	AWG Stranding	Wt./100′ Lbs.	Stock No.	100′ Spool	Stock No.	500′ Spool
8677	16 (19x19)	4	55 D 7728	5.65	55 D 7729	26.55
8675	14 (19x27)	5½	55 D 7730	7.45	55 D 7039 U	34.80
8673	12 (19x25)	7½	55 D 7731	9.60	55 D 7042 U	46.80

HST-1 IRRADIATED POLYOLEFIN SHRINKABLE TUBING

Irradiated polyolefin shrinks to 50% diameter at 275°F. Meets MIL-I-23053 (WEPS) Rev. A. Operating temperature 135°C. Solvent, fungus resistant. *Tubing is oversize to fit object size indicated. Shpg. wt., 8 oz.

6-INCH LENGTHS—SPECIFY BLACK OR CLEAR

Stock No.	Size In.*	Min. I.D.	Recov. I.D	Nom. Wall Thick.	Lgths. Per Pkg.	PER PKG.
55 D 7209 C	3/64	.046″	.023″	.016″	25	2.50
55 D 7232 C	1/16	.063″	.031″	.017″	25	2.80
55 D 7233 C	3/32	.093″	.046″	.020″	25	3.10
55 D 7234 C	1/8	.125″	.062″	.020″	25	3.55
55 D 7235 C	3/16	.187″	.093″	.020″	25	4.15
55 D 7236 C	1/4	.250″	.125″	.025″	25	5.00
55 D 7248 C	3/8	.375″	.187″	.025″	25	6.25
55 D 7249 C	1/2	.500″	.250″	.025″	25	7.15
55 D 7278 C	3/4	.750″	.375″	.030″	25	8.30

4-FOOT LENGTHS

Specify Black, Clear, Red or Yellow. †Black or Clear only.

Stock No.	Size In.*	Min. I.D.	Recov. I.D.	Nom. Wall Thick.	Lgths. Per Pkg.	PER PKG.
55 D 7281 CX	3/64†	.046″	.023″	.016″	10	5.60
55 D 7333 CX	1/16†	.063″	.031″	.017″	10	5.90
55 D 7342 CX	3/32	.093″	.046″	.020″	25	17.00
55 D 7382 CX	1/8	.125″	.062″	.020″	25	18.06
55 D 7483 CX	1/4	.250″	.125″	.025″	25	27.84

HST-2 IRRADIATED POLYOLEFIN SHRINKABLE TUBING

Black irradiated polyolefin, heat shrinkable tubing gives a higher heat and environment resistance than vinyl. The tubing is flexible even at 58°F. Sold by coil.. Shpg. wt., 4 lbs.

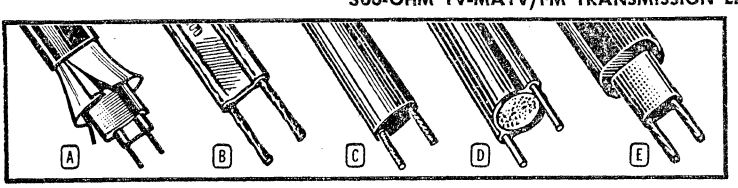
Stock No.	Size In.	Min. I. D.	Recov. I. D.	Wall Thck.	Feet/ Coil	EACH
55 D 9286	3/64	.046″	.023″	.020″	500	36.55
55 D 9287	1/16	.062″	.031″	.020″	500	38.25
55 D 9288	1/8	.125″	.062″	.025″	200	19.04
55 D 9289	3/16	.187″	.093″	.025″	200	23.12
55 D 9290	1/4	.250″	.125″	.025″	200	28.90
55 D 9291	3/8	.375″	.187″	.030″	200	32.13

HST-3 VINYL HEAT SHRINKABLE TUBING

The vinyl tubing shrinks to 50% of original diameter in five seconds. Less than 15% length change. For up to 105 C. Specify Clear, Black, Red, or Light Blue. Avg. shpg. wt., 3 lbs.

Size In.*	Min. I.D.	Recov. I.D.	Wall Thick.	25-foot spool		100-foot spool	
				Stock No.	EACH	Stock No.	EACH
1/8	.135″	.075″	.014″	55 D 7159 C	3.27	55 D 7160 C	10.75
3/16	.200″	.110″	.014″	55 D 7161 C	3.74	55 D 7162 C	12.80
1/4	.270″	.150″	.020″	55 D 7164 C	4.46	55 D 7165 C	16.40
3/8	.395″	.225″	.020″	55 D 7166 C	4.80	55 D 7167 C	17.85
1/2	.520″	.300″	.020″	55 D 7173 C	5.53	55 D 7174 C	18.70
5/8	.645″	.375″	.020″	55 D 7175 C	6.38	55 D 7176 C	22.50
3/4	.770″	.450″	.020″	55 D 7189 C	6.93	55 D 7190 C	24.65
7/8	.895″	.525″	.020″	55 D 7193 C	8.76	55 D 7197 C	32.90
1	1.02″	.600″	.020″	55 D 7194 C	9.35	55 D 7200 C	35.70
1½	1.52″	.900″	.030″	55 D 7195 C	14.58	55 D 7204 C	58.65
2	2.02″	1.200″	.030″	55 D 7196 C	20.23	55 D 7205 C	86.70

300-OHM TV-MATV/FM TRANSMISSION LINE



A TYPE 8290. Shielded ultra-low-loss lead-in ideal for color and black-and-white TV. Mylar shield cuts interference from ignition, electrical gear. Can run through or next to metal. Shpg. wt., 3 lbs. per 100′.
II D 1603. 50′ Coil.....5.95
II D 1605. 100′ Coil.....10.15
II D 1655 W. 500′ Coil.....47.90

B TYPE 8225. For TV and FM antennas. Flat polyethylene jacket. For outdoor use. Wt. per 100 ft., 1¾ lbs.
II D 1441. 50′ Coil.....1.20
II D 1443. 100′ Coil.....1.97
II D 1531 W. 250′ Coil.....4.85

B TYPE 8226. Same as Type 8225 but in clear low-loss polyethylene jacket. For indoor use. Wt. per 100′., 1¾ lbs.
II D 1226. 50′ Coil.....1.20
II D 1229. 100′ Coil.....1.97

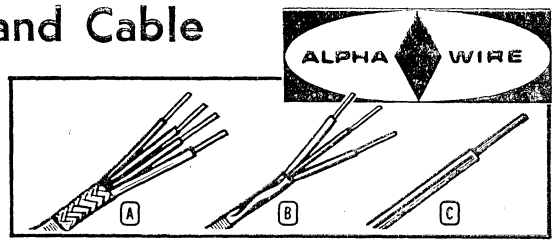
B TYPE 8230. Weldohm design for increased strength and conductivity. 7x28 stranded copper-coated steel wire. Almost twice as strong as plain copper. Polyethylene insulated. Perfect for long lead-ins. 70-mil web. Brown color. 2 lbs. per 100 feet.
II D 1445. 50′ Coil.....1.34
II D 1447. 100′ Coil.....2.22
II D 1533 W. 250′ Coil.....5.50

C TYPE 8235. 300-ohm oval twin line. Low-loss type for both UHF and VHF use. Copper-coated 7x26 steel wire conductors. 185-mil web thickness. Resists extreme weather conditions. Jacket of 100% polyethylene. Supplied in 100-ft. coils only. Shpg. wt. per 100 ft., 4½ lbs. Brown.
II D 1451. 100′ Coil.....5.35

D TYPE 8275. Low-loss lead-in for all VHF-UHF TV and FM installations. Cellular polyethylene core is filled with inert gas. Polyethylene jacket. 7x28 copper-coated steel conductors. 3½ lbs. per 100-ft.
II D 1448. 50′ Coil.....2.70
II D 1450. 100′ Coil.....4.65
II D 1536 W. 250′ Coil.....11.05

E TYPE 8285. Durable, low-loss, recommended for color TV. 22-gauge (7x30) copperweld conductors. Polyethylene jacket, insulation and webbing. Outside diameter, ¼x15/32″. 3½ lbs. per 100 ft.
II D 1452. 50′ Coil.....2.85
II D 1454. 100′ Coil.....4.90
II D 1539 W. 250′ Coil.....11.65

Alpha Wire and Cable



TYPE MW UNCOVERED HOOK-UP WIRE

Military hook-up wire is solid or extra flexible stranded tinned copper, color-coded medium wall polyvinylchloride insulation. Nominal wall thickness is .016". Temperature rating: —40° to +80°C. Voltage rating, 1000 V. Meets MIL-W-76B specifications. Resistant to environmental and chemical abrasions such as acids, oil, alkalies, flame, moisture and fungus. 1000' spools only. **Available in white, black, red, or green—specify.**

Stock No.	Mfr's Type No.	Type Designation	Conductor Size	Conductor Strand	Nom. O.D.	Wt., 1000' Lbs.	PER SPOOL
55 D 8410 C	1550	MW-C 24(7)U	24	7/32	.059"	2.8	8.65
55 D 8424 C	1551	MW-C 22(7)U	22	7/30	.064"	3.6	10.23
55 D 8427 C	1553	MW-C 20(10)U	20	10/30	.073"	4.8	11.55
55 D 8428 C	1555	MW-C 18(16)U	18	16/30	.084"	7.3	15.84
55 D 8433 C	1557	MW-C 16(26)U	16	26/30	.095"	11.2	22.27
55 D 8434 C	1559	MW-C 14(41)U	14	41/30	.110"	16.1	34.32
55 D 8439 CX	1560	MW-C 12(65)U	12	65/30	.125"	24.9	47.85
55 D 8456 C	1561	MW-C 22(1)U	22	Solid	.060"	3.3	7.92
55 D 8468 C	1561/24	MW-C 24(1)U	24	Solid	.055"	2.5	7.00
55 D 8469 C	1563	MW-C 20(1)U	20	Solid	.066"	4.6	9.90
55 D 8492 C	1565	MW-C 18(1)U	18	Solid	.074"	6.9	13.53
55 D 8496 C	1567	MW-C 16(1)U	16	Solid	.083"	11.0	18.97

TYPE B UNCOVERED HOOK-UP WIRE

Stranded, tinned-copper, color-coded. .010" polyvinylchloride insulation. Temperature rating: —55° to +105°C. Rated 600V. Resistant to acids, oil, alkalies, flame, moisture, fungus. **Meets MIL-W-1678D. 1000' spools only. White, black, red or green—specify.**

55 D 8497 C	1850	B-32	32	7/40	.028"	.6	11.88
55 D 8498 C	1851	B-30	30	7/38	.032"	.8	9.48
55 D 8500 C	1852	B-28	28	7/36	.034"	1.0	8.58
55 D 8503 C	1853	B-26	26	7/34	.038"	1.5	9.90
55 D 8510 C	1854	B-24	24	7/32	.043"	2.2	9.24
55 D 8511 C	1854/19	B-24	24	19/36	.043"	2.2	10.96
55 D 8512 C	1855	B-22	22	7/30	.050"	3.0	10.06
55 D 8518 C	1855/19	B-22	22	19/34	.050"	3.0	11.55
55 D 8519 C	1856	B-20	20	7/28	.058"	4.6	11.29
55 D 8245 C	1856/19	B-20	20	19/32	.058"	4.6	14.02
55 D 8246 C	1857	B-18	18	7/26	.068"	7.0	14.68
55 D 8247 C	1857/19	B-18	18	19/30	.068"	7.0	16.41
55 D 8248 C	1858/19	B-16	16	19/29	.077"	9.0	18.97
55 D 8249 C	1859/19	B-14	14	19/27	.091"	14.0	31.92

TYPE B PER MIL-W-16878D NYLON SHIELDED PLASTIC JACKET MULTI-CONDUCTOR CABLE

Each conductor is stranded tinned copper. With color-coded .010" polyvinylchloride insulation; covered with clear, .003" nylon (polymide) jacket. Conductors are cabled; surrounded by braided tinned copper shield providing 90% coverage. Overall white polyvinylchloride jacket. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus. Meets MIL-W-1678D specifications. Temperature rating: —55° C to +105° C. Rated 600 volts. Shpg. wt., 20 lbs.

Mfr's Type	No. of Cond.	Gauge (Strand)	100' Spool Stock No.	100' Spool EACH	1000' Spool Stock No.	1000' Spool EACH
3210	1	24 (19x36)	55 D 9208	7.72	55 D 9209	73.24
3211	2	24 (19x36)	55 D 9210	11.73	55 D 9211 U	109.15
3212	3	24 (19x36)	55 D 9212	16.23	55 D 9213 U	154.98
3220	1	22 (19x34)	55 D 9214	8.50	55 D 9215 X	77.34
3221	2	22 (19x34)	55 D 9216	12.84	55 D 9217 U	120.33
3222	3	22 (19x34)	55 D 9218	17.80	.....	.....
3230	1	20 (19x32)	55 D 9221	8.89	.....	.....
3231	2	20 (19x32)	55 D 9223	14.10	.....	.....
3232	3	20 (19x32)	55 D 9225	19.06	.....	.....

TYPE B PER MIL-W-16878D UNCOVERED PLASTIC PRE-BONDED TINNED COPPER CONDUCTOR

Each strand of conductor is double tinned, then heat-bonded together. An ideal construction where leads are to be cut and stripped for point-to-point wiring. Maintains flexibility of ordinary stranded wire, but reduces handling costs on production soldering jobs. With color-coded polyvinylchloride insulation; wall thickness, .010". Insulation meets requirements of MIL-W-16878D. Temperature rating: —55°C to +105°C. Rated at 600 volts. Resistant to such environmental and chemical abrasives as acids, alkalis, oil, flame, moisture, solvents and fungus. **Available in white, black and red—specify color.**

Mfr's Type	Gauge (Strand)	Nom. O. D.	Wt., 100' Lbs.	100' Spool Stock No.	100' Spool EA.	1000' Spool Stock No.	1000' Spool EACH
3154	24 (7x32)	.044"	.3	55 D 9200C	1.65	55 D 9201C	11.56
3155	22 (7x30)	.051"	.4	55 D 9202C	1.93	55 D 9203C	14.58
3156	20 (7x28)	.059"	.5	55 D 9204C	2.38	55 D 9205C	18.91
3157	18 (7x26)	.070"	.7	55 D 9206C	3.16	55 D 9207C	26.65

MIL-W-16878D SHIELDED TEFLON CABLE

Each conductor stranded silver-plated copper, Type E with .010" extruded Teflon insulation per MIL specs. Rated at 600 volts. When shielded, a closely woven silver-plated copper shield is braided over the conductors. When braided, a Teflon impregnated fiberglass yarn is woven over the shield. Also with a sintered, wrapped white Teflon tape jacket fused over the shield. Temp., —65°C to +200°C. Numbers after / in Type No. are conductors; no / indicates 1 conductor. Av. shpg. wt., 1½ lbs. 100-Ft. Spool.

[A] BRAID OVER SHIELD

Stock No.	Mfr's Type	AWG	Outer Dimensions	100' SPOOL
55 D 7521	2811	24 (19x36)	.081"	23.70
55 D 7522	2811/2	24 (19x36)	.126"	32.85
55 D 7552	2811/3	24 (19x36)	.133"	47.70
55 D 7590	2814	22 (19x34)	.088"	24.60
55 D 7591	2814/2	22 (19x34)	.137"	35.70
55 D 7598	2814/3	22 (19x34)	.144"	52.80
55 D 7599	2817	20 (19x32)	.097"	26.40
55 D 7604	2817/2	20 (19x32)	.154"	39.90
55 D 7605	2817/3	20 (19x32)	.163"	58.95
55 D 7617	2819	18 (19x30)	.106"	35.55
55 D 7618	2819/2	18 (19x30)	.174"	53.85
55 D 7619	2819/3	18 (19x30)	.185"	70.65

[B] TEFLON TAPE WRAP OVER SHIELD

55 D 7620	2821	24 (19x36)	.095"	27.00
55 D 7627	2821/2	24 (19x36)	.140"	38.70
55 D 7630	2821/3	24 (19x36)	.147"	52.35
55 D 7634	2824	22 (19x34)	.102"	27.45
55 D 7635	2824/2	22 (19x34)	.154"	40.95
55 D 7639	2824/3	22 (19x34)	.162"	59.70
55 D 7640	2827	20 (19x32)	.110"	30.00
55 D 7646	2827/2	20 (19x32)	.170"	45.15
55 D 7665	2827/3	20 (19x32)	.175"	64.95
55 D 7667	2829	18 (19x30)	.120"	38.25
55 D 7689	2829/2	18 (19x30)	.190"	60.75
55 D 7694	2829/3	18 (19x30)	.219"	77.55

MIL-W-16878D TEFLON WIRE

Single conductor, stranded silver-plated copper. Extruded TFE Teflon insulation. Temp. rating, —65° to +200°C. Voltage rating: Type E, 600 volts; Type EE, 1000 volts. Nominal Wall Thickness: Type E, all are .010"; Type EE, *.014", †.017". **Available in White, Black, Red, Green, Yellow, Brown, Orange. §Indicates available in White only, **Indicates White, Black, Red or Green only. ††Not available in brown or orange. Specify Color When Ordering.** Resistant to acids, alkalis, oil, flame, moisture and solvents. Av. shpg. wt. per spool: 100', ½ lb.; 1000', 4 lbs. *F in Stock Number denotes Shipment F.O.B. Factory Elizabeth, New Jersey.*

[C] TYPE E—EXTRUDED—600 VOLTS

Mfr's Type	AWG	O.D.	100' Spool Stock No.	100' Spool EACH	1000' Spool** Stock No.	1000' Spool** EACH
5850	32 (7x40)	.029"	55 D 8919C	2.51	55 D 8928C	21.44
5851	30 (7x38)	.032"	55 D 7745C	2.51	55 D 7746C	21.44
5852	28 (7x36)	.036"	55 D 7813C	2.70	55 D 7824C	23.33
5853	26 (7x34)	.040"	55 D 7825C	2.88	55 D 7834C	25.07
5854	24 (19x36)	.045"	55 D 7849C	3.74	55 D 7854C	33.69
5854/7	14 (7x32)	.044"	55 D 7896C	3.08	55 D 7897C	27.08
5855	22 (19x34)	.051"	55 D 7905C	4.19	55 D 7906C	38.12
5855/7	22 (7x30)	.050"	55 D 7910C	3.59	55 D 7915C	32.18
5856	20 (19x32)	.059"	55 D 7918C	6.03	55 D 7946C	56.61
5856/7	20 (7x28)	.058"	55 D 7990C	4.73	55 D 8021C	43.61
5857	18 (19x30)	.070"	55 D 8034C	6.83	55 D 8035C	64.50
5858	16 (19x29)	.077"	55 D 8050C	9.21	55 D 8052CF	88.35
5859††	14 (19x27)	.094"	55 D 8920CF	13.23	55 D 8929CF	128.58
5859/12§	12 (19x25)	.113"	55 D 8921F	16.26	55 D 8930F	159.65

[C] TYPE EE—EXTRUDED—1000 VOLTS

5874**	24 (19x36)	.055"	55 D 8900C	5.46	55 D 8909CF	50.88
5875**	22 (19x34)	.062"	55 D 8901C	6.36	55 D 8910CF	59.93
5876**	20 (19x32)	.070"	55 D 8902C	7.64	55 D 8911CF	72.63
5877**	18 (19x30)	.080"	55 D 8903C	9.33	55 D 8912CF	89.61
5878*§	16 (19x29)	.089"	55 D 8904	11.47	55 D 8913F	112.97
5879*§	14 (19x27)	.106"	55 D 8905	16.77	55 D 8915F	163.95
5879/12†§	12 (19x25)	.124"	55 D 8906	17.13	55 D 8916F	167.63

Alpha Wire and Cable

MULTI-CONDUCTOR UNSHIELDED AUDIO CABLE

Tinned copper covered with color-coded polyvinylchloride insulation. Conductors are twisted. Plastic jacket overall. For unbalanced intercom systems, as low voltage relay control cable, computer cable, or PA system cable. #22 gauge with 7x30 stranding. .010″ wall thickness; .020″ jacket. —20°C to +60°C. Oper. volts, 200 V. 100′ spool only.

Mfr's Type	Cond.	Nom. O.D.	Lbs.	Stock No.	100′ Spool
1176	6	.185″	2.6	55 D 9070	8.40
1177	7	.190″	2.8	55 D 9072	9.80
1178	8	.200″	3.5	55 D 9074	10.50
1179	9	.225″	3.8	55 D 9076	11.70
1180	10	.235″	4.2	55 D 9078	12.80
1181	12	.255″	5.0	55 D 9080	13.80
1181/15	15	.280″	6.2	55 D 9082	30.00
1181/20	20	.310″	8.2	55 D 9084	40.50
1181/25	25	.340″	10.0	55 D 9086	52.50
1181/30	30	.365″	12.3	55 D 9088	63.80

SHIELDED MICROPHONE CABLE

Plastic Jacketed. Have stranded, tinned copper conductors with color-coded polyethylene insulation. With gray, polyvinylchloride jacket overall. Types 1702 and 1705 have .020″ jacket; Type 1710 has .025″ jacket; others .030″ jacket. Wt., 2 lbs.

WITH BRAIDED SHIELD

Mfr's Type	Conductor No.	Conductor Size	O.D.	100′ Spool Stock No.	100′ Spool EACH	1000′ Spool Stock No.	1000′ Spool EACH
1703	1	24	.145″	55 D 7952	5.10	.....	.....
1704	1	24	.190″	55 D 7954	6.80	.....	.....
1706	1	20	.175″	55 D 7958	8.70	.....	.....
1710	2	22	.230″	55 D 7962	9.00	55 D 7963	81.50
1712	2	20	.240″	55 D 9110	11.60	.....	.....

WITH SPIRAL WRAP SHIELD

1702	1	26	.110″	55 D 7950	5.00	55 D 7951	41.00
1705	1	24	.110″	55 D 7956	5.60	55 D 7957	46.40
1709	2	24	.190″	55 D 7960	10.40	.....	.....

1200 SERIES SHIELDED CONTROL CABLE

Stranded, tinned 20 gauge (26/34) copper conductors. Color-coded rubber insulation. Black rubber jacket. Cotton wrap, braided tinned copper shield. Nominal wall thickness, .020″; jacket, .035″.

Stock No.	Mfr's Type	No. of Cond.	Nom. O.D.	Wt., Lbs.	Per 100′ Spool
55 D 8883	1250	2	.270″	4.5	13.71
55 D 9148	1251	3	.285″	5.3	15.19
55 D 8885	1252	4	.305″	6.3	17.17

LOW CAPACITANCE SHIELDED MICROPHONE CABLE

Stranded tinned copper conductor; color-coded foam polyethylene insulation; braided tinned copper shield; chrome gray polyvinylchloride jacket. Low cap. and attenuation. 6 lbs.

Mfr's Type	Conductor No.	Conductor Size	O.D.	Cap. pF /Ft.	100′ Spool Stock No.	100′ Spool EACH	1000′ Spool Stock No.	1000′ Spool EACH
2311	1	24	.180″	20	55 D 9127	8.50	55 D 9128	77.80
2312	1	24	.225″	15	55 D 9129	11.10	55 D 9130 U	103.00
2323	2	22	.300″	11	55 D 9131	18.58	.....	.....

SHIELDED MICROPHONE CABLE

Neoprene-jacketed. Stranded, tinned-copper conductors. Rubber insulated, cotton wrapped; braided tinned-copper shield. Stranding #18, 41x34; #16, 65x34. Jacket, .035″. Wall thickness: 1449, .040″; 1450, 1451, 1452, .020″; 1450/16, .025″.

Stock No.	Mfr's Type	Cond. No.	Cond. Size	Wt., Lbs.	Nom. O.D.	PER 100′ Spool
55 D 7935	1449	1	18	3.7	.240″	19.96
55 D 7937	1450	2	18	5.4	.295″	26.23
55 D 7939	1451	3	18	6.7	.305″	48.51
55 D 7941	1452	4	18	8.1	.330″	59.40
55 D 7943	1450/16	2	16	8.7	.335″	50.49

SHIELDED MULTI-CONDUCTOR CONTROL CABLES

Neoprene jacket overall. Stranded, tinned copper with color-coded rubber insulation. #18 gauge. Wall thickness, .020″. Cabled with fillers, cotton wrap, braided tinned copper shield. For outdoor usage in missile systems, ground support equipment, etc. Operating temperature, —20°C to +60°C. Av. wt., 12 lbs.

Mfr's Type	No. of Cond.	Jkt. Size	Nom. O.D.	100′ Spool Stock No.	100′ Spool EACH
1454	6	.035″	.370″	55 D 7945	82.17
1456	8	.035″	.420″	55 D 7947	108.07
1458	10	.035″	.480″	55 D 7948	132.33
1459	12	.065″	.555″	55 D 7949 U	181.50

SHIELDED MULTI-CONDUCTOR CONTROL CABLE

Chrome gray polyvinylchloride .035″ jacket overall. Stranded tinned copper; polyethylene insulation; braided shield. 600 volt operating voltage. #20 (26x34) gauge. Av. wt., per 100 ft., 8 lbs.

Mfr's Type	No. of Cond.	Wall Thk.	Nom. O.D.	100′ Spool Stock No.	100′ Spool EACH	1000′ Spool Stock No.	1000′ Spool EACH
1713	3	.014″	.250″	55 D 9100	11.60	.....	.....
1715	4	.014″	.260″	55 D 9120	13.40	.....	.....
1716	5	.014″	.275″	55 D 7964	15.30	.....	.....
1717	6	.014″	.300″	55 D 7966	30.00	55 D 7967 Z	291.80
1719	8	.014″	.330″	55 D 7974	38.60	55 D 7975 Z	377.10
1721	10	.014″	.375″	55 D 7976	47.30	55 D 7977 Z	463.80

SHIELDING AND BONDING CABLE

Woven, tinned copper braid per MIL Spec. QQ-B-575. Shielding coverage, 95% or more.

Mfr's Type	Approx. I.D.	No. of Wires	AWG Equiv.	Cap., Amps	100′ Spools Stock No.	100′ Spools EACH
2170	13/64″	192x34	11	46	55 D 8183	22.77
2171	1/4″	384x36	10	53	55 D 8184	29.86
2171/1	9/32″	120x30	9	60	55 D 8185	31.18
2172	5/16″	384x36	10	53	55 D 8186	30.36
2173	7/16″	240x30	6	90	55 D 8187	50.32
2174	1/2″	528x36	9	62	55 D 8188	43.56
2175	9/16″	480x30	3	145	55 D 8189	75.90
2175/1	21/32″	768x30	1	190	55 D 8190	119.46

Silver-plated copper braid manufactured per MIL Spec. QQ-B-575 Shielding coverage, 95% or more. Braid is self-supporting.

Mfr's Type	Approx. I.D.	No. of Wires	AWG Equiv.	Cap., Amps	100′ Spools Stock No.	100′ Spools EACH
2190	1/32″	24x36	22	7	55 D 8191	7.26
2191	1/16″	48x36	19	11	55 D 8192	12.87
2192	5/64″	72x36	18	16	55 D 8193	16.92
2193	7/64″	96x36	16	19	55 D 8194	23.10
2194	1/8″	120x36	15	25	55 D 8111	24.75
2195	5/32″	240x36	12	40	55 D 8112	47.02
2196	11/64″	168x36	14	32	55 D 8113	35.14
2197	13/64″	192x34	11	46	55 D 8114	66.00

RETRACTILE NEOPRENE-JACKET POWER CORDS

High-quality multi-conductor power cord. Retracted lengths, 2 and 4 ft.; extend lengths, 12 and 25 ft. Recognized Under the Component Program of Underwriter's Laboratories, Inc.

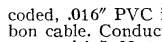
TWO-FOOT RETRACTED LENGTHS

Stock No.	Mfr's Type	Conds. No.	Conds. Size	A	V	Coil O.D.	EACH 1-49	EACH 50-99	EACH 100-Up
55 D 8115	660/2	2	18	7	300	7/8″	4.89	4.65	4.42
55 D 8338	663/2	4	18	5.6	300	1 1/2″	8.04	7.64	7.26
55 D 8340	665/2	3	16	10	300	1 1/2″	8.67	8.24	7.83
55 D 8343	671/2	4	16	8	600	1 7/8″	13.23	12.57	11.94
55 D 8345	672/2	2	14	15	600	2 1/8″	13.15	12.49	11.87
55 D 8116	760/2	3	18	7	300	1″	7.48	7.10	6.75

FOUR-FOOT RETRACTED LENGTHS

Stock No.	Mfr's Type	Conds. No.	Conds. Size	A	V	Coil O.D.	EACH 1-49	EACH 50-99	EACH 100-Up
55 D 8117	660/4	2	18	7	300	7/8″	8.82	8.38	7.96
55 D 8357	662/4	3	18	7	300	1 1/2″	12.76	12.12	11.51
55 D 8359	664/4	2	16	10	300	1 1/2″	12.45	11.83	11.24
55 D 8367	666/4	4	16	8	300	1 5/8″	19.84	18.85	17.91
55 D 8368	670/4	3	16	10	600	1 7/8″	22.36	21.24	20.18
55 D 8118	760/4	3	18	7	300	1″	13.39	12.72	12.08

FLAT RIBBON CABLE MULTI-CONDUCTOR, PLASTIC INSULATION PER MIL-W-16878D, TYPE C



Stranded, tinned copper covered with color-coded, .016″ PVC insulation. Conductors bonded to form flat ribbon cable. Conductors fully color-coded and easily separated. #22 gauge with 7x30 stranding. Temperature rating: —55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents and fungus. Suppied in 100′ spools only. Av. shpg. wt., 5 lbs.

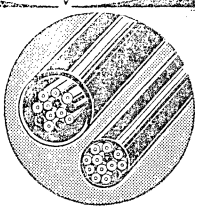
Mfr's Type	No. of Cond.	Nom. O.D.	Stock No.	100′ Spool
3504	4	.065″x.260″	55 D 9227	15.19
3508	8	.065″x.520″	55 D 9229	24.81
3512	12	.065″x.780″	55 D 9231	40.48
3516	16	.065″x1.040″	55 D 9233	56.07
3520	20	.065″x1.300″	55 D 9235	69.15

Alphlex "Fit" Shrinkable Tubing

ALPHA WIRE

FIT-105 FLEXIBLE TUBING

Size	Min. I.D.	Recov. I.D.	Wall Thick.	Stock Number	Wt., Lbs.	Per 25' Coil	Stock Number	Wt., Lbs.	Per 100' Coil 1-4	Per 100' Coil 5-9
3/64"	.046"	.023"	.020"	55 D 8635	.1	2.40	55 D 8647	.1	7.55	6.30
1/16"	.062"	.031"	.020"	55 D 8636	.1	2.55	55 D 8648	.3	8.00	6.65
3/32"	.093"	.046"	.020"	55 D 8637	.1	2.95	55 D 8649	.5	9.20	7.65
1/8"	.125"	.062"	.020"	55 D 8638	.2	3.10	55 D 8650	1.1	10.25	8.65
3/16"	.187"	.093"	.025"	55 D 8639	.3	3.80	55 D 8651	1.4	12.50	10.55
1/4"	.250"	.125"	.025"	55 D 8640	.4	4.80	55 D 8652	1.4	15.85	13.35
3/8"	.375"	.187"	.030"	55 D 8641	.5	5.30	55 D 8653	2.0	17.50	14.70
1/2"	.500"	.250"	.030"	55 D 8642	.8	6.00	55 D 8654	4.5	19.85	16.75
3/4"	.750"	.375"	.035"	55 D 8643	1.3	8.05	55 D 8655	5.0	26.60	22.40
1"	1.000"	.500"	.040"	55 D 8644	2.2	11.60	.....	.....	.....	.....
1 1/2"	1.500"	.750"	.045"	55 D 8645	3.9	19.05	.....	.....	.....	.....
2"	2.000"	1.000"	.050"	55 D 8646	5.6	28.05	.....	.....	.....	.....



Irradiated Polyvinylchloride (PVC) provides snug, flexible insulation. Excellent for insulation over splices. Supplied at "Min. I.D." size; shrinks to "Recov. I.D." size in only 7 seconds when heated to 325° F. Black only. Av. shpg. wt. per 100 ft., 1½ lbs. Inquire for larger quantities than those shown.

55 D 8659, FIT-105-MS-2 Assortment. Ten 6" lengths each of four sizes from 3/8 thru 1" (40 pieces). Wt., ½ lb. 8.00

55 D 8658, FIT-105-MS-1 Assortment. Ten 6" lengths each of six sizes from 3/64 thru 1/4" (60 pieces). Wt., ½ lb. 4.00

4-FOOT LENGTHS (Av. shpg. wt., 1½ lbs.)

Stock No.	Size	Min. I.D.	Recov. I.D.*	Wall Thick.	25 LENGTHS/BOX 1-4	5-9	10-49
55 D 9950 CX	3/64"	.050"	.023"	.016"	13.80	11.70	10.20
55 D 9951 CX	1/16"	.062"	.031"	.017"	14.60	12.30	10.70
55 D 9952 CX	3/32"	.093"	.046"	.020"	16.90	14.25	12.40
55 D 9953 CX	1/8"	.125"	.062"	.020"	17.90	15.20	13.25
55 D 9954 CX	3/16"	.191"	.089"	.020"	21.90	18.50	16.15
55 D 9955 CX	1/4"	.250"	.125"	.025"	27.60	23.20	20.25
55 D 9956 CX	3/8"	.378"	.178"	.025"	30.60	25.75	22.45

Stock No.	Size	Min. I.D.	Recov. I.D.*	Wall Thick.	5 LENGTHS/BOX 1-4	5-24	25-49
55 D 9957 CX	1/2"	.500"	.250"	.025"	6.90	5.85	5.10
55 D 9958 CX	3/4"	.750"	.375"	.030"	9.25	7.98	6.80
55 D 9959 CX	1"	1.000"	.500"	.035"	13.00	10.92	9.52
55 D 9960 CX	1 1/2"	1.500"	.750"	.040"	19.60	16.38	14.28
55 D 9961 CX	2"	2.000"	1.000"	.045"	27.00	22.62	19.72

Stock No.	Size	Min. I.D.	Recov. I.D.*	Wall Thick.	2 LENGTHS/BOX 1-12	13-62	63-624
55 D 9962 CX	3"	3.000"	1.500"	.050"	17.10	14.32	12.48
55 D 9963 CX	4"	4.000"	2.000"	.055"	25.00	20.88	18.22

FIT-221 Assortments. 6" lengths, assorted colors. Wt., ½ lb.
55 D 8790, MS-1 3/64 thru 3/16" (30 lengths) 4.00
55 D 8791, MS-2. 1/4 thru 3/4" (16 lengths) 8.00

FIT-221 SHRINKABLE TUBING

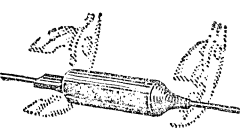
Replaces FIT-275. Shrinks (2:1) to *recovered inside diameter in 7 seconds. Polyolefin extruded tubing in an expanded form. Slips over irregularly shaped material. When temperature of approx. 275° F. is applied for 7 seconds, it returns to its predetermined size. Available in black, red, and white—specify color when ordering.

6-INCH LENGTHS (Av. shpg. wt., 4 oz.)

Stock No.	Size	Min. I.D.	Recov. I.D.*	Nom. Wall Thick.	6" Lgths. Per Box	PER BOX
55 D 9935 C	3/64"	.050"	.023"	.016"	40	3.60
55 D 9936 C	1/16"	.062"	.031"	.017"	36	3.60
55 D 9937 C	3/32"	.093"	.046"	.020"	32	3.60
55 D 9938 C	1/8"	.125"	.062"	.020"	28	3.60
55 D 9939 C	3/16"	.191"	.089"	.020"	24	3.60
55 D 9940 C	1/4"	.250"	.125"	.025"	20	3.60
55 D 9941 C	3/8"	.378"	.178"	.025"	16	3.60
55 D 9942 C	1/2"	.500"	.250"	.025"	14	3.60
55 D 9943 C	3/4"	.750"	.375"	.030"	12	3.60
55 D 9944 C	1"	1.000"	.500"	.035"	8	3.60
55 D 9945 C	1 1/2"	1.500"	.750"	.040"	5	3.60
55 D 9946 C	2"	2.000"	1.000"	.045"	3	3.60
55 D 9947 C	3"	3.000"	1.500"	.050"	2	3.60
55 D 9948 C	4"	4.000"	2.000"	.055"	1	3.60

FIT-300 POLYOLEFIN MOISTUREPROOF TUBING

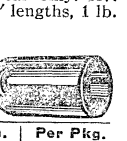
Size	Color	Min. I.D.	Recov. I.D.	Wall Thick.	4-FOOT LENGTHS Stock No.	Lengths Per Pkg.	PER PKG.	6-INCH LENGTHS Stock No.	Lgths. Per Box	Per Box
1/8"	Brown	.125"	.023"	.038"	55 D 8890 X	25	34.00	55 D 9051	14	4.00
3/16"	Gray	.060"	.012"	.043"	55 D 8891 X	25	41.50	55 D 9052	12	4.00
1/4"	White	.080"	.015"	.047"	55 D 8892 X	25	51.80	55 D 9053	10	4.00
3/8"	Red	.375"	.135"	.050"	55 D 8893 X	25	57.70	55 D 9054	8	4.00
1/2"	Blue	.500"	.195"	.055"	55 D 8894 X	5	13.60	55 D 9055	6	4.00
3/4"	Yellow	.750"	.313"	.065"	55 D 8895 X	5	21.00	55 D 9056	4	4.00
1"	Blue	.300"	.050"	.100"*	55 D 8896 X	25	118.20	55 D 9057	4	4.00



Moistureproof encapsulation of components, etc. Outer wall shrinks while inner wall melts to fill all voids. Supplied at "Min I.D." shrinks to "Recov. I.D." at 275° F. *Heavy-walled for use where much meltable material is required. Wt.: 4' lengths, 1½ lbs.; 6", 4 oz.

FIT-350 IRRADIATED KYNAR™ SHRINKABLE TUBING

Size	Min. I.D.	Recov. I.D.	Recov. Wall Thickness	4-FOOT LENGTHS Stock No.	Lgths. Per Box	PER BOX	6-INCH LENGTHS Stock No.	Lgths. Per Box	PER BOX
3/64"	.046"	.023"	.010"	55 D 8676 X	25	17.45	55 D 9145	32	4.00
1/16"	.063"	.031"	.010"	55 D 8677 X	25	19.10	55 D 9146	28	4.00
3/32"	.093"	.046"	.010"	55 D 8678 X	25	22.75	55 D 8874	24	4.00
1/8"	.125"	.062"	.010"	55 D 8679 X	25	25.00	55 D 8875	20	4.00
3/16"	.187"	.093"	.010"	55 D 8680 X	25	38.90	55 D 9147	16	4.00
1/4"	.250"	.125"	.012"	55 D 8681 X	25	48.80	55 D 8877	12	4.00
3/8"	.375"	.187"	.012"	55 D 8682 X	25	64.35	55 D 8878	8	4.00
1/2"	.500"	.250"	.012"	55 D 8683 X	5	19.13	55 D 8879	4	4.00
3/4"	.750"	.375"	.017"	55 D 8684 X	5	35.19	55 D 8880	2	4.00
1"	1.000"	.500"	.019"	55 D 8685 X	5	64.69	55 D 8881	1	4.00



Tough semi-rigid polyvinylidene fluoride that can be repeatedly flexed, bent, or twisted without losing its mechanical or electrical strength. Withstands continuous operating temperatures of —55° to +175° F. Supplied at "Min I.D." size; shrinks to "Recov. I.D." when heated to 347° F. 2:1 shrinkage ratio. Longitudinal shrinkage only 5%. Non-flammable, will never cold flow or melt. Clear only. Av. shpg. wt.: 6" lengths, 4 oz.; 4' lengths, 1 lb.

IRRADIATED POLYOLEFIN FIT-CAPS

Short lengths of semi-rigid tubing sealed on one end. Tight-fitting mechanical bond over terminations. Flame and abrasion resistant polyolefin. Supplied at "Min. I.D." size, shrinks (2:1) to "Recov. I.D." within 7 seconds when a temp. of between 275° and 300°F is applied. Forms a moisture-resistant seal over one or more wires. Pkgs. of 100. Wt., 6 oz.

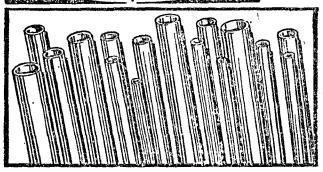
Stock No.	Mfr's Type	Min. I.D.	Recov. I.D.	Wall Thick.	Nom. Length	Color	Per Pkg. of 100
55 D 9245	1	.063"	.025"	.016"	3/4"	White	4.14
55 D 9246	2	.125"	.050"	.020"	1"	Red	5.09
55 D 9247	3	.250"	.100"	.025"	1 1/4"	Grey	6.19
55 D 9248	5	.350"	.175"	.035"	1 1/3"	Brown	6.26
55 D 9249	4	.500"	.250"	.040"	1 1/2"	Black	7.61

MOLDED FIT-CAPS

When heated, shrinks to form permanent encapsulations without molding, potting, use of special tools. Supplied at "Min. I.D." shrinks to "Recov. I.D." when heated to 275°F. Black. Pkg., 6 oz.

Stock No.	Mfr's Type	Min. I.D.	Recov. I.D.	Wall Thick.	Nom. Length	Per Pkg. of 25
55 D 9251	21	.16"	.08"	.04"	1.12"	9.00
55 D 9252	22	.25"	.12"	.05"	1.15"	10.87
55 D 9253	23	.36"	.18"	.06"	1.40"	14.25
55 D 9254	24	.50"	.25"	.07"	1.87"	18.75
55 D 9255	25	.75"	.37"	.08"	2.70"	27.75
55 D 9256	26	1.00"	.50"	.09"	3.50"	37.12
55 D 9257	27	1.50"	.75"	.10"	4.00"	48.75
55 D 9258	28	2.00"	1.00"	.11"	4.50"	60.00

Tubing by Alpha



TEFLON EXTRUDED FLEXIBLE TUBING

- Natural Color
- Resists High Temperatures
- Nonflammable and Resistant to Moisture

Tubing with a high degree of resistance to fatigue and repetitive stresses. High temperature "Class C" thin, flexible insulation will not melt or flow as conventional thermoplastic materials. Spaghetti extruded from pure teflon TFE fluorocarbon resins—is free of contaminants, stresses and is of uniform density and color. Nonflammable; unharmed by soldering irons; moistureproof. Chemically inert, with a coefficient of friction lower than that of any other known solid. Dielectric strength, 500-1000 V/Mil. No variation of electrical properties from —67°C to +260°C, or 60 Hz to 100 MHz. Meets MIL-I-22129C, AMS 3653 B, MIL-I-3158, MIL-104-C. Available in natural color only. *Random lengths. Av. wt. per 100′ spool, 5 oz.

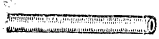
TFT-250 STANDARD-WALL TEFLON TUBING

Stock No.	AWG Size	Nominal Inside Dia.	Nominal Wall Thick.	100′ Spools, EACH 1	2-4	5-9	10-49
55 D 8950	24	.022″	.012″	10.01	8.01	6.89	5.52
55 D 8951	22	.027″	.012″	11.23	8.98	7.62	6.09
55 D 8952	20	.034″	.016″	15.19	12.15	10.31	8.37
55 D 8953	18	.042″	.016″	18.70	14.68	12.50	9.84
55 D 8954	14	.066″	.016″	24.03	18.96	15.81	12.60
55 D 8979	12	.085″	.016″	27.41	22.02	18.25	15.20

TFT-200 THIN-WALL TEFLON TUBING

Stock No.	AWG Size	Nominal Inside Dia.	Nominal Wall Thick.	100′ Spools, EACH 1	2-4	5-9	10-49
55 D 9259	30	.012″	.009″	9.00	6.62	5.95	5.34
55 D 9260	28	.015″	.009″	8.00	5.70	5.28	4.39
55 D 9261	26	.018″	.010″	7.70	5.60	5.03	3.99
55 D 9262	24	.022″	.010″	7.70	5.60	5.03	4.32
55 D 9263	22	.027″	.010″	9.50	7.12	6.08	4.84
55 D 9264	20	.034″	.012″	12.00	9.33	7.78	6.15
55 D 9265	19	.038″	.012″	12.50	9.70	8.34	6.66
55 D 9266	18	.042″	.012″	12.98	10.73	9.04	7.24
55 D 9267	17	.047″	.012″	14.18	11.46	9.79	7.92
55 D 9268	16	.053″	.012″	14.53	12.67	10.53	8.64
55 D 9759	15	.059″	.012″	14.58	12.79	10.83	8.80
55 D 9760	14	.066″	.012″	16.04	13.76	11.55	9.35
55 D 9761	13	.076″	.012″	17.17	15.62	12.67	10.55
55 D 9762	12	.085″	.012″	18.48	16.63	13.63	11.35
55 D 9763	11	.095″	.012″	20.45	18.61	15.08	12.56
55 D 9764	10	.016″	.012″	22.04	19.36	15.84	13.54
55 D 9765*	9	.118″	.015″	24.95	23.34	20.94	19.03
55 D 9766*	8	.133″	.015″	27.52	25.75	23.15	21.03
55 D 9767*	7	.148″	.015″	29.45	27.99	25.30	22.98
55 D 9768*	6	.166″	.015″	31.82	30.28	27.50	25.05
55 D 9769*	5	.186″	.015″	34.85	33.93	30.88	28.18

ALPHLEX PVC-105 PLASTIC TUBING



Plastic tubing meets MIL-I-631D, ASTM-D876 and ASTM-D922 specifications. Extremely high tensile strength. (Type F, Form U, Grade C, Class 1, Category 1.) Designed for general electronic, aircraft, electrical uses.

Sizes 24 to 12. Have 0.016″ wall thickness, except sizes 24 and 22. 0.012″. Clear, black, red—specify. Wt. per 100′, 5 oz.

Stock No.	Size	Nom. I.D.	Per 100-Ft. Coil 1-4	5-9	10-49
55 D 9269 C	24	.022″	2.43	2.11	1.80
55 D 9270 C	22	.027″	2.44	2.12	1.81
55 D 9271 C	20	.034″	2.49	2.16	1.85
55 D 9272 C	18	.042″	2.58	2.23	1.88
55 D 9273 C	16	.063″	2.72	2.35	1.96
55 D 9274 C	14	.066″	2.89	2.49	2.04
55 D 9275 C	12	.085″	3.07	2.64	2.16

Sizes 10 to 2. Size 10, .016″ wall thick.; all other sizes, .020″. Clear, black, red—specify. Av. shpg. wt. per 100 ft., 10 oz.

Stock No.	Size	Nom. I.D.	Per 100-Ft. Coil 1-4	5-9	10-49
55 D 9281 C	10	.106″	3.27	2.81	2.35
55 D 9282 C	8	.133″	4.57	3.89	3.16
55 D 9283 C	6	.166″	5.19	4.41	3.52
55 D 9284 C	4	.208″	6.00	5.08	3.97
55 D 9285 C	2	.263″	6.91	5.84	4.50

Sizes 0 to 5/8″. Wall thicknesses, size 0, .020″; *.025″; †.030″. Clear or black—specify. Av. shpg. wt. per 100′ coil, 5 lbs.

Stock No.	Size	Nom. I.D.	Per 100-Ft. Coil 1-4	5-9	10-49
55 D 9292 C	0	.330″	7.98	6.73	5.14
55 D 9293 C	5/16″*	.312″	9.42	7.94	6.04
55 D 9294 C	3/8″*	.375″	10.81	9.09	6.91
55 D 9295 C	1/2″*	.500″	12.77	10.64	8.07
55 D 9296 C	5/8″†	.625″	18.38	15.30	11.73

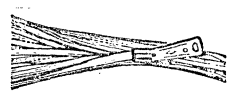
PLASTIC-IMPREGNATED FIBERGLAS TUBING TYPE 130

- Insulation Will Not Crack, Peel or Lose Its Dielectric Values
- High Chemical and Abrasion Resistance, Heat Stability
- For Continuous Operation at 130°C
- Meets MIL-L-3190B, Grade B

Toughest, most pliable of insulating materials, formulated to provide the maximum in electrical characteristics, chemical resistance, heat stability, abrasion resistance. Tubing is constructed from an inorganic fiberglass base sleeving coated with tough, flexible plastic insulation. Recommended for conditions requiring continuous operation at up to 130°C. Neither the fiberglass base sleeving nor the plastic base will support combustion. Conforms to MIL-L-3190B, Grade B. 100-ft. Coil. Av. wt., 2 lbs.

Stock No.	Gauge Size	Wall Thickness Max.	Min.	Approx. I.D.	EACH 1-4	5-9
55 D 9637	24	.022″	.016″	.022″	4.79	3.90
55 D 9638	22	.022″	.016″	.027″	5.05	4.05
55 D 9639	20	.022″	.016″	.034″	5.12	4.15
55 D 9643	18	.022″	.016″	.042″	5.21	4.25
55 D 9644	16	.028″	.020″	.053″	5.45	4.40
55 D 9677	14	.028″	.020″	.066″	5.62	4.60
55 D 9678	12	.028″	.020″	.085″	6.11	4.90
55 D 9680	10	.028″	.020″	.106″	6.86	5.50
55 D 9682	8	.028″	.020″	.133″	7.51	6.05
55 D 9683	6	.028″	.020″	.166″	8.42	6.80
55 D 9684	4	.036″	.026″	.208″	10.24	8.20
55 D 9685	2	.036″	.026″	.234″	12.88	10.30

ZIP-31 PLASTIC ZIPPER-TUBING

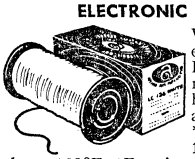


Designed to harness, cover, and protect electrical cables. Zip to close or open. Fabricated from .020″ polyvinyl sheet of MIL-I-631D, Grade C materials. Rated 759 V/mil; tensile strength, 3810 PSI. Flexible from —86°C to +105°C. One slider with each 25′ of tubing. Order tubing 1/4″ larger than total O.D. of wires to be covered. Available in black or clear—specify.

Stock No.	Inside Dia.	Wt., Lbs.	100-FT. COILS, EACH 1-4	5-9	10-49
55 D 8376 C	1/2″	4	34.00	31.00	29.00
55 D 8377 C	5/8″	4½	34.50	31.50	29.50
55 D 8378 C	3/4″	5	35.00	32.00	30.00
55 D 8385 C	1″	6¼	36.00	33.00	31.00
55 D 8366 C	1¼″	6½	38.00	34.50	32.50
55 D 8369 C	1½″	7	39.50	36.00	34.00
55 D 8370 C	2″	10	42.00	38.00	36.00

55 D 9972. Type AB 295 Extra Metal Sliders. For above. 2 oz. Each .05

ELECTRONIC NYLON FLAT BRAIDED TAPE



Wide contact area with the insulation eliminates flow away from contact point. Flexible, easy to use. When knotted, will not slip, recommended for all types of harness work. Resistant to fungus, flame, acids, abrasions. High tensile strength. *Rubber-like resin, melting point above 190°F. †Micro-crystalline wax, melting point above 130°F. ‡Fungistatic synthetic rubber. §Thermoplastic synthetic resin, melting point above 350°F. 3/32″ wide, .014″ thick except LC-134 (1/16″x.010″). 500-yd. spools (LC-132, 500-yd. tube).

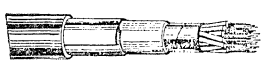
Mfr's Type	Finish	White Stock No.	White SPOOL	Black Stock No.	Black SPOOL
LC-132	GR*	55 D 9898	8.45	55 D 9904	9.14
LC-134	MW†	55 D 9982	5.41	55 D 9983	6.09
LC-136	MW†	55 D 9980	8.45	55 D 9981	9.14
LC-140	SR‡	55 D 9924	8.45	55 D 9925	9.14
LC-143	AM§	55 D 9949	8.45	55 D 9988	9.14

Depend on Allied for Complete Stocks, OEM Prices, Fast, Friendly Service

Wire, Cable and Shielding Kit

CONSOLIDATED WIRE AND CABLE

TELEPHONE AND COMMUNICATION CABLE DESIGNED FOR DIRECT BURIAL



Color-coded direct burial cable. Copper armoring minimizes cable damage from rodents, insects, and abrasion from sharp stones. Polyethylene insulated conductors covered with non-hygroscopic binder tape, also 40-mil polyethylene jacket. Conductors #22 annealed copper. Twisted pairs with varying lays to minimize cross-talk. Cabled by stranding pairs in concentric layers.

Mfr's Type	No. of Pairs	No. of Cond.	O.D. (In.)	Mfr's Type	No. of Pairs	No. of Cond.	O.D. (In.)
6006	6	12	.430	6025	25	50	.630
6018	18	36	.560	6050	50	100	.820

Stock No.	Mfr's Type	Lbs. Per Ft.	PER FOOT (25 Ft. Min.) 1-249	250-499	500-Up
55 D 8177 F	6006	.125	.29	.26	.25
55 D 9151 F	6018	.180	.50	.45	.42
55 D 8178 F	6025	.250	.58	.52	.49
55 D 8179 F	6050	.360	1.01	.90	.85

INTERIOR AND EXTERIOR TELEPHONE WIRE

No. 22 solid, tinned copper wire. Interior: 1/32" insulation, cotton braid. Exterior: black rubber, weatherproof braid.

Conductors	Stock No.	100' Coil	Stock No.	500' Coil	Stock No.	1000' Coil
2 Int.	55 D 8362	5.50	55 D 8363	25.90	55 D 8364	51.50
2 Ext.	55 D 8752	5.24	55 D 8760	24.20	55 D 8761	47.20
3 Ext.	55 D 8175	7.90	.....	.....	.....	.....

TINNED COPPER BUS BAR WIRE

High quality aerial and bus bar solid tinned wire. Solid soft drawn copper and brightly tinned for all types of soldering connections and excellent for applications requiring a conductor for heavy current. Standard spool put-up, 100-ft., and 1000-ft.

Mfr's Type	AWG (In.)	O.D.	100-ft. Spool Stock No.	Lbs.	EA.	1000-ft. Spool Stock No.	Lbs.	EA.
3848	30	.010	55 D 8550	.3	.62	55 D 8551	.9	2.47
3847	28	.013	55 D 8560	.3	.62	55 D 8573	1.0	2.78
3846	26	.016	55 D 8581	.4	.62	55 D 8582	1.3	3.00
3819	24	.020	55 D 8583	.3	.63	55 D 8584	1.3	3.31
3818	22	.025	55 D 8585	.3	.67	55 D 8586	2.0	3.86
3817	20	.032	55 D 8588	.4	.77	55 D 8589	3.6	5.32
3816	18	.040	55 D 8590	.5	1.00	55 D 8591	5.0	7.54
3815	16	.051	55 D 8592	.8	1.46	55 D 8593	8.0	12.04
3821	14	.064	55 D 8595	1.5	2.16	55 D 8596	13.1	18.50
3831	12	.082	55 D 8597	2.0	3.15	55 D 8598 X	20.5	29.30
3841	10	.102	55 D 8599	3.2	5.64	55 D 8600 X	32.0	54.00
3845	8	.129	55 D 8667	5.0	7.85	55 D 8668 X	51.0	74.50

SHIELDED PLASTIC JACKET CABLE

Multiple-conductor microphone cable. #20 AWG. Braided-shield. Gray plastic jacket.

Mfr's Type	No. Cond.	100-ft. Spools Stock No.	Lbs.	EA.	500-ft. Spools Stock No.	Lbs.	EA.
1722	2	55 D 8670	4.5	6.94	55 D 8671	17.5	30.85
1723	3	55 D 8672	5.5	8.45	55 D 8674 X	27.5	40.00
1724	4	55 D 8690	6.0	10.30	55 D 8694 X	31.0	47.70
1725	5	55 D 8695	7.0	12.20	55 D 8698 X	37.0	54.70
1726	6	55 D 8699	8.0	15.40	55 D 8709 X	42.5	76.80
1727	7	55 D 8750	9.0	18.30	55 D 8778 X	46.0	87.20
1728	8	55 D 8780	8.0	20.80	55 D 8787 X	38.0	93.00

SHIELDED PLASTIC JACKET WIRE

Tinned copper; polyethylene insulation with close spiral tinned copper shield and heavy vinyl plastic jacket overall. Use for low impedance mikes. *#22; †#20; ‡1 cond.; §3 cond.

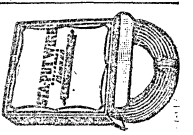
Mfg. Type	O.D. (In.)	Stock No.	50' Coil	Stock No.	100' Coil	Stock No.	500' Coil
1461*	.135‡	55 D 8700	1.95	55 D 8757	3.75	55 D 8758	16.90
1495†	.000‡	55 D 8759	2.77	55 D 8762	5.41	55 D 8763	25.17
1723†	.250§	.....	.....	55 D 8766	9.52	55 D 8767	44.98

HEATER CORD

Black and white marker heater cord. 2 conductor, U.L. Type HPD. Nom. insulation thickness, 1/32".

Mfg. Type	Size	Strd.	O.D. (In.)	Stock No.	100' Coil	Stock No.	250' Coil
4087	16	65x34	.275	55 D 8748	8.22	55 D 8850	20.09
4092	18	41x34	.250	55 D 8898	7.47	55 D 8899	18.02

PUSH-BACK HOOK-UP WIRE



Tinned hook-up wire. No. 20. Pure copper wire; insulation easily pushed back. Available in both solid and stranded type. Double-cotton covered with paraffin-treated damp-proof braid. 5 different colors. Wt., 25 ft., 4 oz.; 100 ft., 1 lb.

STRANDED TYPE, 10x30

Spool	Red	Black	Yellow	Blue	Green	EA.
25 ft.	55 D 8442	55 D 8440	55 D 8444	55 D 8441	55 D 8443	.52
100 ft.	55 D 8447	55 D 8445	55 D 8449	55 D 8446	55 D 8448	2.03

SOLID TYPE

25 ft.	55 D 8472	55 D 8470	55 D 8474	55 D 8471	55 D 8473	.49
100 ft.	55 D 8477	55 D 8475	55 D 8479	55 D 8476	55 D 8478	1.76

TYPE 2000 BARE NICKEL-CHROMIUM WIRE

Recommended for heating appliances and other devices which have operating temperatures not exceeding 1850°F. Particularly suited for heavy-duty rheostats and controls which require a compact resistance element. ¼-lb. spools. Shpg. wt., ¼ lb.

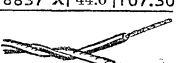
Stock No.	Size	EA.	Stock No.	Size	EA.	Stock No.	Size	EA.
55 D 8076	14	1.52	55 D 8084	22	1.93	55 D 8158	32	3.43
55 D 8078	16	1.58	55 D 8150	24	2.22	55 D 8160	34	4.16
55 D 8079	17	1.67	55 D 8152	26	2.60	55 D 8162	36	5.10
55 D 8080	18	1.67	55 D 8154	28	2.95	55 D 8164	38	8.05
55 D 8081	19	1.71	55 D 8156	30	3.11	55 D 8166	40	8.05
55 D 8082	20	1.81	.....	.....	.....	.....	.....	.....

MULTIPLE CONDUCTOR RUBBER CABLE

Unshielded rubber cable stranded (26x34) tinned copper. No. 20; insulation thickness, .020"; jacket thickness, .031". Color coded cond.

Mfg. Type	O.D. (In.)	Con-duct.	100-ft. Coil Stock No.	Lbs.	EA.	500-ft. Coil Stock No.	Lbs.	EA.
1732	.280	2	55 D 8744	4.0	9.74	55 D 8773	18.5	45.40
1733	.285	3	55 D 8776	4.0	11.62	55 D 8745 X	22.0	49.48
1734	.300	4	55 D 8797	5.0	13.17	55 D 8798 X	26.0	58.40
1736	.000	6	55 D 8832	7.0	21.47	55 D 8833 X	37.5	89.80
1738	.400	8	55 D 8747	8.5	26.30	55 D 8837 X	44.0	107.30

STEREO PHONO PICKUP-ARM CABLE

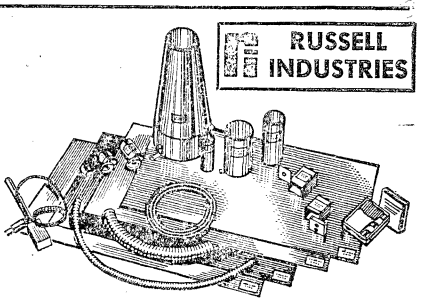


Type 1478 unshielded; 1479 braided tinned-copper shield. No. 32 (7x40) copper 2-conductor cable with .009" vinyl plastic insulation, O.D., .055". Av. wt.: 10' spool, 4 oz.: 25', 6 oz.; 250', 1 lb.

Mfr's Type	25-Ft. Spool Stock No.	EACH	250-Ft. Spool Stock No.	EACH
1478	55 D 8524	.72	55 D 8525	5.84
1479	55 D 8536	1.42	55 D 8537	8.98

ELECTROMAGNETIC SHIELDING KIT

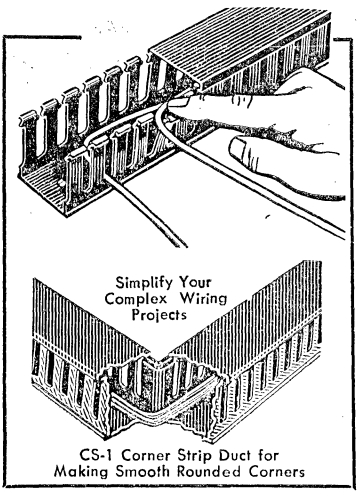
- Fully Processed Kit, Ready for Your Immediate Use
- Permeability to Meet Various Shielding Application Requirements



Shielding kit includes everything needed to prove out theoretical designs. Ideal for use in industry, laboratories, schools. Includes drawn and fabricated shields; material identification test kit for identifying materials and parts having illegible or missing markings; shielded adhesive-back tape and foil for formed-in-place magnetic shielding of components for production, prototypes and laboratory experiments; Shieldflex tubing for both electromagnetic and electrostatic shielding of current carrying conductors; a search coil; and instructions for test setups. Foils, cans shields, tubing are fully processed and ready to use; no heat treatment required. Applications: transformers, tubes, reed relays, motors, tachometers, microphones, many more. Shpg. wt., 10 lbs.

55 D 7000 X 99.50

Wiring Accessories



CS-1 Corner Strip Duct for Making Smooth Rounded Corners

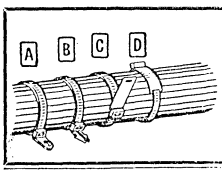
PANDUCT PLASTIC SNAP-SLOT WIRING DUCT

Vinyl plastic wiring duct. Simplifies complex wiring; protects wire insulation. In 6-ft. sections; can be cut to any length with hacksaw. Unique snap-slot design permits easy insertion of wires. Self-locking wire slots prevent accidental removal of wires. Wire can be removed with no electrical disconnections. Ducts can be used with CS-1 corner strips (listed below—see illustration at left) for making smooth rounded corners at duct junctions. With cover. **Specify dark gray or white color.**

Stock No.	Mfr's Type	Nominal Size W	Nominal Size H	Shpg. Wt. Per 100 Ft.	PER SIX-FOOT SECTION 1-16	17-33	34-Up
55 D 8701 CX	E .5 x .5	½"	½"	15 lbs.	3.16	2.51	2.25
55 D 9196 CX	E .5 x .62	½"	⅝"	16 lbs.	3.30	2.64	2.44
55 D 8702 CX	E .5 x 1	½"	1"	20 lbs.	3.56	2.84	2.64
55 D 8703 CX	E .5 x 1.25	½"	1¼"	20 lbs.	3.96	3.10	2.84
55 D 8704 CX	E .5 x 1.75	½"	1¾"	20 lbs.	4.09	3.30	3.04
55 D 8707 CX	E .75 x .75	¾"	¾"	20 lbs.	3.56	2.84	2.64
55 D 8705 CX	E .75 x 1	¾"	1"	22 lbs.	3.63	2.91	2.70
55 D 9197 CX	E .75 x 2	¾"	2"	29 lbs.	4.95	3.96	3.63
55 D 8706 CX	E 1 x 1	1"	1"	25 lbs.	3.76	3.03	2.77
55 D 9198 CX	E 1 x 1.5	1"	1½"	27 lbs.	4.75	3.83	3.50
55 D 8708 CX	E 1 x 2	1"	2"	30 lbs.	5.01	4.02	3.70
55 D 9199 CX	E 1.5 x 1.5	1½"	1½"	30 lbs.	5.15	4.16	3.76

MODEL CS-1 CORNER STRIP

For applications requiring smooth, rounded corners at duct junctions. Easily cut to correspond to any duct height. (See illustration left). Comes in 5-ft. sections. Shpg. wt./100 ft., 15 lbs. **Specify dark gray or white.**
55 D 8290 CX.....Per 5-Ft. Section 1.60



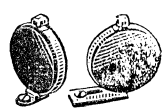
Harness wire bundles fast with durable self-locking Sta-Strap nylon ties

CABLE TIES AND CLAMPS

STA-STRAP SERIES SS

Permanent, hand or tool-applied white nylon ties for fast harnessing of wire bundles. All are self-locking. Available as tie (types with "T" in Mfr's Type No.); clamp (types with "C"); identification markers (types with "M"). Type SSC nylon clamps (see drawing at left) have integral mounting tab; can be mounted in equipment before or after wiring. Suffix H in Mfr's Type No. denotes heavy-duty. Sta-Straps meet applicable MIL Specs. **Supplied in packages of 100 or 1000.**

Mfr's Type	Fig.	Bundle Dia., Max.	Wt., Per 100	PER PACKAGE OF 100 Stock No.	1-4	5-9	PER PACKAGE OF 1000 Stock No.	1-24	25-49	50-99
SST1	A	¾"	4 oz.	55 D 8710	3.60	2.85	55 D 9502	23.00	21.85	20.70
SST1.5	A	1½"	4 oz.	55 D 9004	3.75	3.00	55 D 9503	24.00	22.80	21.60
SST2	A	1¾"	5 oz.	55 D 8251	4.30	3.40	55 D 9505	27.00	25.65	24.30
SST3I	A	3"	5 oz.	55 D 9500	7.00	5.65	55 D 9506	45.00	42.75	40.50
SST3	A	3"	6 oz.	55 D 9501	7.60	6.05	55 D 9507	48.50	46.00	43.70
SST4	A	4"	9 oz.	55 D 8711	9.80	7.80	55 D 9509	60.00	57.00	54.00
SST4H	A	4"	1¼ lbs.	55 D 9001	14.50	11.50	55 D 9513	93.00	88.35	83.70
SST8H	A	8"	2¼ lbs.	55 D 9005	22.50	18.00	55 D 9514 X	140.00	136.00	126.00
SSC2	B	1¾"	6 oz.	55 D 8252	4.90	3.90	55 D 9517	30.00	28.50	27.00
SSC4	B	4"	10 oz.	55 D 9002	10.80	8.60	55 D 9518	66.00	62.70	59.40
SSC4H	B	4"	1¼ lbs.	55 D 9003	17.00	13.60	55 D 9519	111.80	106.20	100.75
SSM2	D	1¾"	6 oz.	55 D 8712	8.60	6.80	55 D 9522	55.00	52.25	49.50
SSM4	D	4"	10 oz.	55 D 8713	14.10	11.20	55 D 9523	87.50	83.15	78.25



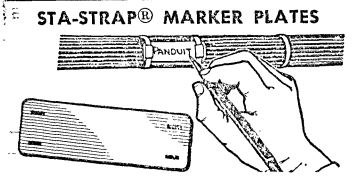
TA1 TA2

TIE ANCHORS

For ties, above. TA1 for inline mount; mounts before wire installation. TA2 for perpendicular mount; before or after installation.

Stock No.	Mfr's Type	Wt., Oz.	PER PKG. OF 100 1-4	5-9	10-99
55 D 8261	TA1	3	3.00	2.40	2.25
55 D 8262	TA2	4	3.60	2.85	2.70

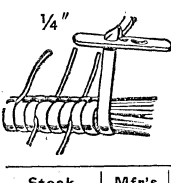
STA-STRAP® MARKER PLATES



These handy marker plates are for identifying wire bundles up to 4" diameter. All-nylon and can be hot-stamped or marked with nylon marking pen. Are secured to wire bundles using two standard Sta-Strap harness ties. ¾" w. Natural nylon white.

Stock No.	Mfr's Type	Lgth	Wt. Lbs. 100	PER PKG. OF 100 1-4	5-Up
55 D 9019	MP150C	1½"	.1	9.50	7.60
55 D 9020	MP175C	1¾"	.1	9.85	7.90
55 D 9021	MP200C	2"	.15	10.30	8.30
55 D 9022	MP250C	2½"	.15	11.25	9.00
55 D 9023	MP350C	3½"	.2	13.00	10.40

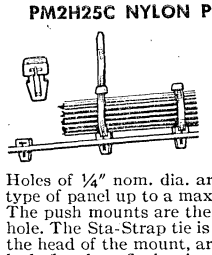
SPIRAL CABLE WRAPPING SHEATH



For bundles 3/16" to 2" dia. Suffix "F" clear polyethylene; "R" fire-resistant white polyethylene; "N" clear nylon. Std. ¼" O.D. 100-ft. coils. With tool. Wt. per 100-ft., 2 lbs.

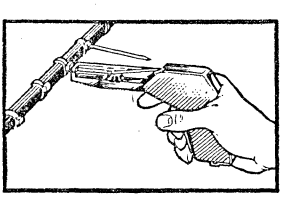
Stock No.	Mfr's Type	PER 100 FT. COIL 1-9	10-49	50-Up
55 D 8291	T-25F	6.25	5.00	4.45
55 D 8292	T-25R	9.15	7.35	6.50
55 D 8293	T-25N	14.00	11.20	9.95

PM2H25C NYLON PUSH MOUNT



The push mount is used with standard Sta-Strap cable ties to mount harnesses to panels. For bundle diameters up to four inches. Holes of ¼" nom. dia. are drilled into any type of panel up to a max. thickness of ⅛". The push mounts are then pushed into the hole. The Sta-Strap tie is threaded through the head of the mount, around the harness, locked and cut flush using a Panduit cabling tool. Provides a neat, securely mounted harness. **Pkg. of 100.** Wt. per 100, 0.1 lb.
55 D 9024. 1-4 Pkgs.....Each 3.00
5-9 Pkgs..Each 2.40 10-99 Pkgs..Each 2.25
100-249 Pkgs.....Each 2.15

GS-2B GUN-TYPE CABLING TOOL



- Fast, Efficient Cabling System
- Preset Strap Tension and Cut-Off

Works faster than spot tying, taping or other conventional methods. One adjustable clamp replaces a complete range. Uniform strap tension with any bundle. Direct feed with preset strap cut-off and controlled strap tension. Cut-off occurs only when preset tension is reached. Used to install standard and miniature Sta-Strap cable ties, clamp and identification markers. Meets applicable MIL spec. Shpg. wt., 1 lb.
55 D 9060.....19.00

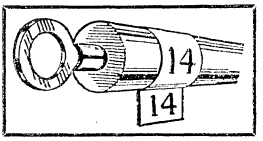
GS4H GUN-TYPE CABLING TOOL

Heavy-duty harnessing tool handles the ten largest sizes of Sta-Strap cable ties. Similar in appearance to GS-2B, above. Two-position knob can be adjusted to suit the precise cable tying job. Handles standard to extra-long heavy duty ties, identification markers and clamps. Meets applicable MIL spec. Wt., 2 lbs.
55 D 9987.....40.00

Wire Markers, Cable Accessories, Hot-Air Guns

BRADY SELF-STICKING MINIATURE WIRE MARKERS

Type B-700MM. Preprinted. ½"-long miniature markers for wire under 0.150". Wrap or flag wires for permanent or temporary identification. Stick to any insulation. Resist heat to 300°F, oil, solvents. Meet industry standard codes. Consecutive numbers. Av. shpg. wt., 2 oz.



Stock No.	Consecutive Numbers	Markers Per Card	PER CARD 1-99	100-499	500-999	1000-2499	2500-4999	5000-9999
55 D 7009	0-49	150	.27	.243	.216	.196	.182	.169
55 D 7010	50-99	150	.27	.243	.216	.196	.182	.169
55 D 7011	100-132	99	.27	.243	.216	.196	.182	.169
55 D 7012	133-165	99	.27	.243	.216	.196	.182	.169
55 D 7013	166-198	99	.27	.243	.216	.196	.182	.169

Type B-600 Extra-Durable Wire Markers. Heavy-duty 1½" "Mylar" for wires up to .150" dia. Temp. range: −20°F to +300°F. One-piece construction, sub-surface printing, improved legibility, extra-firm adhesion, resistance to abrasion and solvents. Consecutive numbers or *individual (specify number wanted).

55 D 8387 C	0-25*	36	.20	.18	.16	.145	.135	.125
55 D 8389	1-33	33	.20	.18	.16	.145	.135	.125
55 D 8390	34-66	33	.20	.18	.16	.145	.135	.125
55 D 8391	67-99	33	.20	.18	.16	.145	.135	.125
55 D 8392	100-124	25	.20	.18	.16	.145	.135	.125
55 D 8395	A-Z	26	.20	.18	.16	.145	.135	.125

HELI-TUBE SPIRAL-CUT CABLE WRAP

Quality cable wrap. Suffix "C" to the Manufacturers Type No. means clear polyethylene; Suffix "N" means nylon; Suffix "FR" means fire resistant. Av. shpg. wt. for 100 ft., 2 lbs.

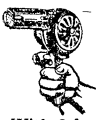
100-FOOT SPOOLS

Stock No.	Mfr's Type	Dia.	PER SPOOL 1-9	10-49	50-99	100-Up
55 D 9478	HT-1/8C	⅛"	3.25	2.70	2.40	1.80
55 D 9480	HT-1/4C	¼"	5.40	4.50	4.00	3.20
55 D 9491	HT½C	½"	12.00	11.20	8.64	6.40
55 D 9496	HT-1/8N	⅛"	6.75	6.20	5.20	4.15
55 D 9498	HT¼N	¼"	12.40	10.10	8.94	8.20
55 D 9716	HT½N	½"	34.40	32.80	31.20	25.80
55 D 9721	HT-1/8FR	⅛"	4.35	3.60	3.20	2.40
55 D 9493	HT¼FR	¼"	7.20	6.64	5.52	4.40
55 D 9825	HT½FR	½"	15.20	13.60	11.04	8.80

500-FOOT SPOOLS

Stock No.	Mfr's Type	Dia.	PER SPOOL 1-9	10-19	20-Up
55 D 9479	HT-1/8C	⅛"	13.50	12.00	9.00
55 D 9489	HT-1/4C	¼"	22.50	20.00	16.00
55 D 9492X	HT½C	½"	56.00	43.20	32.00
55 D 9497	HT-1/8N	⅛"	31.00	26.00	20.75
55 D 9499	HT¼N	¼"	50.50	44.70	41.00
55 D 9488	HT-⅜C	⅜"	37.50	30.40	23.00

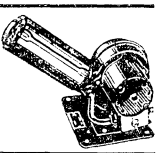
MASTER HEAT GUN BLOWERS



Two heat gun models that deliver instant heat up to 1000° F without the danger of an open flame. Perfect for use with "shrinkable" tubing, forming plastics, and forced drying. Type HG-501 produces heat from 500 to 750° F, and Type HG-751 from 750 to 1000° F. With 8-ft. neoprene cord. Accessories sold below. 115 VAC.

55 D 8576. Type HG-501. 14 amps. Shpg. wt., 5 lbs. 49.90
55 D 8574. Type HG-751. 20 amps. Shpg. wt., 5 lbs. 59.95
55 D 8541. Type 100 Nozzle Adapter. Shpg. wt., ¼ lb. 2.95
55 D 8548. Type 145 Baffle Plate. For tubing to ¾" dia. ¼ lb. 2.75
55 D 8542. Type 150 Baffle Plate. For tubing to 1¼" dia. ¼ lb. 2.95

MASTER AIR HEATER BLOWERS

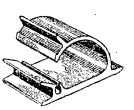


Maintain continuous flow of heated air where you need it. For portable use or permanent mounting. Overall length, 12" (except Type AH-301, 9"). With 8-ft. cord. For 110-120 volts, 60 Hz AC.

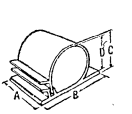
Stock No.	Mfr's Type	Amps	Temp. (F)	Wt., Lbs.	EACH
55 D 8543	AH-301	10	300°	7	56.65
55 D 8544	AH-501	14	500°	8¼	59.95
55 D 8545	AH-751	18	750°	8¼	78.35

GC ADHESIVE-MOUNT LOCKING CABLE CLAMPS

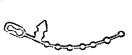
Mfr's Type	Dimensions A	B	C	D*	Pull-Off, Lbs.	Box of 100 Stock No.	Box	Box of 1000 Stock No.	Box
34-404	½"	¾"	⅜"	3/16"	8	55 D 9773	7.70	55 D 9785	61.57
34-400	½"	1"	13/32"	¼"	9	55 D 9774	8.46	55 D 9786	67.71
34-396	½"	1"	33/64"	⅜"	9	55 D 9775	10.00	55 D 9787	79.97
34-393	1"	¾"	⅜"	3/16"	10	55 D 9776	11.18	55 D 9788	89.43
34-387	1"	1"	13/32"	¼"	12	55 D 9777	12.20	55 D 9789	97.64
34-383	1"	1"	33/64"	⅜"	12	55 D 9778	14.21	55 D 9790 F	113.69
34-380	1"	1¼"	11/16"	½"	14	55 D 9779	16.38	55 D 9791 F	131.01
34-376	1¼"	1¼"	25/32"	⅝"	16	55 D 9780	21.19	55 D 9792 F	169.53
34-372	1½"	1½"	59/64"	¾"	20	55 D 9781	30.49	55 D 9793 F	243.90



Exclusive lock/release design provides positive locking, yet is easily released. Adhesive backing gives permanent holding on most surfaces without any special surface treatment. Constructed of high-impact, stable PVC. Temperature range, −20° to +180° F (best adhesion +70° to +120° F). *Indicates cable diameter. Save in quantities of 1000. Av. shpg. wt. per box of 100 clamps, 1 lb.; per box of 1000, 10 lbs.



GC SNAP-IN CABLE TIES



Bind wire and cables into a single harness. Permit quick, tight adjustment to any size bundle. Snap-in button terminals insert into ¼" chassis hole. 4-¼" length. Wt.: box of 100, 4 oz.; 1000, 4 lbs.

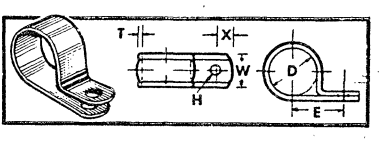
Mfr's Type	Color	Box of 100 Stock No.	Box	Box of 1000 Stock No.	Box
34-454	Red	55 D 9770	1.75	55 D 9782	13.95
34-456	Yellow	55 D 9771	1.75	55 D 9783	13.95
34-458	Blue	55 D 9772	1.75	55 D 9784	13.95

PLASTIC TIES

Bind cables into single harness. Plastic except *nylon. Supplied in pkgs. of 100. Av. shpg. wt., per pkg., 4 oz.

Stock No.	Type 34-	Size	Color	PER PKG./100 1-49	50-99	100-Up
55 D 8931	432C	4¼"	Red	1.20	1.06	.92
55 D 8932	436C	4¼"	Yellow	1.20	1.06	.92
55 D 8933	440C	4¼"	Blue	1.20	1.06	.92
55 D 8934	442C*	4¼"	White	1.49	1.30	1.26
55 D 8935	444C	10"	Red	2.20	1.90	1.60
55 D 8936	460C*	10"	White	3.50	2.95	2.60

GC CABLE CLIPS



Ethyl Cellulose†. Withstand age, moisture, corrosion, shock, vibration and temperatures from −40° to +185° F. Meet MIL-242A. T=.060"; W=½"; H=.204". Supplied in Packages of 100. Av. shpg. wt. per pkg., 6 oz.

Nylon‡. Durably built to resist temperatures from −60° to +250° F. Types N-2 to N-8: T=.040"; W=⅜"; H=.167". Types N-9B to N-20B: T=.060"; W=½"; H=.204". Meet MIL-P17091A. Supplied in Packages of 100. *Indicates dimensions in inches. Av. shpg. wt. per pkg., 6 oz.

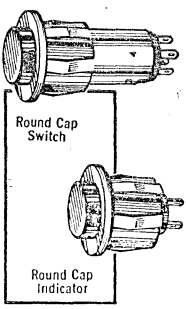
Mfr's Type†	Dimensions* D	E	X	Pkg. of 100 Stock No.	Pkg.
34-300C	⅛	.360	7/32	55 D 8839	2.34
34-304C	3/16	.423	7/32	55 D 8840	2.40
34-308C	¼	.457	7/32	55 D 8841	2.58
34-312C	5/16	.498	7/32	55 D 8842	2.85
34-316C	⅜	.529	7/32	55 D 8843	3.00
34-320C	7/16	.560	7/32	55 D 8844	3.30
34-324C	½	.592	7/32	55 D 8845	3.60
34-328C	9/16	.623	7/32	55 D 8846	4.20
34-336C	⅝	.654	7/32	55 D 8847	4.50
34-340C	11/16	.752	7/32	55 D 8849	4.80
34-344C	¾	.783	7/32	55 D 8851	5.10
34-348C	⅞	.845	7/32	55 D 8852	5.40
34-352C	1	.908	7/32	55 D 8853	5.70
34-356C	1⅛	.970	7/32	55 D 8854	6.00
34-358C	1¼	1.062	7/32	55 D 8855	6.30

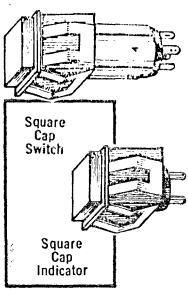
Mfr's Type‡	Dimensions* D	E	X	Pkg. of 100 Stock No.	Pkg.
34-370C	⅛	.310	7/32	55 D 8856	3.60
34-374C	3/16	.373	7/32	55 D 8857	3.90
34-378C	¼	.407	7/32	55 D 8858	4.20
34-382C	5/16	.448	7/32	55 D 8859	4.65
34-386C	⅜	.479	7/32	55 D 8860	4.80
34-390C	7/16	.510	7/32	55 D 8861	5.10
34-394C	½	.542	7/32	55 D 8862	5.40
34-398C	9/16	.623	7/32	55 D 8864	6.60
34-402C	⅝	.654	7/32	55 D 8865	7.20
34-406C	11/16	.752	7/32	55 D 8866	7.50
34-410C	¾	.783	7/32	55 D 8867	8.10
34-414C	⅞	.845	7/32	55 D 8868	8.70
34-418C	1	.908	7/32	55 D 8869	10.20
34-420C	1⅛	1.002	7/32	55 D 8870	12.00
34-422C	1¼	1.062	7/32	55 D 8871	13.80

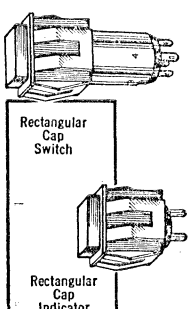
Pushbutton Switches and Lights

HANDY INDEX TO DIALCO LIGHTS

Mfr's Type	Page	Mfr's Type	Page	Mfr's Type	Page	Mfr's Type	Page
4-1830	415	177-8430	416	188-1476	413	507-5824	414
4-1930	415	181-8836	416	188-1478	413	508-7538	415
32-2901	418	181-8864	416	249-7841	415	508-7545	415
32-3101	418	183-1471	413	249-7840	415	508-8738	415
52-0408	417	183-1472	413	250-8758	414	508-8745	415
52-0463	417	183-1473	413	252-9951	415	513 Series	412
52-1308	417	183-1474	413	253-6939	415	513-0101	413
52-1363	417	183-1475	413	270-1830	415	513-0201	413
81-0410	417	183-1476	413	270-1930	415	513-0301	413
81-1059	417	183-1478	413	300 Series	412	513-0601	413
81-9110	417	183-9730	413	301 Series	412	514-0512	418
95-0408	417	183-9830	413	303 Series	412	514-1012	418
95-0410	417	184-1871	413	502-3214	416	515-0012	415
95-0463	417	184-1872	413	502-3241	416	515-0050	415
95-1059	417	184-1873	413	502-8136	416	515-0051	415
95-1310	417	184-1874	413	502-8137	416	521-8018	414
95-9108	417	184-1875	413	502-8140	416	533 Series	412
95-9110	417	187-1871	413	506-0375	418	800-1030	413
95-9163	417	187-1872	413	506-0500	418	801-1030	413
101-3830	416	187-1873	413	507-3835	414	803-1710	413
101-5030	416	187-1874	413	507-3836	414	804-1710	413
103-3101	418	187-1875	413	507-3906	414	806-1710	413
103-3502	418	187-1876	413	507-3907	414	820-2701	413
125-0408	417	187-1878	413	507-3909	414	913-1156	414
125-0463	417	188-1471	413	507-3914	414	913-1430	414
137-8836	416	188-1472	413	507-3917	414	913-1436	414
137-8864	416	188-1473	413	507-3918	414	922-1141	413
137-8874	416	188-1474	413	507-4537	415	928-1422	414
162-8430	416	188-1475	413	507-4538	415		







Series 513 pushbutton switches provide low-profile snap-in mounting. Momentary action with NC, NO, or two-circuit (one NC, one NO) types. Takes T-1-¾ incandescent bulbs with midget flanged base, in voltages from 6-28 V. Contact rating: 3 A res. at 125 VAC or 30 VDC. Series 533 are matching indicator base assemblies. Series 300 are caps for both Series. Available in ⅝" sq. or rnd., or ¾x1". Switch and indicator bases have black bezels. *With barrier; †without barrier. 1 oz.

SERIES 533 INDICATOR BASE ASSEMBLIES

Order cap below.

Stock No.	Type 533-	Takes Cap	EACH 1-9	10-24	25-99	100-249	250-499
60 D 7892	0601	⅝" Sq.	1.66	1.57	1.43	1.33	1.23
60 D 7893	0701	⅝" Rnd.	1.66	1.57	1.43	1.33	1.23
60 D 7894	0901*	¾x1"	1.66	1.57	1.43	1.33	1.23
60 D 7895	1001†	¾x1"	1.66	1.57	1.43	1.33	1.23

SERIES 513 SWITCH BASES—INCLUDES BEZEL, CLIP, SPANNER RING

Stock No.	Type 513-	Contact Arrangement	Operate Force	Bezel Accommodates:	EACH 1-9	10-24	25-99	100-249	250-499
60 D 7896	0106-001	SPST-NO	20 oz.	⅝" Sq. cap	3.77	3.54	3.32	3.09	2.89
60 D 7897	0107-001	SPST-NO	20 oz.	⅝" Rnd. Cap	3.77	3.54	3.32	3.09	2.89
60 D 7898	0109-001†	SPST-NO	20 oz.	¾" x 1" Cap	3.77	3.54	3.32	3.09	2.89
60 D 7899	0110-001*	SPST-NO	20 oz.	¾" x 1" Cap	3.77	3.54	3.32	3.09	2.89
60 D 7900	0206-001	SPST-NC	10 oz.	⅝" Sq. Cap	3.77	3.54	3.32	3.09	2.89
60 D 7901	0207-001	SPST-NC	10 oz.	⅝" Rnd. Cap	3.77	3.54	3.32	3.09	2.89
60 D 7902	0209-001†	SPST-NC	10 oz.	¾" x 1" Cap	3.77	3.54	3.32	3.09	2.89
60 D 7903	0210-001*	SPST-NC	10 oz.	¾" x 1" Cap	3.77	3.54	3.32	3.09	2.89
60 D 7904	0306-001	Two Circuit	15 oz.	⅝" Sq. Cap	4.10	3.84	3.60	3.36	3.14
60 D 7905	0307-001	Two Circuit	15 oz.	⅝" Rnd. Cap	4.10	3.84	3.60	3.36	3.14
60 D 7906	0309-001†	Two Circuit	15 oz.	¾" x 1" Cap	4.10	3.84	3.60	3.36	3.14
60 D 7907	0310-001*	Two Circuit	15 oz.	¾" x 1" Cap	4.10	3.84	3.60	3.36	3.14

SERIES 513 ALTERNATE ACTION SWITCHES

‡Switch Base only. Does not include bezel, clip, or spanner ring.

60 D 8688	1406-001	SPDT	12 oz.	⅝" Sq. Cap	5.79	5.41	5.05	4.68	4.33
60 D 8689	1407-001	SPDT	12 oz.	⅝" Rnd. Cap	5.79	5.41	5.05	4.68	4.33
60 D 8690	1409-001†	SPDT	12 oz.	¾" x 1" Cap	5.79	5.41	5.05	4.68	4.33
60 D 8691	1410-001*	SPDT	12 oz.	¾" x 1" Cap	5.79	5.41	5.05	4.68	4.33
60 D 8692	1506-001	Two Circuit	12 oz.	⅝" Sq. Cap	5.79	5.41	5.05	4.68	4.33
60 D 8693	1507-001	Two Circuit	12 oz.	⅝" Rnd. Cap	5.79	5.41	5.05	4.68	4.33
60 D 8694	1509-001†	Two Circuit	12 oz.	¾" x 1" Cap	5.79	5.41	5.05	4.68	4.33
60 D 8695	1510-001*	Two Circuit	12 oz.	¾" x 1" Cap	5.79	5.41	5.05	4.68	4.33
60 D 8696	1401-604‡	SPDT	12 oz.	.....	5.14	4.81	4.49	4.16	3.85
60 D 8697	1501-604‡	Two Circuit	12 oz.	.....	5.14	4.81	4.49	4.16	3.85

PUSHBUTTON SWITCH CAPS FOR SERIES 513 AND 533

⅝" SQUARE

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-99	100-249	250-499
60 D 8726	300-1871	Red	.83	.78	.73	.68	.63
60 D 8727	300-1872	Grn	.83	.78	.73	.68	.63
60 D 8728	300-1873	Amb	.83	.78	.73	.68	.63
60 D 8729	300-1874	Blue	.83	.78	.73	.68	.63
60 D 8730	300-1875	Wht	.83	.78	.73	.68	.63
60 D 8731	300-1876	Yel	.83	.78	.73	.68	.63

⅝" ROUND

60 D 8732	301-1471	Red	.83	.78	.73	.68	.63
60 D 8733	301-1472	Grn	.83	.78	.73	.68	.63
60 D 8734	301-1473	Amb	.83	.78	.73	.68	.63

⅝" ROUND (Cont'd)

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-99	100-249	250-499
60 D 8735	301-1474	Blue	.83	.78	.73	.68	.63
60 D 8736	301-1475	Wht	.83	.78	.73	.68	.63
60 D 8737	301-1476	Yel	.83	.78	.73	.68	.63

¾x1" RECTANGULAR

60 D 8738	303-3471	Red	.92	.86	.80	.74	.68
60 D 8739	303-3472	Grn	.92	.86	.80	.74	.68
60 D 8740	303-3473	Amb	.92	.86	.80	.74	.68
60 D 8741	303-3474	Blue	.92	.86	.80	.74	.68
60 D 8742	303-3475	Wht	.92	.86	.80	.74	.68
60 D 8743	303-3476	Yel	.92	.86	.80	.74	.68

DIALCO

PRESS-TO-TEST INDICATOR LIGHTS

Permit pre-testing of lamps. 804-1710 and 803-1710 have 1" C. to C. spacing; mount in 5/8" diameter hole; use T-3¼ lamp. 801-1030 and 800-1030 have ¾" C. to C. spacing; mount in 15/32" hole; use T-1¾ lamp. Less lamps.

[A] SERIES 804-1710 WITH DIMMER

Stock No.	Mfr's Type	MIL No.	Lens Color
60 D 8134	804-1710-0337-504	MS25331-1	Clear
60 D 8135	804-1710-0331-504	MS25331-2	Red
60 D 8136	804-1710-0332-504	MS25331-3	Green
60 D 8137	804-1710-0333-504	MS25331-4	Amber

1-9.....Each 2.67 10-24.....Each 2.50
25-99.....Each 2.35 100-249.....Each 2.19

[A] SERIES 803-1710 NON-DIMMER

Stock No.	Mfr's Type	MIL No.	Lens Color
60 D 8139	803-1710-0337-504	MS25331-5	Clear
60 D 8140	803-1710-0331-504	MS25331-6	Red
60 D 8141	803-1710-0332-504	MS25331-7	Green
60 D 8142	803-1710-0333-504	MS25331-8	Amber
60 D 8143	803-1710-0334-504	.....	Blue

1-9.....Each 2.44 10-24.....Each 2.28
25-99.....Each 2.13 100-249.....Each 1.98

[B] SERIES 806-1710 NON-DIMMER

Stock No.	Mfr's Type	MIL No.	Lens Color
60 D 8662	806-1710-0437-504	.....	Clear
60 D 8663	806-1810-0431-504	.....	Red
60 D 8664	806-1710-0432-504	.....	Green
60 D 8665	806-1710-0433-504	.....	Amber
60 D 8666	806-1710-0434-504	.....	Blue

1-9.....Each 2.81 10-24.....Each 2.62
25-99.....Each 2.45 100-249.....Each 2.28

[C] SERIES 801-1030 WITH DIMMER

60 D 8149	801-1030-0337-504	MS25041-1	Clear
60 D 8150	801-1030-0331-504	MS25041-2	Red
60 D 8151	801-1030-0332-504	MS25041-3	Green
60 D 8152	801-1030-0333-504	MS25041-4	Amber
60 D 8153	801-1030-0334-504	MS25041-10	Blue

1-9.....Each 2.26 10-24.....Each 2.12
25-99.....Each 1.99 100-249.....Each 1.86

[C] SERIES 800-1030 NON-DIMMER

60 D 8154	800-1030-0337-504	MS25041-5	Clear
60 D 8155	800-1030-0331-504	MS25041-6	Red
60 D 8156	800-1030-0332-504	MS25041-7	Green
60 D 8157	800-1030-0333-504	MS25041-8	Amber
60 D 8158	800-1030-0334-504	MS25041-11	Blue

1-9.....Each 1.95 10-24.....Each 1.82
25-49.....Each 1.70 100-249.....Each 1.86

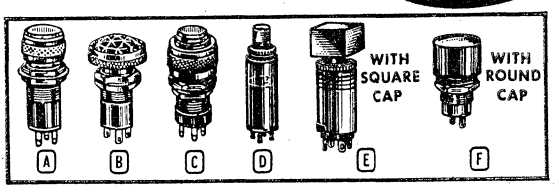
820-2701 PRESS-TO-TEST SERIES

Conform to all applicable Military specs. Press-to-test assemblies (without dimmer) mount in 1" clearance hole. Approx. 1¼x3¼". Two binding screw terminals for "normal" circuit; one for "test". Use S6 bulbs with candelabra screw base. Less lamp, order below. *Translucent unfrosted. Shpg. wt., 3 oz.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 8667	820-2701-0111-502	Red	
60 D 8668	820-2701-0112-502	Green	1-9.....6.01
60 D 8669	820-2701-0113-502	Amber	10-24.....5.62
60 D 8670	820-2701-0114-502	Blue	25-99.....5.24
60 D 8671	820-2701-1035-502	White*	100-249.....4.86
60 D 8676	820-2701-0116-502	Yellow	250-499.....4.50
60 D 8677	820-2701-0117-502	Clear	

LAMPS FOR ABOVE

Stock No.	Type	Volts	A	Base	Bulb	Box 10
60 D 8519	C7A	115	.....	Mid. Flange	T-2	7.02
60 D 8522	C9A	115	.....	S.C. Mid. Flange	T-2	7.02
60 D 7342	327	28	.04	Mid. Flange	T-1¾	4.30
60 D 7401	381	6.3	.20	Mid. Flange	T-1¾	7.60



PUSHBUTTON SWITCHES

[D] Incandescent Illuminated Switch. SPST—N.O., momentary contact. Gold plated contacts, 0.1 A at 125 VAC or 30 VDC, non-inductive. Uses T-1¾ lamp. Over 1 million operations. Rear mtg., 3/8" dia. hole; solder terminals. Less lamp.

Stock No.	Mfr's Type	Color	EACH
60 D 9023	922-1141-1631-523	Red	1-9..... 3.46
60 D 9024	922-1141-1632-523	Green	10-24..... 3.27
60 D 9025	922-1141-1633-523	Amber	25-99..... 3.06
60 D 9026	922-1141-1634-523	Blue	100-249.....2.86
60 D 9027	922-1141-1635-523	White	250-499.....2.68
60 D 9028	922-1141-1637-523	Clear	

[E] [F] ½" FRICTION-FIT PUSHBUTTON/LENS CAPS

Made to fit Illuminated Pushbutton Assemblies, and matching Indicator Light Base Assemblies, described above and at left. Solid-color translucent face and sides. Have high-strength plastic lens. Square caps are non-rotatable for secure locking.

Color	Round Rotatable		Square (Non-Rotatable)	
	Stock No.	Mfr's Type	Stock No.	Mfr's Type
Red	60 D 8857	183-1471	60 D 8878	184-1871
Green	60 D 8858	183-1472	60 D 8879	184-1872
Amber	60 D 8859	183-1473	60 D 8880	184-1873
Blue	60 D 8860	183-1474	60 D 8881	184-1874
White	60 D 8861	183-1475	60 D 8882	184-1875
Yellow	60 D 8862	183-1476	.....	.....
Ivory	60 D 8863	183-1478	.....	.....

1-9.....Each .59 10-24.....Each .55 25-99.....Each .51
100-249.....Each .47 250-499.....Each .43
500-999.....Each .39 1000-2499.....Each .36

[E] [F] ¾" FRICTION-FIT PUSHBUTTON/LENS CAPS

Non-rotatable pushbutton and lens cap assemblies provide secure locking of the socket terminal assembly in the mounting bushing. Designed to fit the indicator base assemblies described above and at left. Square caps are non-rotatable for secure locking.

Color	Round (Keyed)		Square (Non-Rotatable)	
	Stock No.	Mfr's Type	Stock No.	Mfr's Type
Red	60 D 8885	188-1471	60 D 8892	187-1871
Green	60 D 8886	188-1472	60 D 8893	187-1872
Amber	60 D 8887	188-1473	60 D 8894	187-1873
Blue	60 D 8888	188-1474	60 D 8895	187-1874
White	60 D 8889	188-1475	60 D 8896	187-1875
Yellow	60 D 8890	188-1476	60 D 8897	187-1876
Ivory	60 D 8891	188-1478	60 D 8898	187-1878

1-9.....Each .83 10-24.....Each .78 25-49.....Each .73
100-249.....Each .68 250-499.....Each .63
500-999.....Each .58 1000-2499.....Each .53

ILLUMINATED PUSHBUTTON SWITCH BASE ASSEMBLY

For use with friction-fit caps at right. Require ½" mtg. holes. Rear mtg. for panels to 3/16" thick. Circuits: Type 0101, single, N.O.; Type 0201, single, N.C.; Type 0301, double, one N.O., one N.C.; Type 0601, Dry-Double, one N.O., one N.C.

Stock No.	Mfr's Type	EACH				
		1-9	10-24	25-99	100-249	250-499
60 D 8850	513-0101-604	3.12	2.94	2.76	2.57	2.41
60 D 8851	513-0201-604	3.12	2.94	2.76	2.57	2.41
60 D 8852	513-0301-604	3.45	3.24	3.04	2.84	2.66
60 D 8855	513-0601-604	3.77	3.55	3.33	3.11	2.91

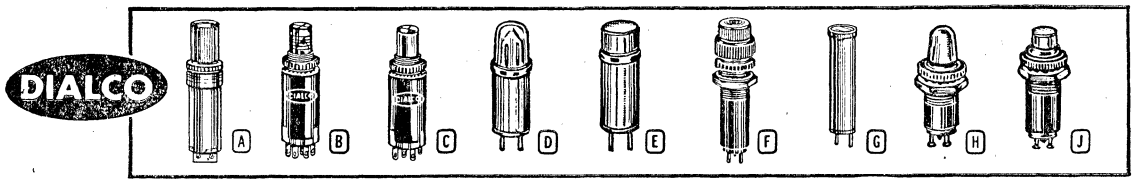
INDICATOR LIGHT BASE ASSEMBLIES

Type 183-9830-14-604 Front or Rear-Mounting Assembly. (Not illus.) For friction-fit caps, see p. 405. Fits ½" diameter hole.
60 D 8856. 1-9....Ea. 1.01 10-24....Ea. .94 25-99....Ea. .87
100-249.....Ea. .81 250-499.....Ea. .75

Type 183-9730-14-602 Front Mounting Assembly Only. (Not illus.) For friction-fit caps, see p. 405. Fits 15/32" diameter hole.
60 D 9110. 1-9....Ea. 1.01 10-24....Ea. .94 25-99....Ea. .87
100-249.....Ea. .81 250-499.....Ea. .75

For Additional Lamps See Pages 419 and 420.

Lights, Switches and Accessories (Cont'd)



SERIES 928 FLASHING INDICATOR

A Unique indicator light that provides instant intermittent light flashing on connection to ordinary 110-125 VAC circuit. No thermal elements or moving contacts; uses special characteristic of neon lamp and reliable solid-state driver circuit to provide a minimum of 5000 hours operation. Rear mounts in ½" clearance hole in panels up to 3/16" thick. Supplied with selected 521-8018 replaceable seasoned neon lamp accommodated by shank of removable plastic lens cap.

Stock No.	Mfr's Type	Lens Color	EACH				
			1-9	10-24	25-99	100-249	250-499
60 D 6004	928-1422-1631-638	Red	5.51	5.07	4.78	4.30	4.05
60 D 6005	928-1422-1633-638	Amber	5.51	5.07	4.78	4.30	4.05
60 D 7500	521-8018	Lamp	.92	.83	.74	.....	.....

913 SERIES ILLUMINATED PUSHBUTTON SWITCH

B C New illuminated pushbutton switch with light action and short travel. Illumination of transparent pushbutton obtained from non-replaceable high brightness C2A(NE-2H) neon lamp (110-125 VAC operation only). Integral 33K current limiting resistor. Gold plated contacts rated 0.1 amp, 125 VAC; 0.1 amp 30 VDC. Single circuit (Illus. "C" above) or two circuit (Illus. "B" above). Rear mounts in 3/8" clearance hole in panels up to 1/8" thick.

Stock No.	Mfr's Type	Lens Color	Form	EACH				
				1-9	10-24	25-99	100-249	250-499
60 D 6006	913-1156-1631-525	Red	N.O.	2.56	2.41	2.26	2.11	1.97
60 D 6007	913-1156-1633-525	Amber	N.O.	2.56	2.41	2.26	2.11	1.97
60 D 6008	913-1156-1635-525	White	N.O.	2.56	2.41	2.26	2.11	1.97
60 D 6009	913-1156-1637-525	Clear	N.O.	2.56	2.41	2.26	2.11	1.97
60 D 6010	913-1430-1631-525	Red	N.C.	2.56	2.41	2.26	2.11	1.97
60 D 6011	913-1430-1633-525	Amber	N.C.	2.56	2.41	2.26	2.11	1.97
60 D 6012	913-1430-1635-525	White	N.C.	2.56	2.41	2.26	2.11	1.97
60 D 6013	913-1430-1637-525	Clear	N.C.	2.56	2.41	2.26	2.11	1.97
60 D 6014	913-1436-1631-525	Red	T.C.	2.71	2.55	2.39	2.23	2.09
60 D 6015	913-1436-1633-525	Amber	T.C.	2.71	2.55	2.39	2.23	2.09
60 D 6016	913-1436-1635-525	White	T.C.	2.71	2.55	2.39	2.23	2.09
60 D 6017	913-1436-1637-525	Clear	T.C.	2.71	2.55	2.39	2.23	2.09

6-VOLT INCANDESCENT LAMP CARTRIDGES

Series 507-3906. Unbased T-1¾ lamps in aluminum sleeves, capped with plastic lenses. Operating life: 1000 hours. Stainless steel pins, nylon insul. For 6 volts, 200 milliamperes.

D Stovepipe		E Short Cylindor		Lens Color
Stock No.	Mfr's Type	Stock No.	Mfr's Type	
60 D 8423	507-3906-0971-600	60 D 8429	507-3906-1471-600	Red
60 D 8424	507-3906-0972-600	60 D 8430	507-3906-1472-600	Green
.....	.....	60 D 8431	507-3906-1473-600	Amber
.....	.....	60 D 8432	507-3906-1474-600	Blue
.....	.....	60 D 8433	507-3906-1475-600	White

1-9.....1.15 10-24.....1.06
25-99.....97 100-249.....88 250-499.....81

6.3 VOLT LONG-LIFE LAMP CARTRIDGES

E Series 507-3907. Same as 507-3906 Series, but for 6.3-volt, .04 ampere operation. 50,000 hour life. Short-cylinder type.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 8678	507-3907-1471-600	Red	1-9.....1.56
60 D 8679	507-3907-1472-600	Green	10-24.....1.44
60 D 8680	507-3907-1473-600	Amber	25-99.....1.32
60 D 8681	507-3907-1474-600	Blue	100-249.....1.19
60 D 8682	507-3907-1475-600	White	250-499.....1.09

6.3-VOLT LAMP CARTRIDGES

E Series 507-3909. Same as 507-3906 Series, but for 6.3-volt, 200-mA operation. 50,000 hour life. All are short-cylinder type.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 8452	507-3909-1471-600	Red	1-9.....1.21
60 D 8453	507-3909-1472-600	Green	10-24.....1.12
60 D 8454	507-3909-1473-600	Amber	25-99.....1.02
60 D 8455	507-3909-1474-600	Blue	100-149.....92
60 D 8456	507-3909-1475-600	White	250-499.....85

14-VOLT LAMP CARTRIDGES

E Series 507-3914. For 14-volt, 80-mA operation. Short-cylinder type. Mount in 3/8" clearance hole. 50,000 hr. life.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 8464	507-3914-1471-600	Red	1-9.....1.28
60 D 8465	507-3914-1472-600	Green	10-24.....1.18
60 D 8466	507-3914-1473-600	Amber	25-99.....1.08
60 D 8467	507-3914-1474-600	Blue	100-249.....98
60 D 8468	507-3914-1475-600	White	250-499.....90

28-VOLT LAMP CARTRIDGES

Series 507-3917. As above, but 28-V, 40-mA. Life: 1000 hours.

D Stovepipe		E Short Cylinder		Lens Color
Stock No.	Mfr's Type	Stock No.	Mfr's Type	
60 D 8434	507-3917-0971-600	60 D 8440	507-3917-1471-600	Red
60 D 8435	507-3917-0972-600	60 D 8441	507-3917-1472-600	Green
60 D 8436	507-3917-0973-600	60 D 8442	507-3917-1473-600	Amber
.....	.....	60 D 8443	507-3917-1474-600	Blue
60 D 8438	507-3917-0975-600	60 D 8444	507-3917-1475-600	White
.....	.....	60 D 8445	507-3917-1476-600	Yellow

1-9.....Ea. 1.10 10-24.....Ea. 1.02
25-99.....Ea. .93 100-249.....Ea. .84

Series 507-3918. As above, but 25,000 hour operating life.

Stovepipe		Flat Lens		Lens Color
Stock No.	Mfr's Type	Stock No.	Mfr's Type	
60 D 7501	507-3918-1471-600	60 D 7505	507-3918-0371-600	Red
60 D 7502	507-3918-1472-600	60 D 7506	507-3918-0372-600	Green
60 D 7503	507-3918-1473-600	60 D 7507	507-3918-0373-600	Amber
60 D 7504	507-3918-1475-600	60 D 7508	507-3918-0375-600	White

1-9.....Ea. 1.30 10-24.....Ea. 1.20
25-99.....Ea. 1.10 100-249.....Ea. .99

115-125 VOLT ASSEMBLY

F Series 250-8758. Indicator light for 115-125 volts, 60 Hz. Uses cartridge below. Rear-mount holder for 3/8" clearance.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 6630	250-8758-3331-504	Red	1-9.....1.68
60 D 6631	250-8758-3332-504	Green	10-24.....1.54
60 D 6632	250-8758-3333-504	Amber	25-99.....1.42
60 D 6633	250-8758-3335-504	White	100-249...1.30

G Lamp Cartridge 507-5824-0747-600. For the 250-8758 Series listed above.

60 D 6634. 1-9.....Ea. 1.38 10-24.....Ea. 1.30
25-99.....Ea. 1.23 100-249.....Ea. 1.15

REPLACEABLE NEON CARTRIDGES

Series 507-3835. Built-in NE-2E lamps. For 105-125 volts. Use external 56K resistor for bright light, 100K for medium light.

D Stovepipe		E Long Cylinder		Color Lens
Stock No.	Mfr's Type	Stock No.	Mfr's Type	
60 D 8470	507-3835-0931-600	60 D 8475	507-3835-1531-600	Red
60 D 8471	507-3835-0933-600	60 D 8476	507-3835-1533-600	Amber
.....	.....	60 D 8479	507-3835-1535-600	White
60 D 8473	507-3835-0937-600	60 D 8478	507-3835-1537-600	Clear

1-9.....Each .88 10-24.....Each .81
25-99.....Each .74 100-249.....Each .64

Series 507-3836. Above, with NE-2H high-brightness lamp. Needs external 33K resistor for 110-125 V, long life; 22K for bright light.

60 D 8480	507-3836-0931-600	60 D 8485	507-3836-1531-600	Red
60 D 8481	507-3836-0933-600	60 D 8486	507-3836-1533-600	Amber
60 D 8482	507-3836-0935-600	60 D 8487	507-3836-1535-600	White
60 D 8484	507-3836-0937-600	60 D 8489	507-3836-1537-600	Clear

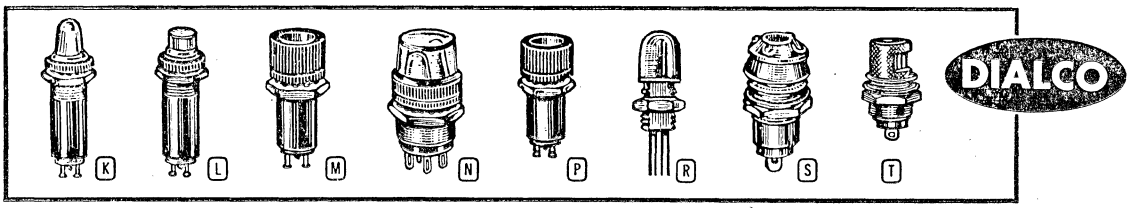
1-9.....Each .88 10-24.....Each .81
25-99.....Each .74 100-249.....Each .64

LAMPS FOR ABOVE

Stock No.	Type	Volts	Amp	Base	Bulb	Box of 10
60 D 8519	C7A	115	.....	Mid. Flange	T-2	7.02
60 D 8522	C9A	115	.....	S.C. Mid. Fl'ge	T-2	7.02
60 D 7342	327	28	.04	Mid. Flange	T-1¾	4.30
60 D 7401	381	6.3	.20	Mid. Flange	T-1¾	7.60

For Additional Lamps See Pages 419 and 420

Lights, Switches and Accessories (Cont'd)



REPLACEABLE NEON CARTRIDGES (Cont'd)

Series 507-4537. Built-in A1B lamp for 105-125 volt AC/DC. Built-in 56K resistor for bright light. Approximate operating life, 3000 hours.

[D] Stovepipe		[E] Long Cylinder		Lens Color
Stock No.	Mfr's Type	Stock No.	Mfr's Type	
60 D 8407	507-4537-0931-640	60 D 8415	507-4537-1531-640	Red
60 D 8408	507-4537-0933-640	60 D 8416	507-4537-1533-640	Amber
60 D 8410	507-4537-0937-640	60 D 8418	507-4537-1537-640	Clear

1-9.....Each 1.18 10-24.....Each 1.09
25-99.....Each 1.01 100-249.....Each .92

Series 507-4538. As above, but with A1C high-brightness lamp, and 22K built-in resistor for bright light. For 105-125 volts, AC. Approximate life, 3000 hours.

60 D 8411	507-4538-0931-610	60 D 8419	507-4538-1531-610	Red
60 D 8412	507-4538-0933-610	60 D 8420	507-4538-1533-610	Amber
60 D 8414	507-4538-0937-610	60 D 8422	507-4538-1537-610	Clear

1-9.....Each 1.18 10-24.....Each 1.09
25-99.....Each 1.01 100-249.....Each .92

PERMANENT DATALITES

[H] Series 249-7840 Stovepipe. Non-replaceable A9A(NE-2E) lamps, less resistor. Fit 3/8" hole. 65 VAC or 90 VDC starting V.

Stock No.	Mfr's Type	Lens Color	EACH
60 D 8384	249-7840-0931-504	Red	1-9.....1.13
60 D 8385	249-7840-0933-504	Amber	10-24.....1.06
60 D 8386	249-7840-0935-504	White	25-99.....1.00
60 D 8387	249-7840-0936-504	Yellow	100-249..... .93
60 D 8388	249-7840-0937-504	Clear	

[J] Series 249-7840. Same as Series 249-7840 above, but has cylindrical lens.

60 D 8394	249-7840-1431-504	Red	1-9.....1.13
60 D 8395	249-7840-1433-504	Amber	10-24.....1.06
60 D 8396	249-7840-1435-504	White	25-99.....1.00
60 D 8397	249-7840-1436-504	Yellow	100-249..... .93
60 D 8398	249-7840-1437-504	Clear	

[K] Series 249-7841 Stovepipe. Same circuit as 249-7841 below, with 100K resistor for 105-125 V AC-DC.

60 D 8389	249-7841-0931-574	Red	1-9.....1.35
60 D 8390	249-7841-0933-574	Amber	10-24.....1.27
60 D 8391	249-7841-0935-574	White	25-99.....1.19
60 D 8392	249-7841-0936-574	Yellow	100-249.....1.11
60 D 8393	249-7841-0937-574	Clear	

[L] Series 249-7841. Same circuit as 249-7841 above, but has cylindrical lens. With 100K resistor.

60 D 8399	249-7841-1431-574	Red	1-9.....1.35
60 D 8400	249-7841-1433-574	Amber	10-24.....1.27
60 D 8401	249-7841-1435-574	White	25-99.....1.19
60 D 8402	249-7841-1436-574	Yellow	100-249.....1.11
60 D 8403	249-7841-1437-574	Clear	

CARTRIDGE ASSEMBLY AND HOLDERS

[P] Type 508-7538-504. Compact holder for 1 cartridge. Mounts in 3/8" clearance hole. Solder cup. Polar-terms. Less cartridge.
60 D 8380. 1-9.....Ea. 1.22 10-24.....Ea. 1.12
25-99.....Ea. 1.02 100-249.....Ea. .92

LAMPS FOR ABOVE

Stock No.	Type	Volts	Amp	Base	Bulb	Box of 10
60 D 8519	C7A	115	.....	Mid. Flange	T-2	7.02
60 D 8522	C9A	115	.....	S.C. Mid. Flange	T-2	7.02
60 D 7342	327	28	.04	Mid. Flange	T-1¾	4.30
60 D 7401	381	6.3	.20	Mid. Flange	T-1¾	7.60

CARTRIDGE ASSEMBLY AND HOLDERS (Cont'd)

[P] Type 508-7545-504. Same as 7538 below, left, but uses 4537 and 4538 cartridges.
60 D 8381. 1-9.....Ea. 1.22 10-24.....Ea. 1.12
25-99.....Ea. 1.02 100-249.....Ea. .92

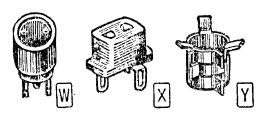
[M] Type 508-8745-504. Same as type 508-7545 above, but with turret terminals.
60 D 8383. 1-9.....Ea. 1.22 10-24.....Ea. 1.12
25-99.....Ea. 1.02 100-249.....Ea. .92

[N] Type 253-6939-1437-504. Assembly for 2 cartridges. Mount in ¾" diameter hole. Clear plastic lens, less cartridges.
60 D 8378. 1-9.....Ea. 3.32 10-24.....Ea. 3.06
25-99.....Ea. 2.81 100-249.....Ea. 2.56

[M] Type 508-8738-504. Same as type 508-7538 below, left, but with turret terminals.
60 D 8382. 1-9.....Ea. 1.22 10-24.....Ea. 1.12
25-99.....Ea. 1.02 100-249.....Ea. .92

CARTRIDGE CONNECTORS

[W] Series 515-0012. Molded phenolic insulation; solder cup terminals.
60 D 8405. 1-9.....Each .70
10-24.....Each .61
25-99.....Each .53
100-249.....Each .46



[X] Series 515-0050. Molded phenolic with cadmium-plated copper solder lug terminals.
60 D 8404. 1-9.....Ea. .22 10-24.....Ea. .20
25-99.....Ea. .19 100-249.....Ea. .18

[Y] Series 515-0051. Speed Clip. Fastening device for direct mounting all Dialco plug-in cartridges.
60 D 8406. 1-9.....Ea. .11 10-24.....Ea. .10
25-99.....Ea. .09 100-249.....Ea. .08

INCANDESCENT INDICATOR LIGHTS (.193" Mtg. Clearance)

[R] Series 252. Subminiature incandescent assemblies with non-replaceable lamp enclosed in high-impact plastic housing. Entire unit less than 5/8" long, less leads. Needs only .193" panel mtg. hole for clearance. Diameter of stovepipe lens cap is 7/32"; length, 9/32". Anti-rotation construction; 6" flexible wire leads. Lamp ratings: 5.0 volts @ .06 ampere for 60,000 hours; 6.3 V @ .07 ampere for 6000 hours. †Suffix of MIL No. MS25446-.

Stock No.	Type 252--9951-	†	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8372	0974	2	Blue	2.96	2.77	2.58	2.41	2.27	2.15
60 D 8373	0972	3	Green	2.96	2.77	2.58	2.41	2.27	2.15
60 D 8374	0971	4	Red	2.96	2.77	2.58	2.41	2.27	2.15
60 D 8375	0975	5	White	2.96	2.77	2.58	2.41	2.27	2.15
60 D 8376	0973	6	Amber	2.96	2.77	2.58	2.41	2.27	2.15
60 D 8377	0937	7	Clear	2.96	2.77	2.58	2.41	2.27	2.15

15/32" MOUNTING CLEARANCE LIGHTS

MS25010 SUBMINIATURE LIGHTS

[S] Series 270 Edge-Light Assemblies. Meet MIL-L-7806-3. For MIL-P-7788 plate panels. Emit light radially through colored filter into plastic plate. Resilient light seal washer prevents light loss at front. Tinned Brass terminals with elongated slots. Red filters. Cadmium-plated brass mtg. bushing, internal-tooth lockwasher, hex nut. Less T-1¾ lamp. ½x1 7/16", *Add Suffix -702.

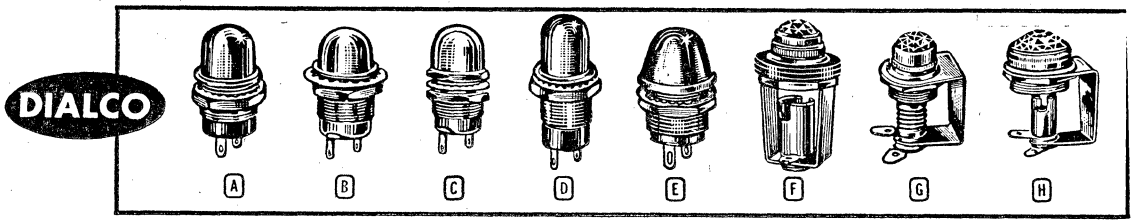
Stock No.	Mfr's Type* 270-	Terminals	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8490	1930-0111	Solder	.75	.68	.62	.56	.50	.45
60 D 8491	1830-0111	Screw	.90	.81	.72	.65	.59	.54

ONE-TERMINAL LIGHT SHIELD

[T] Black nickel finish. Opening, ¼x3/16". Type 4-1930 has solder terminals; 4-1830, screw. *Add Suffix 2900-201 when ordering.

Stock No.	Mfr's Type*	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8247	4-1930	1.61	1.49	1.39	1.29	1.20	1.11
60 D 8248	4-1830	1.88	1.74	1.62	1.51	1.40	1.29

Lights, Switches and Accessories (Cont'd)



15/32" MOUNTING CLEARANCE LIGHTS (Cont'd)

TWO-TERMINAL PLASTIC INCANDESCENT INDICATOR LIGHTS WITH OMNIDIRECTIONAL LENSES

A Series 162-8430. Front Mount. Use 327 and 328 lamps (not supplied). 180° visibility. †Suffix of MIL No. MS25256-.

TRANSPARENT LENS TYPE

Stock No.	Type 162-8430-	†	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8310	0931-502	6	Red	1.21	1.13	1.05	.97	.90	.84
60 D 8311	0932-502	4	Green	1.21	1.13	1.05	.97	.90	.84
60 D 8312	0933-502	2	Amber	1.21	1.13	1.05	.97	.90	.84
60 D 8313	0937-502	8	Clear	1.21	1.13	1.05	.97	.90	.84
60 D 8344	0975-502	10	White	1.21	1.13	1.05	.97	.90	.84
60 D 8345	0934-502	12	Blue	1.21	1.13	1.05	.97	.90	.84

TRANSLUCENT LENS TYPE

60 D 8314	0971-502	...	Red	1.21	1.13	1.05	.97	.90	.84
60 D 8315	0972-502	...	Green	1.21	1.13	1.05	.97	.90	.84
60 D 8316	0973-502	...	Amber	1.21	1.13	1.05	.97	.90	.84
60 D 8317	0974-502	...	Blue	1.21	1.13	1.05	.97	.90	.84

B (E) Series 101-5030 Front Mount, 101-3830 Front or Back Mount. Front mount units need 17/32" mtg. hole; back mount, 15/32". Use T-1¾ lamp (not incl.). Has two terminals for solder connections and anti-rotation construction. With hardware. §White.

TRANSPARENT LENS

Stock No. (Front Mt.)	Mfr's Type	Stock No. (See Above)	Mfr's Type	Lens Color
60 D 8358	101-5030-0931-201	60 D 8365	101-3830-0931-201	Red
60 D 8359	101-5030-0932-201	60 D 8366	101-3830-0932-201	Green
60 D 8360	101-5030-0933-201	60 D 8367	101-3830-0933-201	Amber
60 D 8364	101-5030-0937-201	60 D 8371	101-3830-0937-201§	Clear

1-9.....Each 1.26 10-24.....Each 1.17 25-99.....Each 1.08
100-249..Each 1.00 250-499...Each .92 500-999.....Each .85

TRANSLUCENT LENS

Stock No. (Front Mt)	Mfr's Type	Stock No. (See Above)	Mfr's Type	Lens Color
60 D 8346	101-5030-0971-201	60 D 8352	101-3830-0971-201	Red
60 D 8347	101-5030-0972-201	60 D 8353	101-3830-0972-201	Green
60 D 8348	101-5030-0973-201	60 D 8354	101-3830-0973-201	Amber
60 D 8349	101-5030-0975-201	60 D 8355	101-3830-0975-201§	Clear

1-9.....Each 1.26 10-24.....Each 1.17 25-99.....Each 1.08
100-249...Each 1.00 250-499...Each .92 500-999....Each .85

PLASTIC NEON INDICATORS WITH OMNIDIRECTIONAL LENSES

D Series 137-8836. Front Mount. Full 180° visibility. Use C7A (NE-2D) neon lamp; built-in 62K resistor for 105-125 volts. Less lamp. Fits 15/32" diameter hole. †Suffix of MIL No. MS25257-.

Stock No.	Mfr's Type 137-8836-	†	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8319	-0931-552	4	Red	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8320	-0933-552	2	Amber	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8321	-0937-552	6	Clear	2.02	1.88	1.74	1.61	1.48	1.36

D Series 137-8864.* As above, but with 22K resistor. Uses C9A (NE-2J) neon lamp. *Use Series No. as Prefix.

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8322	-0931-512	Red	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8323	-0933-512	Amber	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8324	-0935-512	White	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8325	-0937-512	Clear	2.02	1.88	1.74	1.61	1.48	1.36

D Series 137-8864.* As above, but with 33K resistor for 25,000 hr. life. Use with C9A (NE-2J) lamp. Less lamp.

60 D 8326	-0931-532	Red	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8327	-0933-532	Amber	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8328	-0935-532	White	2.02	1.88	1.74	1.61	1.48	1.36
60 D 8329	-0937-532	Clear	2.02	1.88	1.74	1.61	1.48	1.36

15/32" MOUNTING CLEARANCE LIGHTS (Cont'd)

WATERTIGHT SERIES

E Series 177-8430*. Front mtg. For T-1¾ midget incandescent lamp. 5/8x13/16". Less lamp. *Use Series No. as Prefix.

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8330	-0971-503	Red	1.51	1.41	1.32	1.24	1.17	1.10
60 D 8331	-0972-503	Green	1.51	1.41	1.32	1.24	1.17	1.10
60 D 8332	-0973-503	Amber	1.51	1.41	1.32	1.24	1.17	1.10
60 D 8334	-0975-503	White	1.51	1.41	1.32	1.24	1.17	1.10

E Series 181-8836.* Same as Series 137-8836, but with "O" ring for watertightness. Has 62K resistor. Less C7A (NE-2D) lamp.

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8336	-0931-553	Red	2.46	2.30	2.14	2.00	1.86	1.73
60 D 8337	-0933-553	Amber	2.46	2.30	2.14	2.00	1.86	1.73

E Series 181-8864.* Same as Series 137-8864, but with "O" ring for watertightness. Has 22K resistor. Less C9A (NE-2J) lamp.

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8340	-0931-513	Red	2.46	2.30	2.14	2.00	1.86	1.73
60 D 8341	-0933-513	Amber	2.46	2.30	2.14	2.00	1.86	1.73

MINIATURE BAYONET INCANDESCENTS (1 1/16" Mounting)

F Series 502-8140. For use between 2 and 55 volts. Faceted ½" lens. 1 1/16" mtg. hole. Less T-3¼ lamp.

Stock No.	Mfr's Type	Lens Color
60 D 7889	502-8140-2131-100	Red
60 D 7890	502-8140-2132-100	Green
60 D 7891	502-8140-2133-100	Amber

1-9.....Each .63 10-24.....Each .58 25-99.....Each .53
100-249....Each .49 250-499....Each .45 500-999....Each .42

OPEN FACETED INCANDESCENTS

G Series 502-8137, 8136. ½" lens. Use T-3¼ lamp. 1 1/16" mtg. hole. For use between 2 and 48 volts. Bayonet not illus.

Lens Color	Screw 8137 Stock No.	Mfr's Type	Bayonet 8136 Stock No.	Mfr's Type
Red	60 D 7966	502-8137-2131-102	60 D 7967	502-8136-2131-102
Green	60 D 7968	502-8137-2132-102	60 D 7969	502-8136-2132-102
Amber	60 D 7970	502-8137-2133-102	60 D 7971	502-8136-2133-102
Blue	.....	.....	60 D 7990	502-8136-2134-102
White	.....	.....	60 D 7992	502-8136-2135-102

1-9.....Each .50 10-24.....Each .46 25-99.....Each .43
100-249....Each .40 250-499....Each .37 500-999....Each .34

H Series 502-3241, 502-3214, 1" jewel; 1" mtg. hole. Bayonet type takes T-3¼ lamp. Candelabra type uses S6 lamp; not illustrated. For use between 6 and 145 volts.

Lens Color	Bayonet 3241 Stock No.	Mfr's Type	Candel. 3214 Stock No.	Mfr's Type
Red	60 D 7947	502-3241-0431-302	60 D 7975	502-3214-0431-302
Green	60 D 7948	502-3241-0432-302	60 D 7976	502-3214-0432-302
Amber	60 D 7949	502-3241-0433-302	60 D 7977	502-3214-0433-302

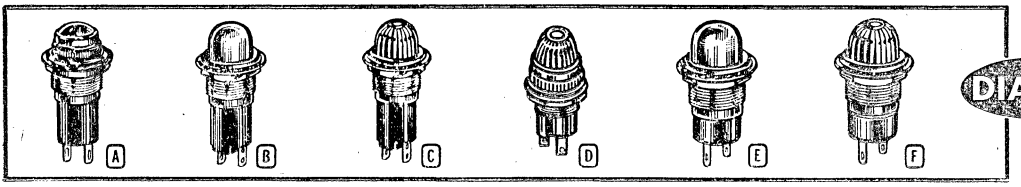
1-9.....Each .88 10-24.....Each .81 25-99.....Each .75
100-249....Each .68 250-499....Each .64 500-999....Each .59

LAMPS FOR ABOVE

Stock No.	Type	Volts	Amp	Base	Bulb	Box of 10
60 D 8519	C7A	115	.....	Mid. Flange	T-2	7.02
60 D 8522	C9A	115	.....	S.C. Mid. Flange	T-2	7.02
60 D 7342	327	28	.04	Mid. Flange	T-1¾	4.30
60 D 7366	44	6-8	.25	Bayonet	T-3¼	.90
60 D 7401	381	6.3	.20	Mid. Flange	T-1¾	7.60

For Additional Lamps See Pages 419 and 420

Lights, Switches and Accessories (Cont'd)



1 1/16" MOUNTING CLEARANCE LIGHTS

INCANDESCENT ASSEMBLIES

A Series 81-0410*. Meets MIL-L-3661B. Enclosed, aviation-type socket shell. Convex, smooth-faced lens; frosted back. ½" black nickel-brass holder. Takes T-3¼ miniature bayonet lamp. 2¼" long, 1 1/16" clearance hole. Fits panel to ⅜". Type 0135-201 is unfrosted. U.L. Component Program-Recognized. Less lamp. *Use Series Number as Prefix when ordering.

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 7772	-0111-201	Red	1.26	1.18	1.12	1.06	1.00	.94
60 D 7773	-0112-201	Green	1.26	1.18	1.12	1.06	1.00	.94
60 D 7775	-0113-201	Amber	1.26	1.18	1.12	1.06	1.00	.94
60 D 7561	-0117-201	Clear	1.26	1.18	1.12	1.06	1.00	.94
60 D 7774	-0135-201	White	1.26	1.18	1.12	1.06	1.00	.94

LOW-VOLTAGE ENCLOSED SIGNAL ASSEMBLIES

A Series 81-9110*. Convex lens; smooth face; frosted back. Use T-3¼ bayonet lamps. 2¼" long. 1 1/16" mtg. hole. Panels to ⅜". Less lamp. *Use Series No. as Prefix to order.

60 D 7780	-0111-102	Red	.82	.77	.72	.68	.64	.60
60 D 7781	-0112-102	Green	.82	.77	.72	.68	.64	.60
60 D 7782	-0113-102	Amber	.82	.77	.72	.68	.64	.60
60 D 7786	-0114-102	Blue	.82	.77	.72	.68	.64	.60

B Series 95-9110*. For use with miniature bayonet lamps. Solder terminals. Less T-3¼ lamp. *Use Series No. as Prefix to order.

60 D 7846	-0931-102	Red	.73	.69	.65	.61	.57	.53
60 D 7847	-0932-102	Green	.73	.69	.65	.61	.57	.53
60 D 7848	-0933-102	Amber	.73	.69	.65	.61	.57	.53
60 D 7850	-0935-102	White	.73	.69	.65	.61	.57	.53

B Series 95-0410, 95-1310 Incandescent. Use with miniature bayonet T-3¼ lamp. Less lamp. *Use Series No. as Prefix to order.

SERIES 95-0410 SOLDER LUGS

Stock No.	Mfr's Type*	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 9157	-0931-201	Red	1.07	1.01	.96	.91	.86	.81
60 D 9158	-0932-201	Green	1.07	1.01	.96	.91	.86	.81
60 D 9159	-0933-201	Amber	1.07	1.01	.96	.91	.86	.81

SERIES 95-1310 SCREW TERMINAL

60 D 9164	-0931-201	Red	1.16	1.10	1.04	.98	.93	.88
60 D 9165	-0932-201	Green	1.16	1.10	1.04	.98	.93	.88
60 D 9166	-0933-201	Amber	1.16	1.10	1.04	.98	.93	.88

NEON INDICATORS WITH BUILT-IN RESISTORS

C Series 52-0408, 52-0463. Fluted stovepipe lens. MIL-L-3661. Solder terminals. 52-0408 has 56K resistor for B1A (NE-51) lamp; 52-0463 has 22K for B2A (NE-51H) high-brightness lamp.

Lens Color	Type NE-51 Stock No.	Type NE-51 Mfr's Type	Type NE-51H Stock No.	Type NE-51H Mfr's Type
Red	60 D 7806	52-0408-0991-241	60 D 7810	52-0463-0991-211
Amber	60 D 7807	52-0408-0993-241	60 D 7811	52-0463-0993-211
White	60 D 7808	52-0408-0995-241	60 D 7812	52-0463-0995-211
Clear	60 D 7809	52-0408-0997-241	60 D 7813	52-0463-0997-211

1-9.....Ea. 1.26 10-24.....Ea. 1.20 25-99.....Ea. 1.14
100-249....Ea. 1.08 250-499....Ea. 1.02 500-999...Ea. .96

Series 52-1308, 52-1363. Same as above, but with screw terminals.

Red	60 D 7814	52-1308-0991-241	60 D 7818	52-1363-0991-211
Amber	60 D 7815	52-1308-0993-241	60 D 7819	52-1363-0993-211
White	60 D 7816	52-1308-0995-241	60 D 7820	52-1363-0995-211
Clear	60 D 7817	52-1308-0997-241	60 D 7821	52-1363-0997-211

1-9.....Ea. 1.34 10-24.....Ea. 1.27 25-99.....Ea. 1.20
100-249....Ea. 1.13 250-499.....Ea. 1.07 500-999....Ea. 1.01

LAMPS FOR ABOVE

Stock No.	Type	Volts	Amp	Base	Bulb	Box of 10
60 D 8519	C7A	115	.....	Mid. Flange	T-2	7.02
60 D 8522	C9A	115	.....	S.C. Mid. Flange	T-2	7.02
60 D 7342	327	28	.04	Mid. Flange	T-1¾	4.30
60 D 7401	381	6.3	.20	Mid. Flange	T-1¾	7.60

1 1/16" CLEARANCE LIGHTS (Cont'd)

B Series 95-0408, 95-0463. For T-3¼ neon lamp. Meet MIL specs. Stovepipe lens. 110-125 V AC-DC. 2 1/16" long. U.L. Component Program-Recognized. C.S.A. Listed. Solder terminals.

Lens Color	Type B1A (NE-51) Stock No.	Type B1A (NE-51) Mfr's Type	Type B2A (NE-51H) Stock No.	Type B2A (NE-51H) Mfr's Type
Red	60 D 7822	95-0408-0931-241	60 D 7826	95-0463-0931-211
Amber	60 D 7823	95-0408-0933-241	60 D 7827	95-0463-0933-211
White	60 D 7824	95-0408-0935-241	60 D 7828	95-0463-0935-211
Clear	60 D 7825	95-0408-0937-241	60 D 7829	95-0463-0937-211

1-9.....Ea. 1.26 10-24.....Ea. 1.20 25-99.....Ea. 1.14
100-249....Ea. 1.08 250-499....Ea. 1.02 500-999....Ea. .96

B Series 95-9108, 95-9163. Same as above, but plastic head, phenolic body. U.L. Component Program-Recognized.

Red	60 D 7838	95-9108-0931-142	60 D 7697	95-9163-0931-112
Amber	60 D 7839	95-9108-0933-142	60 D 7698	95-9163-0933-112
White	60 D 7840	95-9108-0935-142	60 D 7699	95-9163-0935-112
Clear	60 D 7841	95-9108-0937-142	60 D 7732	95-9163-0937-112

1-9.....Ea. .87 10-24.....Ea. .82 25-99.....Ea. .77
100-249.....Ea. .72 250-499.....Ea. .68 500-999.....Ea. .64

OILTIGHT SERIES ASSEMBLIES

D Series 125-0408, 125-0463 Fluted Lens. Solder term. B1A (NE-51) lamp with 56K resistor; B2A (NE-51H) with 22K.

Lens Color	Type B1A NE-51 Stock No.	Type B1A NE-51 Mfr's Type	Type B2A NE-51H Stock No.	Type B2A NE-51H Mfr's Type
Red	60 D 8210	125-0408-1191-443	60 D 8216	125-0463-1191-413
Amber	60 D 8211	125-0408-1193-443	60 D 8217	125-0463-1193-413
Clear	60 D 8212	125-0408-1197-443	60 D 8218	125-0463-1197-413

D Series 125-0408, 125-0463 Plain Lens. Solder terminals, B1A (NE-51) lamp with 56K resistor; B2A (NE-51H) with 22K.

Red	60 D 8213	125-0408-1131-443	60 D 8219	125-0463-1131-413
Amber	60 D 8214	125-0408-1133-443	60 D 8220	125-0463-1133-413
Clear	60 D 8215	125-0408-1137-443	60 D 8221	125-0463-1137-413

D Series 125-0463 with 33K resistor. For B2A (NE-51H) neon lamp; long life. Plain lens.

Red	.....	.....	60 D 8225	125-0463-1131-433
Amber	.....	.....	60 D 8226	125-0463-1133-433
Clear	.....	.....	60 D 8227	125-0463-1137-433

1-9.....Ea. 1.98 10-24.....Ea. 1.88 25-99.....Ea. 1.77
100-249....Ea. 1.69 250-499....Ea. 1.61 500-999....Ea. 1.54

INCANDESCENT INDICATOR LIGHT ASSEMBLIES

Each series consists of indicator light assembly and lens. 81-1059 has convex back-frosted lens or faceted unfrosted lens. Stovepipe unit consists of assembly with 95-3171 translucent lens or 52-3191 internally fluted lens. Both series take T-2 bulb (voltage range 6-120 volts); mount in 1 1/16" hole. Less lamp.

Lens Color	Stock No.	(E) Stovepipe Lens Translucent	Stock No.	(F) Stovepipe Lens Intern. Fluted
Red	60 D 6066	95-1059-3171-102	60 D 6241	52-1059-3191-102
Green	60 D 6067	95-1059-3172-102	60 D 6242	52-1059-3192-102
Amber	60 D 6068	95-1059-3173-102	60 D 6243	52-1059-3193-102
Blue	60 D 6069	95-1059-3174-102	60 D 6244	52-1059-3194-102
White	60 D 6070	95-1059-3175-102	60 D 6245	52-1059-3195-102
Yellow	60 D 6071	95-1059-3176-102	60 D 6246	52-1059-3196-102
Clear	.....	.....	60 D 6247	52-1059-3197-102

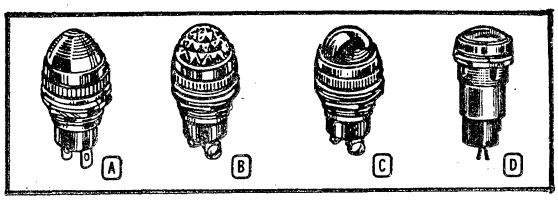
1-9.....Ea. .88 10-24.....Ea. .82 25-99.....Ea. .77
100-249.....Ea. .73 250-499.....Ea. .69 500-999.....Ea. .65

Lens Color	Stock No.	Convex Lens Back Frosted	Stock No.	Faceted Lens Unfrosted
Red	60 D 6248	81-1059-0111-102	60 D 6255	81-1059-0431-102
Green	60 D 6249	81-1059-0112-102	60 D 6256	81-1059-0432-102
Amber	60 D 6250	81-1059-0113-102	60 D 6257	81-1059-0433-102
Blue	60 D 6251	81-1059-0114-102	60 D 6258	81-1059-0434-102
White	60 D 6252	81-1059-0135-102	60 D 6259	81-1059-0435-102
Yellow	60 D 6253	81-1059-0116-102	60 D 6260	81-1059-0436-102
Clear	60 D 6254	81-1059-0117-102	60 D 6261	81-1059-0437-102

1-9.....Ea. .93 10-24.....Ea. .87 25-99.....Ea. .81
100-249.....Ea. .77 250-499.....Ea. .73 500-999.....Ea. .69

DIALCO Lights, Switches and Accessories (Cont'd)

ONE-INCH MOUNTING CLEARANCE LIGHTS



NON-OIL TIGHT ASSEMBLIES

A Series 32-3101. 115-volt. Black phenolic; brass. Faceted lens. Candelabra base. Less S6 lamp. Underwriter's Laboratories Component-Program Recognized.

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 7928	32-3101-0431-302	Red	1.46	1.33	1.22	1.11	1.02	.94
60 D 7929	32-3101-0432-302	Green	1.46	1.33	1.22	1.11	1.02	.94
60 D 7930	32-3101-0433-302	Amber	1.46	1.33	1.22	1.11	1.02	.94
60 D 7933	32-3101-0434-302	Blue	1.46	1.33	1.22	1.11	1.02	.94
60 D 7932	32-3101-0435-302	White	1.46	1.33	1.22	1.11	1.02	.94
60 D 7931	32-3101-0437-302	Clear	1.46	1.33	1.22	1.11	1.02	.94

D Series 32-2901. Enclosed lamp. Convex lens; frosted back. Solid brass. Underwriter's Laboratories Component-Program Recognized. †Translucent, unfrosted. Less S6 lamp. 6" leads. Friction-fit chromed cap.

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 7934	32-2901-0111-302	Red	1.74	1.59	1.45	1.32	1.21	1.11
60 D 7935	32-2901-0112-302	Green	1.74	1.59	1.45	1.32	1.21	1.11
60 D 7936	32-2901-0113-302	Amber	1.74	1.59	1.45	1.32	1.21	1.11
60 D 7937	32-2901-0117-302	Clear†	1.74	1.59	1.45	1.32	1.21	1.11
60 D 7866	32-2901-0135-302	White	1.74	1.59	1.45	1.32	1.21	1.11

OIL-TIGHT ASSEMBLIES

B C Series 103-3101. Use S6 Candelabra screw base lamp. Glass lens gives 180° light spread. Assembly includes Gasket for oil and water tight seal. 1⅜" center-to-center spacing. †Torpedo faceted lens. ‡Frosted-back dome lens.

Lens Color	Torpedo Lens (Fig. B)† Stock No.	Mfr's Type	Dome Lens†(Fig. C)‡ Stock No.	Mfr's Type
Red	60 D 8178	103-3101-1331-403	60 D 8185	103-3101-1211-403
Green	60 D 8179	103-3101-1332-403	60 D 8186	103-3101-1212-403
Amber	60 D 8180	103-3101-1333-403	60 D 8187	103-3101-1213-403
White	60 D 8181	103-3101-1335-403	60 D 8188	103-3101-1235-403

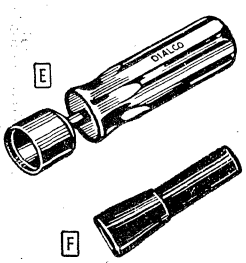
1-9.....Each 2.64 10-24....Each 2.40 25-99....Each 2.20
100-249...Each 2.00 250-249..Each 1.84 500-999..Each 1.70

B C Series 103-3502. Accepts S6 bayonet base lamp. Glass lens gives light spread of 180°. 1⅜" center-to-center spacing. Includes gasket for water and oil tight seal.

Lens Color	Torpedo Lens (Fig. B)† Stock No.	Mfr's Type	Dome Lens (Fig. C)‡ Stock No.	Mfr's Type
Red	60 D 8192	103-3502-1331-403	60 D 8199	103-3502-1211-403
Green	60 D 8193	103-3502-1332-403	60 D 8200	103-3502-1212-403
Amber	60 D 8194	103-3502-1333-403	60 D 8201	103-3502-1213-403
White	60 D 8195	103-3502-1335-403	60 D 8202	103-3502-1235-403

1-9.....Each 2.77 10-24....Each 2.53 25-99....Each 2.31
100-249...Each 2.10 250-499..Each 1.93 500-999..Each 1.78

DIALCO WRENCHES AND PILOT BULB REMOVERS



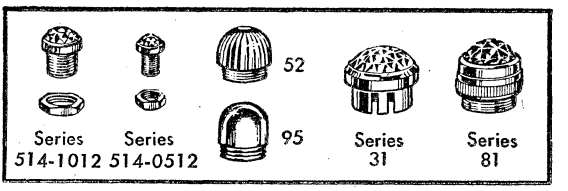
E 506-0375 Wrench. For installation of series 913 switches. For 64 D.P. ST. Knurl, Class III.
60 D 9053.....4.08

E 506-0500 Wrench. Mounting wrench for series 928 indicator lights and series 513 switches.
60 D 7009.....4.08

F 506-0045 Remover. For convenient installation and removal of T-3 1/4 and S6 lamps. Made of high-grade rubber for solid grip.
60 D 8506.....26

F 506-0073 Remover. Has two hollow ends that engage lamps tightly. One end for T-3¼ bulbs, the other for T-4½ bulbs. High-grade rubber.
60 D 7912.....26

REPLACEMENT LENS CAPS AND ACCESSORIES



SERIES 514-1012, 514-0512 ASSEMBLIES

Have ⅜" long threaded shanks; require 11/16" behind mounting panel. Require 11/16", 7/16", 3/32" diameter mounting holes. Maximum outside diameter, 1012, ½"; 0512, 11/32".

Stock No.	Mfr's Type	Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 8018	514-1012-2131-102	Red	.18	.16	.14	.13	.12	.11
60 D 8019	514-1012-2132-102	Green	.18	.16	.14	.13	.12	.11
60 D 8020	514-1012-2133-102	Amber	.18	.16	.14	.13	.12	.11
60 D 8023	514-0512-2131-102	Red	.17	.15	.14	.12	.11	.10
60 D 8024	514-0512-2132-102	Green	.17	.15	.14	.12	.11	.10
60 D 8025	514-0512-2133-102	Amber	.17	.15	.14	.12	.11	.10

SERIES 52 AND 95 REPLACEMENT LENS CAPS

Plastic replacement lens caps have threaded base, provide 180° light dispersion. Series 52 replaces types 520408 and 521308. Series 95 replaces types 950408, 951308, 952208, 959108, and 959163. Available in six colors.

Color	Stock No.	Type 52	Stock No.	Type 95	EACH 1-9	10-24	25-99	100-249	250-499	500-999
Red	60 D 8034	-0991	60 D 8028	-0931	.19	.18	.17	.16	.15	.14
Green	60 D 8035	-0992	60 D 8029	-0932	.19	.18	.17	.16	.15	.14
Amber	60 D 8036	-0993	60 D 8030	-0933	.19	.18	.17	.16	.15	.14
Blue	60 D 8037	-0994	60 D 8031	-0934	.19	.18	.17	.16	.15	.14
White	60 D 8039	-0995	60 D 8033	-0935	.19	.18	.17	.16	.15	.14
Clear	60 D 8038	-0997	60 D 8032	-0937	.19	.18	.17	.16	.15	.14

SERIES 31 POLISHED CHROME ASSEMBLIES

Polished chrome assemblies for panel mounting open assemblies; use with series 502-3228 and 31-3101. Convex type has frosted back for uniform light diffusion. *Convex. †Faceted.

Stock No.	Mfr's Type 31	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 7999	-0111-300*	Red	.62	.58	.54	.50	.46	.43
60 D 8000	-0112-300*	Green	.62	.58	.54	.50	.46	.43
60 D 8001	-0113-300*	Amber	.62	.58	.54	.50	.46	.43
60 D 8005	-0117-300*	Clear	.62	.58	.54	.50	.46	.43
60 D 8006	-0431-300†	Red	.62	.58	.54	.50	.46	.43
60 D 8007	-0432-300†	Green	.62	.58	.54	.50	.46	.43
60 D 8008	-0433-300†	Amber	.62	.58	.54	.50	.46	.43
60 D 8012	-0437-300†	Clear	.62	.58	.54	.50	.46	.43

MIL-SPEC SERIES 81 REPLACEMENT LENS CAPS

Replacement lens cap assemblies with threaded shank, 180° light dispersion for series 81-0410 and 81-1310. Have black nickel finish to meet requirements of MIL-L-3661A.

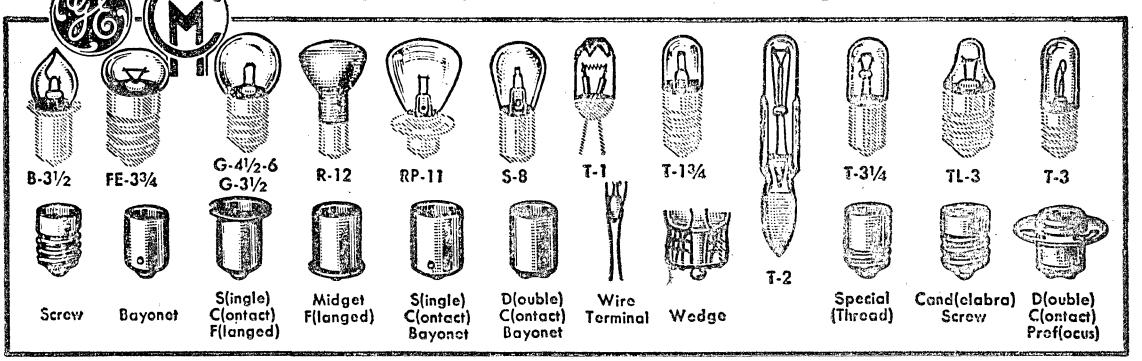
Stock No.	Mfr's Type 81-	Lens Color	EACH 1-9	10-24	25-99	100-249	250-499	500-999
60 D 7776	0111-200	Red	.38	.35	.33	.31	.29	.27
60 D 7777	0112-200	Green	.38	.35	.33	.31	.29	.27
60 D 7779	0113-200	Amber	.38	.35	.33	.31	.29	.27
60 D 7637	0117-200	Clear	.38	.35	.33	.31	.29	.27
60 D 7778	0135-200	White	.38	.35	.33	.31	.29	.27

SERIES 81 REPLACEMENT LENS CAPS

Replacement lens caps have threaded shanks for use with series 81-9110, 81-1310 and 502-8140-100 indicator lights. Replacement assembly includes white nickel lens holder. Translucent ½" diameter smooth-faced convex lens provides wide-angle light dispersion; has frosted back for uniform diffusion.

Stock No.	Mfr's Type 81-	Lens Color	EACH 1-9	10-24	25-99	100-149	250-499	500-999
60 D 8040	0111-100	Red	.28	.26	.24	.23	.22	.21
60 D 8041	0112-100	Green	.28	.26	.24	.23	.22	.21
60 D 8042	0113-100	Amber	.28	.26	.24	.23	.22	.21
60 D 8044	0135-100	White	.28	.26	.24	.23	.22	.21

Lamps by G.E. and Chicago-Miniature



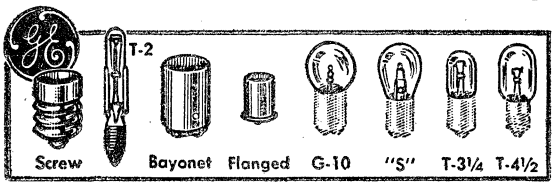
WE WILL SUPPLY MINIATURE AND SUBMINIATURE LAMPS BY G.E. OR CHICAGO-MINIATURE, WHICHEVER ARE IN STOCK WHEN YOUR ORDER IS FILLED

Wide variety of miniature and subminiature incandescent lamps for such applications as aircraft, annunciators, appliances, automotive, bicycles, coin machines, flashlights, marine, medical, indicators, signs and house numbers, radio and TV, telephone, toys and novelties. Offer extra-long life, reliability, low cost, high light output for amount of current consumed, low operating cost. For illustrations of bulb and base styles referred to in table, and explanation of abbreviations, refer to Figure above.

Stock No.	Mfr's Type	Volts	Amps	Base	Bulb Style	PER PKG. of 10		
						1-9	10-49	50-Up
60 D 7300	PR-2	2.4	.50	S.C. F.	B-3½	1.30	1.00	.90
60 D 7301	PR-3	3.6	.50	S.C. F.	B-3½	1.30	1.00	.90
60 D 7302	PR-4	2.3	.27	S.C. F.	B-3½	1.30	1.00	.90
60 D 7303	PR-6	2.47	.30	S.C. F.	B-3½	1.30	1.00	.90
60 D 7305	PR-12	5.95	.50	S.C. F.	B-3½	1.30	1.00	.90
60 D 7306	PR-13	4.75	.50	S.C. F.	B-3½	1.30	1.00	.90
60 D 7367	6	6.4	3.0	D.C. Bayonet	S-8	3.60	2.90	2.50
60 D 7307	12	6.3	.15	Min. 2-pin	G-3½	1.70	1 40	1.20
60 D 7308	13	3.7	.30	Screw	G-3½	1.10	.90	.70
60 D 7309	14	2.5	.30	Screw	G-3½	1.10	.90	.70
60 D 7310	24E	24	.035	Tel. Slide	T-2	4.40	3.60	3.10
60 D 7369	24X	24	.035	Tel. Slide	T-2	4.40	3.60	3.10
60 D 7312	39	6.3	.36	Bayonet	T-3¼	2.01	1.82	.....
60 D 7313	40	6.8	.15	Screw	T-3¼	.90	.70	.60
60 D 7314	41	2.5	.50	Screw	T-3¼	1.70	1.40	1.20
60 D 7315	43	2.5	.50	Bayonet	T-3¼	1.70	1.40	1.20
60 D 7366	44	6.3	.25	Bayonet	T-3¼	.90	.70	.60
60 D 7316	45	3.2	.35	Bayonet	T-3¼	1.40	1.20	1.00
60 D 7317	46	6.3	.25	Screw	T-3¼	1.00	.80	.70
60 D 7318	47	6.3	.15	Bayonet	T-3¼	.90	.70	.60
60 D 7319	48	2.0	.06	Screw	T-3¼	1.70	1.40	1.20
60 D 7320	48C	48	.035	Tel. Slide	T-2	4.80	3.90	3.30
60 D 7321	49	2.0	.06	Bayonet	T-3¼	1.40	1.20	1.00
60 D 7322	50	7.5	1 c.p.	Screw	G-3½	1.00	.80	.70
60 D 7323	51	7.5	1 c.p.	Bayonet	G-3½	.90	.70	.60
60 D 7370	52	14.4	.10	Screw	G-3½	2.20	1.80	1.50
60 D 7324	53	14.4	.12	Bayonet	G-3½	.90	.70	.60
60 D 7325	55	7.0	2 c.p.	Bayonet	G-4½	.90	.70	.60
60 D 9432	55C	55	.050	Tel. Slide	T-2	4.80	3.90	3.30
60 D 7326	57	14	2 c.p.	Bayonet	G-4½	.90	.70	.60
60 D 7327	63	6-8	3 c.p.	S.C. Bayonet	G-6	1.50	1.20	1.10
60 D 7328	67	13.5	4 c.p.	S.C. Bayonet	G-6	1.10	.90	.80
60 D 7329	67K	13.5	4 c.p.	Cand. Screw	G-6	3.50	2.80	2.40
60 D 7330	81	6-8	6 c.p.	S.C. Bayonet	G-6	1.60	1.30	1.10
60 D 7331	82	6-8	6 c.p.	D.C. Bayonet	G-6	1.60	1.30	1.10
60 D 9707	93	12.8	1.04	S.C. Bayonet	S-8	2.00	1.60	1.40
60 D 7332	112	1.2	.22	Screw	TL-3	1.10	.90	.70
60 D 6737	137	6.3	.25	Min. Bay.	G-3½	1.40	1.10	.90
60 D 6738	157	5.8	1.1	Screw	G-6	6.32	5.91	.....
60 D 7334	158	12	.24	Wedge	T-3¼	1.20	1.00	.90
60 D 7335	159	6.3	.15	Wedge	T-3¼	1.70	1.40	1.20
60 D 7336	222	2.2	.25	Screw	TL-3	1.10	.90	.70
60 D 7337	223	2.2	.25	Screw	FE-3¾	1.60	1.30	1.10
60 D 7338	224	2.15	.22	Special	TL-2¾	1.40	1.20	1.00
60 D 7339	233	2.3	.27	Screw	G-3½	1.60	1.30	1.10
60 D 6739	240	6.3	.36	Bayonet	T-3¼	1.80	1.40	1.20
60 D 7340	248	2.5	.80	Screw	G-5½	2.20	1.80	1.50
60 D 7373	259	6.3	.25	Wedge	T-3¼	1.30	1.10	.90
60 D 6740	307	28	.67	S.C. Bayonet	S-8	5.20	4.20	3.60
60 D 7341	313	28	.17	Bayonet	T-3¼	2.00	1.70	1.40
60 D 6741	324	3	.19	Wire Term.	T-1¾	4.10	3.40	2.90
60 D 7342	327	28	.04	Mid. Flanged	T-1¾	4.30	3.50	3.00
60 D 7343	328	6	.20	Mid. Flanged	T-1¾	3.40	2.70	2.30
60 D 7374	330	14	.08	Mid. Flanged	T-1¾	5.70	4.60	4.00
60 D 7145	331	1.35	.06	Mid. Flanged	T-1¾	6.40	5.20	4.50
60 D 7146	334	28.0	.04	Mid. Flanged	T-1¾	5.30	4.30	3.70
60 D 6742	337	6	.20	S.C Mid. F.	T-1¾	11.40	9.30	7.90
60 D 7147	338	2.7	.06	Mid. Flanged	T-1¾	5.80	4.70	4.00
60 D 7375	344	10	.014	Mid. Flanged	T-1¾	9.20	7.40	6.40

Stock No.	Mfr's Type	Volts	Amps	Base	Bulb Style	PER PKG. of 10		
						1-9	10-49	50-Up
60 D 7376	345	6	.04	Mid. Flanged	T-1¾	10.10	8.20	7.00
60 D 6743	346	18	.04	SC. Mid F.	T-1¾	8.30	6.70	5.70
60 D 7377	363	14	.20	Bayonet	G-3½	1.50	1.20	1.00
60 D 6744	370	18	.04	S.C. Midget	T-1¾	9.90	8.00	6.80
60 D 6748	375	3	.015	S.C. Mid. F.	T-1¾	16.40	13.30	11.40
60 D 7400	380	6.3	.04	Mid. Flanged	T-1¾	14.00	11.40	9.70
60 D 7401	381	6.3	.20	Mid. Flanged	T-1¾	7.60	6.20	5.30
60 D 7402	382	14	.08	Mid. Flanged	T-1¾	8.70	7.00	6.00
60 D 6745	386	14	.08	Mid. Grooved	T-1¾	10.00	8.10	6.90
60 D 6746	387	28	.04	Mid. Flanged	T-1¾	5.50	4.50	3.80
60 D 6747	388	28	.04	Mid. Grooved	T-1¾	10.10	8.20	7.00
60 D 7378	405	6.5	.50	Screw	G-4½	1.77	1.60	.....
60 D 7379	406	2.6	.30	Screw	G-4½	1.41	1.30	.....
60 D 7380	407	4.9	.30	Screw	G-4½	1.60	1.30	1.11
60 D 7344	425	5	.50	Screw	G-4½	1.46	1.19	1.01
60 D 7346	432	18.0	.25	Screw	G-4½	1.90	1.50	1.30
60 D 7347	433	18	.25	Bayonet	G-4½	1.90	1.60	1.30
60 D 7383	509K	24	.18	Cand. Screw	G-6	2.70	2.20	1.90
60 D 7393	680	5	.060	Wire Term.	T-1	19.70	16.00	13.70
60 D 7394	682	5	.060	Sub-Mid. F.	T-1	25.00	20.30	17.30
60 D 7395	683	5	.060	Wire Term.	T-1	19.70	16.00	13.70
60 D 7396	685	5	.060	Sub-Mid. F.	T-1	25.00	20.30	17.30
60 D 7397	715	5	.115	Wire Term.	T-1	19.70	16.00	13.70
60 D 7403	755	6.3	.15	Min. Bay.	T-3¼	2.10	1.70	1.50
60 D 7404	756	14	.08	Min. Bay.	T-3¼	2.90	2.30	2.00
60 D 7405	757	28	.08	Bayonet	T-3¼	3.10	2.60	2.20
60 D 6600	1133	6.2	3.91	S.C. Bayonet	RP-N	3.50	2.90	2.40
60 D 6749	1252	24	.23	D.C. Bayonet	G-6	3.60	2.90	2.50
60 D 7384	1383	12	20w	S.C. Bayonet	R-12	19.20	15.60	13.30
60 D 7349	1445	18	.15	Bayonet	G-3½	1.20	1.00	.80
60 D 7350	1446	12	.20	Screw	G-3½	1.90	1.60	1.30
60 D 7351	1447	1.80	.15	Screw	G-3½	1.40	1.10	1.00
60 D 7353	1458	20	.25	Bayonet	G-5	2.20	1.80	1.60
60 D 7385	1474	14	.17	Screw	T-3	3.10	2.50	2.10
60 D 7354	1477	24	.17	Screw	T-3	4.30	3.50	3.00
60 D 7355	1487	12-16	.20	Screw	T-3¼	1.70	1.40	1.20
60 D 7356	1488	14	.15	Bayonet	T-3¼	1.80	1.50	1.30
60 D 7533	1490	3.2	0.16	Bayonet	T-3¼	1.40	1.10	.90
60 D 7357	1493	6.5	2.75	D.C. Bayonet	S-8	8.40	6.80	5.90
60 D 7386	1630	6.5	2.75	D.C. Pref.	S-8	11.20	9.10	7.80
60 D 7359	1768	6	.20	Midget Screw	T-1¾	6.00	4.90	4.20
60 D 7388	1769	2.5	.20	Midget Screw	T-1¾	7.30	5.90	5.10
60 D 7360	1813	14.4	.10	Min. Bayonet	T-3¼	1.80	1.50	1.30
60 D 7361	1815	12-16	.20	Min. Bayonet	T-3¼	1.60	1.30	1.10
60 D 7389	1816	13	.33	Min. Bayonet	T-3¼	1.50	1.20	1.00
60 D 7362	1819	28	.04	Min. Bayonet	T-3¼	2.40	1.90	1.70
60 D 7363	1820	28	.10	Min. Bayonet	T-3¼	2.10	1.70	1.50
60 D 7390	1822	36	.10	Min. Bayonet	T-3¼	4.30	3.50	3.00
60 D 7391	1828	37.5	.05	Min. Bayonet	T-3¼	4.60	3.70	3.20
60 D 7364	1829	28	.07	Min. Bayonet	T-3¼	2.30	1.90	1.60
60 D 7392	1835	55	.05	Min. Bayonet	T-3¼	5.10	4.20	3.60
60 D 7365	1847	6.3	.15	Min. Bayonet	T-3¼	1.20	1.00	.80
60 D 7596	1869	10	.014	Wire Term.	T-1¾	7.60	6.20	5.30
60 D 7542	1891	12.0	0.24	Min. Bayonet	T-3¼	1.10	.90	.80
60 D 7543	1892	14.0	0.12	Min. Bayonet	T-3¼	1.70	1.40	1.20
60 D 7399	2128	3	.0125	Wire Term.	T-1	21.80	17.70	15.10
60 D 7406	2180	6.3	.04	Wire Term.	T-1¾	7.20	5.80	5.00
60 D 7407	2181	6.3	.20	Wire Term.	T-1¾	4.00	3.20	2.80
60 D 7408	2182	14	0.8	Wire Term.	T-1¾	4.30	3.50	3.00

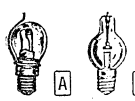
Miniature Lamps



G.E. MINIATURE NEON-GLOW INDICATOR LAMPS

For 105-600 V, except ‡210-600 V. §DC only. Screw types have series resistor in base for 105-125 V; others require external resistor. In Base column of table, below Sk. means skirted; D.C., double contact; S.C., single contact; Mid. Flange, midget flanged; Bay., bayonet; Cand., candelabra. *AC starting voltage, DC starting V 40% higher. †High brightness. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Watts	*AC V	Bulb Style	Base	Box of 10
60 D 8516	A1B	1/17	65	T-2	Wire Term.	1.26
60 D 8517	†A1C	1/17	95	T-2	Wire Term.	1.26
60 D 8518	A1A (NE-2)	1/17	65	T-2	Wire Term.	.90
60 D 8519	C7A (NE-2D)	1/15	65	T-2	S.C. Mid. Flange	7.02
60 D 8520	A9A (NE-2E)	1/10	65	T-2	Wire Term.	.90
60 D 8521	†C2A (NE-2H)	1/5	....	T-2	Wire Term.	.89
60 D 8522	†C9A (NE-2J)	1/5	105	T-2	S.C. Mid. Flange	7.02
60 D 8523	B4A (NE-7)	¼	55	T-4½	Wire Term.	6.21
60 D 8524	7AA (NE-16)	¼	§67	T-4½	D.C. Bay. Cand.	5.67
60 D 8525	B5A (NE-17)	¼	55	T-4½	D.C. Bay. Cand.	7.74
60 D 8526	B6A (NE-21)	¼	55	T-4½	S.C. Bay. Cand.	8.10
60 D 8527	J5A (NE-30)	1	60	G-10	Edison	10.26
60 D 8528	L5A (NE-32)	1	60	G-10	D.C. Bay. Cand.	10.26
60 D 8529	R2A (NE-34)	2	60	S-14	Edison	15.80
60 D 8530	R6A (NE-40)	3	60	S-14	Edison	23.40
60 D 8431	R9A (NE-42)	3	60	S-14	Sk. D.C. Bay. C.	22.68
60 D 8532	B7A (NE-45)	¼	65	R-5½	Cand. Screw	7.29
60 D 8433	B9A (NE-48)	¼	65	T-4½	D.C. Bay. Cand.	6.03
60 D 8534	B1A (NE-51)	1/25	65	T-3¼	S.C. Bay. Min.	1.80
60 D 8535	†B2A (NE-51H)	1/7	....	T-3¼	S.C. Bay. Min.	1.98
60 D 8536	‡J9A (NE-56)	1	60	S-11	Edison	9.52
60 D 8537	F3A (NE-57)	¼	65	T-4¼	Cand. Screw	7.52
60 D 8538	‡F4A (NE-58)	½	65	T-4½	Cand. Screw	7.20
60 D 8929	F5A (NE-66)	1¼	65	T-4½	Cand. Screw	11.25
60 D 8930	K1A (NE-84)	¼	95	T-2	Special Tel. Slide	5.80



TUNGAR BULBS

Argon and argon-mercury filled tungar bulbs for rectification of AC to DC in battery chargers, etc. *For use in movie projectors. †Amps. Av. shpg. wt., 1¼ lbs.

Stock No.	Mfr's Type	Fig.	†	EACH	Stock No.	Mfr's Type	Fig.	†	EACH
60 D 7592	12X825	....	2	7.90	60 D 7595	189048	B	6	8.05
60 D 7593	206501	A	2	7.95	60 D 7597	189049	B	6	8.05
60 D 7594	20X672	....	5	10.85	60 D 7598	*217283	B	15	14.95

MINIATURE NEON-GLOW CIRCUIT CONTROL LAMPS

T-2 style bulbs; have wire leads. Radioactive additive reduces breakdown voltage in darkness. Tinned 1" leads for easy soldering. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	DC Start Voltage	Design Current DC mA	BOX OF 10
60 D 7950	5AB (NE-23)	60-90	.3	1.44
60 D 7951	5AG-A (NE-76)	68-76	.4	4.50
60 D 7953	5AH (NE-83)	60-100	10.0	1.80
60 D 7954	5AJ (NE-86)	55-90	1.5	1.44
60 D 7956	4AC (NE-97)	110-140	.5	2.80

ARGON GLOW LAMPS

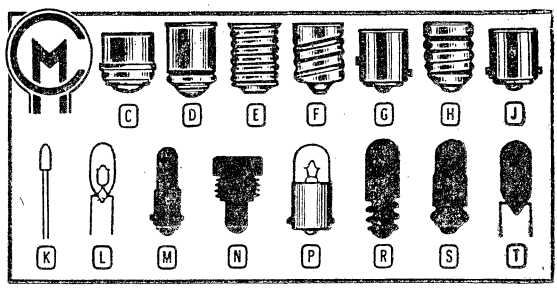
Long-life lamps emit pale blue-violet light, near-ultraviolet radiation. Clear glass bulb. Type AR-3 has average life of 1000 hours. Type AR-1 has average life of 3000 hours. For 110-120 volts. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Watts	Bulb Style	Base	BOX of 10
60 D 8541	J2A (AR-3)	¼	T-4½	Candelabra Screw	7.65
60 D 8542	W1A (AR-1)	2	S-14	Standard Edison	17.10

HIGH-OUTPUT LENS-END MINIATURE LAMPS

Focused beam, ideal for activating photoconductors in card or tape operations. 0.35 amp at 2.5 V, AC-DC. Midget grooved base. Overall diameter, .250". 11/16" long. Wt., 3 oz.

Stock No.	Type	Style	1-9, EA.	10-99, EA.	100-Up, EA.
60 D 7957	253	GTL-1¾	2.66	1.62	1.43
60 D 7958	253X	GTL-1¾	3.52	2.17	1.92
60 D 7959	261	GTL-1¾	7.67	4.63	4.11



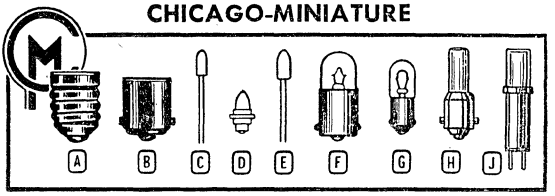
CHICAGO-MINIATURE CM-8 SERIES, SUBMINIATURE AND MIL SPEC LAMPS

The lamps listed in this catalog are the more popular types available from Chicago Miniature. All AS Types are aged and selected for critical electrical applications. To order Chicago Miniature Lamps, specify lamp numbers listed and quantities desired. If your application requires a lamp not shown, please contact your local Allied Electronics facility.

Stock No.	Mfr's Type	Fig.	Volts	Amps	Base	PER PKG. of 10 1-9	10-49	50-Up
60 D 7123	323	N	3.0	.19	Per Mil. 25236-323	8.90	7.20	6.10
60 D 7125	327 AS-15	P	28.0	.04	Per Mil. 25237-327	14.30	11.60	9.90
60 D 7130	328L	P	6.0	.20	Per Mil. 25237-328	11.60	9.40	8.00
60 D 7145	331	P	1.35	.06	Midget Flanged	6.40	5.20	4.50
60 D 7537	333	E	28.0	.04	Midget Screw	10.70	9.40	.....
60 D 7146	334	S	28.0	.04	Midget Grooved	5.30	4.30	3.70
60 D 7126	335	R	28.0	.04	Per Mil. 15612-2	10.10	8.20	7.00
60 D 7530	399	E	28.0	.04	Midget Screw	10.10	8.20	7.00
60 D 7160	634	L	6.0	.20	Wire Terminal	7.20	5.90	5.00
60 D 7487	680	.....	5.0	.06	Wire Terminal	19.70	16.00	13.70
60 D 7489	680AS15	.....	5.0	.06	Wire Terminal	23.00	18.60	15.90
60 D 7492	682	C	5.0	.06	Sub-Midget Flanged	25.00	20.30	17.30
60 D 7493	682AS15	C	5.0	.06	Sub-Midget Flanged	28.60	23.20	19.80
60 D 7494	683	.....	5.0	.06	Wire Terminal	19.70	16.00	13.70
60 D 7495	683AS15	.....	5.0	.06	Wire Terminal	23.00	18.60	15.90
60 D 7496	685	C	5.0	.06	Sub-Midget Flanged	25.00	20.30	17.30
60 D 7497	685AS15	C	5.0	.06	Sub-Midget Flanged	28.60	23.20	19.80
60 D 7499	715	.....	5.0	.115	Wire Terminal	19.70	16.00	13.70
69 D 7509	715AS15	.....	5.0	.115	Wire Terminal	23.00	18.60	15.90
60 D 7510	718	C	5.0	.195	Sub-Midget Flanged	25.00	20.30	17.30
60 D 7511	718AS15	C	5.0	.115	Sub-Midget Flanged	28.60	23.20	19.80
60 D 7149	1705	T	14.0	.08	Wire Terminal	4.30	3.50	3.00
60 D 7150	1730	T	6.0	.04	Wire Terminal	7.10	5.80	5.00
60 D 7151	1764	T	28.0	.04	Wire Terminal	3.60	2.90	2.50
60 D 7137	1768L	R	6.0	.20	Per Mil. 15612-1	17.20	13.90	11.90
60 D 7152	1775	R	6.3	.075	Midget Screw	7.30	5.90	5.10
60 D 7153	1784	T	6.0	.20	Wire Terminal	4.80	3.90	3.30
60 D 7154	1784AS10	T	6.0	.20	Wire Terminal	12.20	10.80	.....
60 D 7155	1859	T	10.0	.015	Wire Terminal	6.99	6.16	.....
60 D 7512	6803	C	5.0	.060	Wire Terminal	20.70	16.80	14.40
60 D 7513	6833	C	5.0	.060	Wire Terminal	20.70	16.80	14.40
60 D 7514	8299	E	2.5	.35	Midget Screw	19.00	15.50	13.20
60 D 7156	8623	N	28.0	.04	Threaded Knurled	14.60	11.90	10.10
60 D 7138	8627	L	28.0	.04	Per Mil. 28135-1	9.00	7.30	6.30
60 D 7159	8632	M	28.0	.04	Midget Flanged	14.60	11.90	10.10
60 D 7165	8666	K	5.0	.08	Wire Terminal	20.70	16.80	14.40
60 D 7521	CM8-60	J	6.0	5.5	S.C. Bayonet	8.20	6.60	5.70
60 D 7522	CM8-108	.....	6.15	4.45	D.C. Bayonet	60.20	48.90	41.80
60 D 7523	CM8-109	J	6.0	1.0	S.C. Bayonet	21.80	17.70	15.10
60 D 7524	CM8-220	G	6.3	.33	Min. Bayonet	34.70	28.20	24.10
60 D 7525	CM8-255	F	2.75	.32	Min. Screw Base	30.20	27.70	.....
60 D 7526	CM8-282	.....	3.8	.33	Wire Terminal	24.30	19.70	16.90
60 D 7527	CM8-308	J	28.0	.72	D.C. Bayonet	9.80	8.70	.....
60 D 7528	CM8-363	.....	28.0	.04	Wire Terminal	7.00	5.70	4.80
60 D 7529	CM8-373	D	2.5	.35	Midget Groove	13.40	10.90	9.30
60 D 7531	CM8-428	.....	5.0	.18	Midget Flanged	18.70	15.20	13.00
60 D 7532	CM8-374	.....	2.5	.35	Wire Terminal	11.90	9.70	8.30
60 D 7534	CM8-428L	.....	6.0	.22	Midget Flanged	18.70	15.20	13.00
60 D 7535	CM8-503	G	6.3	.35	Min. Bayonet	28.10	22.80	19.50
60 D 7536	CM8-610	.....	6.3	.20	Wire Terminal	6.80	5.50	4.70
60 D 7538	CM8-628	.....	6.0	.20	Midget Flanged	12.60	10.20	8.70
60 D 7158	CM8-631	M	1.35	.06	Midget Flanged	8.80	7.20	6.10
60 D 7539	CM8-637	.....	3.0	.19	Midget Flanged	15.00	12.10	10.40
60 D 7540	CM8-640	.....	14.0	.08	Wire Terminal	6.50	5.20	4.50
60 D 7164	CM8-661	L	6.0	.04	Wire Terminal	10.40	8.40	7.20
60 D 7541	CM8-715F1	.....	5.0	.125	Wire Terminal	20.40	16.60	14.20
60 D 7544	CM8-740	L	3.8	.38	Wire Terminal	29.60	24.00	20.50
60 D 7545	CM8-750	L	6.3	.19	Wire Terminal	24.50	19.90	17.00
60 D 7546	CM8-805	L	5.0	.06	Wire Terminal	7.70	6.20	5.30
60 D 7547	CM8-806	L	5.0	.06	Wire Terminal	7.70	6.20	5.30
60 D 7548	CM8-807	L	5.0	.115	Wire Terminal	7.70	6.20	5.30
60 D 7549	CM8-967	G	120	.02	Min. Bayonet	8.30	6.80	5.80

Lamps by G.E. and Chicago-Miniature

CHICAGO-MINIATURE



STANDARD VOLTAGE LAMPS

Stock No.	Mfr's Type	Fig.	Volts	Watts	Bulb Style	Per PKG. of 10		
						1-9	10-49	50-Up
60 D 7475	3S6/5	A	120	3	S-6	3.70	3.00	2.60
60 D 7477	6S6	A	115	6	S-6	2.20	1.80	1.50
60 D 7479	6S6	A	145	6	S-6	4.40	3.60	3.10
60 D 7480	6S6/DC	B	120	6	S-6	3.20	2.60	2.20
60 D 7481	6T4½/1	A	115-125	6	T-4½	6.86	5.50	4.70
60 D 7482	7C7	A	115-125	7	C-7	2.20	1.80	1.50
60 D 7483	10C7	A	115-125	10	C-7	2.70	2.20	1.90
60 D 7484	10C7DC	B	115-125	10	C-7	2.90	2.40	2.00
60 D 7485	10S6/10	A	230	10	S-6	5.10	4.10	3.50

LONG LIFE LAMPS

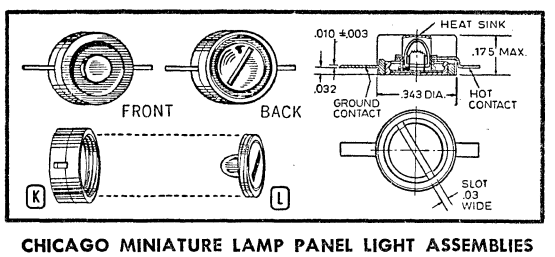
M.F., midget flanged. W.T., wire terminal. S.F., submidget flanged. M., Bay., miniature bayonet. Av. wt., 6 oz.

Stock No.	Mfr's Type	Fig.	Volts	Amps	Base	Bulb Style	PER PKG. of 10		
							1-9	10-49	50-Up
60 D 9406	327LSV	F	28.0	.06	M.F.	T-1¾	10.50	8.50	7.30
60 D 9411	713	E	5.0	.075	W.T.	T-1	19.70	16.00	13.70
60 D 9412	714	D	5.0	.075	S.F.	T-1	25.00	20.30	17.30
60 D 9415	7153	C	5.0	.115	W.T.	T-¾	20.70	16.80	14.40
60 D 9417	CM8-801	G	5.0	.06	M., Bay.	T-3¼	21.50	19.05	.....
60 D 9418	CM8-802	G	5.0	.06	M., Bay.	T-3¼	21.50	19.05	.....
60 D 9419	CM8-803	G	5.0	.104	M., Bay.	T-3¼	21.50	19.05	.....
60 D 9421	CM-1866	G	6.3	.25	M., Bay.	T-3¼	1.34	1.18	.....

SMALLEST 5000-HOUR 120-VOLT LAMP

High reliability lamps. Small size, long life (5000-hr.). With bayonet or cartridge base (see table below). Aerospace and MS requirements. 120 V, .025 A. Flat-top bulb. Av. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Base	PER PKG. of 10		
				1-9	10-49	50-Up
60 D 9427	CM8-967	H	Bayonet	8.30	6.80	5.80
60 D 9428	CML-03026	J	Cartridge	12.00	10.60	.....



CHICAGO MINIATURE LAMP PANEL LIGHT ASSEMBLIES

Consists of two major parts—a colored filter and lamp cap. Lamp cap threads into filter, illuminating panel with one footlambert surface brightness from 2⅜" dia. circle using clear filter, 5 V 60 mA lamp cap; or red filter, 5-V 115 mA cap. Minimizes panel lamps required. Easy to install, service. Meets MIL-P-7788. Tol: *Amps ±10%; MIL Spec. candle power ±15%.

[K] PC MOUNTED FLYING SAUCER LAMP ASSEMBLY

Stock	Type CM-	A*	MIL Spec cd	Life Hrs.	1-199 Ea.
60 D 6094	23-21-01	.060	.030	100 M	3.25
60 D 6095	23-21-02	.060	.053	100 M	3.25
60 D 6096	23-21-03	.075	.090	25 M	3.25
60 D 6097	23-21-04	.115	.147	40 M	3.25

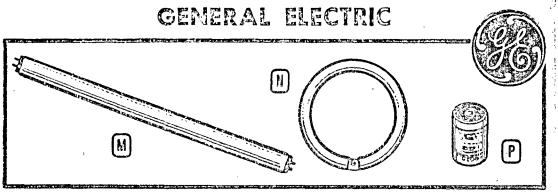
[L] FLYING SAUCER PC MOUNT FILTER ASSEMBLIES

Stock No.	Mfrs. Type No.	Color	1-199 Ea.
60 D 6091	CM-23-12-01	Red	2.70
60 D 6092	CM-23-12-02	Blue	2.70
60 D 6093	CM-23-12-03	Clear	2.70

FLYING SAUCER REAR MOUNT FILTER ASSEM. (Not illus.)

Stock No.	Mfrs. Type No.	Color	1-199 Ea.
60 D 6088	CM-23-11-01	Red	2.70
60 D 6089	CM-23-11-02	Blue	2.70
60 D 6090	CM-23-11-03	Clear	2.70

GENERAL ELECTRIC



[M] STANDARD FLUORESCENT TUBES

For bright, cool light. Have medium-size bi-pin base. All cool-white color. †T12 for regular or rapid-start service. *24 per package. May be burned in any position.

Stock No.	Mfr's Type	Watts	Size	Wt., Lbs.	PKG. OF 6	
					1-3	4-Up
60 D 6579 K	F15T8/CW	15	8"	½	6.90	5.65
60 D 6580 K	F30T8/CW	30	8"	½	7.80	6.31
60 D 6581 K	*F15T12/CW†	40	12"	½	27.60	22.56
60 D 6582 K	F20T12/CW†	40	12"	½	5.88	4.78
60 D 6583 K	F40CW	40	12"	½	6.30	5.05

[N] CIRCLINE FLUORESCENT TUBES

Designed and rated for operation in rapid-start circuits; will also attain full rated performance operating in conventional starter type circuits.

Stock No.	Mfr's Type	Watts	Size	Dia.	Wt., Lbs.	EACH	
						1-11	12-Up
60 D 6584	T9	22	8¼"	1⅛"	½	3.34	3.01
60 D 6585	T10	32	12"	1⅛"	½	3.34	3.01

[P] FLUORESCENT BALLASTS

Wide selection of high-quality power compensating ballasts for all popular fluorescent fixtures. ‡55-65% corrected at normal power factor. **90-100% corrected at high power Factor. ▪U.L. Recog. 105-125 V, 60 Hz AC. *Lamp watts. †For rapid-start lamps.

‡A-LAMP BALLAST

Stock No.	Mfr's Type	Watts*	Wt., Lbs.	EACH	
				1-9	10-Up
60 D 6567	L-120F	15/20	1	1.87	1.55
60 D 6568	L-140F	40	2	2.10	1.75
60 D 6569	LO-14-20-C	14, 15, 20	1	1.01	.92
60 D 6570	RLC-140	32, 40	2	3.05	2.46

‡2-LAMP BALLAST

60 D 6571	L-220F	20/20	2	2.66	2.14
60 D 6572	R-22-32	22/32	3	4.13	3.33

**2-LAMP BALLAST

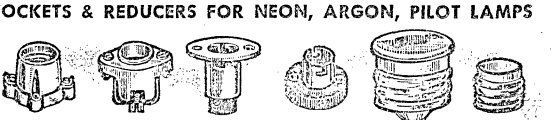
60 D 6573	S-240	40/40	3	6.41	5.18
60 D 6574	†RQM-2S40	40/40	3	5.67	4.60

[P] FLUORESCENT STARTERS

Designed to fit all standard fixtures. Made from the finest quality materials to exacting quality control standards to assure extended failure-free operation. Each pkg. contains two starters.

Stock No.	Mfr's Type	Watts	Wt., Oz.	PKG. OF 2	
				1-9	10-Up
60 D 6565	FS2	14, 15, 20	3	.45	.37
60 D 6566	FS4	30 or 40	3	.45	.37

SOCKETS & REDUCERS FOR NEON, ARGON, PILOT LAMPS



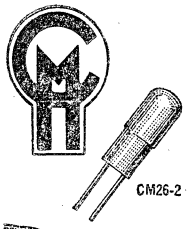
Figs. R, S, T, and W are sockets; other units are reducers. Reducer fits into socket to convert to more commonly used types of bulb bases. *With hard rubber insert in metal shell. Av. wt., 3 oz.

Stock No.	Fig.	Description	1-49, EA.	50-Up, EA.
60 D 7661	R	Edison socket	.24	.20
60 D 7662	R	Miniature screw socket	.18	.13
60 D 7663	S	Candelabra screw socket	.61	.46
60 D 7664	R	Candelabra screw socket	.18	.14
60 D 7665	T*	D.C. bay, candelabra socket	.40	.36
60 D 7666	W	D.C. bay, candelabra socket	.94	.85
60 D 7667	W	S.C. bay, candelabra socket	.90	.82
60 D 7668	X	Edison-to-Cand. reducer	.25	.19
60 D 7669	Y	Candelabra-to-Min. reducer	.18	.15
60 D 7670	Y	Intermediate-to-Cand. reducer	.11	.08

▪Recognized Under the Component Program of Underwriters' Laboratories, Inc

Chicago Miniature Lamp Indicators

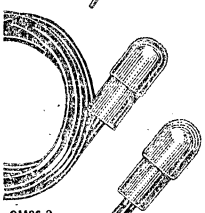
CM26 T-1 "MIGI-LITE" ULTRAMINIATURE INDICATOR LIGHTS

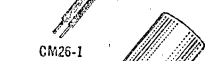


Contains a subminiature lamp sealed in a high temperature polycarbonate housing. Wide range of voltages. Low-cost commercial substitutes for MS25446 and MS90308 indicators. Terminals: CM26-1, #30 AWG tinned solid wire with PVC insulations; CM26-2, .020" nickel pins. CM26-3, #26 AWG stranded wire with PVC insulation. Max. panel thickness, 1/8". Mtg. hole, .185"-.190" dia. Final numbers in type no. indicate lamp voltage (see lamp table). With mounting clip. Specify color—white, red, amber, green, blue. ½ oz.

LAMP TABLE

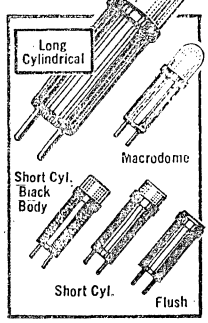
Lamp No.	Design Volts	Design Amps	Lamp No.	Design Volts	Design Amps
02	3.0	.0125	16	14.0	.065
05	5.0	.03	17	18.0	.026
19	5.0	.06	21	28.0	.02
20	5.0	.11	18	28.0	.024
14	10.0	.027	22	28.0	.04
15	12.0	.06			





Stock No.	Type CM26-	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 9050 C	1-00-02	2.06	1.75	1.55	1.39	1.24
60 D 9051 C	1-00-05	2.06	1.75	1.55	1.39	1.24
60 D 9052 C	1-00-14	2.06	1.75	1.55	1.39	1.24
60 D 9054 C	1-00-15	2.06	1.75	1.55	1.39	1.24
60 D 9055 C	1-00-16	2.06	1.75	1.55	1.39	1.24
60 D 9056 C	1-00-17	2.06	1.75	1.55	1.39	1.24
60 D 9057 C	1-00-18	2.06	1.75	1.58	1.39	1.24
60 D 9058 C	1-00-19	.78	.66	.59	.53	.47
60 D 9059 C	1-00-20	.78	.66	.59	.53	.47
60 D 9060 C	1-00-21	2.06	1.75	1.58	1.39	1.24
60 D 9061 C	1-00-22	2.06	1.75	1.58	1.39	1.24
60 D 9062 C	2-00-02	2.24	1.90	1.68	1.51	1.34
60 D 9063 C	2-00-05	2.24	1.90	1.68	1.51	1.34
60 D 9064 C	2-00-14	2.24	1.90	1.68	1.51	1.34
60 D 9065 C	2-00-15	2.24	1.90	1.68	1.51	1.34
60 D 9066 C	2-00-16	2.24	1.90	1.68	1.51	1.34
60 D 9067 C	2-00-17	2.24	1.90	1.68	1.51	1.34

Stock No.	Type CM26-	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 9068 C	2-00-18	2.24	1.90	1.68	1.51	1.34
60 D 9069 C	2-00-19	.98	.83	.74	.66	.59
60 D 9070 C	2-00-20	.98	.83	.74	.66	.59
60 D 9071 C	2-00-21	2.24	1.90	1.68	1.51	1.34
60 D 9072 C	2-00-22	2.24	1.90	1.68	1.51	1.34
60 D 9073 C	3-00-02	2.24	1.90	1.68	1.51	1.34
60 D 9074 C	3-00-05	2.24	1.90	1.68	1.51	1.34
60 D 9075 C	3-00-14	2.24	1.90	1.68	1.51	1.34
60 D 9076 C	3-00-15	2.24	1.90	1.68	1.51	1.34
60 D 9077 C	3-00-16	2.24	1.90	1.68	1.51	1.34
60 D 9078 C	3-00-17	2.24	1.90	1.68	1.51	1.34
60 D 9079 C	3-00-18	2.24	1.90	1.68	1.51	1.34
60 D 9080 C	3-00-19	.98	.83	.74	.66	.59
60 D 9081 C	3-00-20	.98	.83	.74	.66	.59
60 D 9082 C	3-00-21	2.24	1.90	1.68	1.51	1.34
60 D 9083 C	3-00-22	2.24	1.90	1.68	1.51	1.34

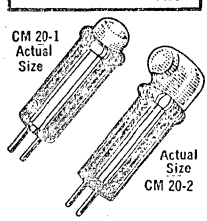


CML SERIES "HIDE-A-LITE" INDICATOR LIGHTS

New concept in cartridge indicators. Indicators appear *white* in the off position and take on color when activated. A glance is all that is necessary to quickly ascertain which indicators are "on" in a multiple-indicator panel. Ideally suited for use as warning lights or on systems control panels where signal and indicator speed is important. Clear anodized aluminum housing. Nylon insulation. Translucent polycarbonate caps. For 6-volt T-1¾ incandescent lamp. Meet MIL-L-3661 specification. Stainless steel terminals, located off-center to provide polarization in cartridge holders. *Long cylindrical; †macrodome; §short cylindrical; ‡short cyl., blk. body; **flush. ††Activated color. ½ oz.

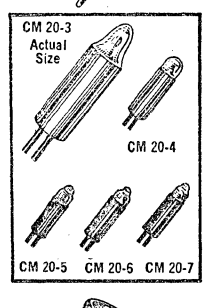
Stock No.	Type CML-	††	Stock No.	Type CML-	††
60 D 9084	70406*	Red	60 D 9094	60406§	Blue
60 D 9085	70406*	Grn	60 D 9095	60406§	Amb
60 D 9086	70406*	Blue	60 D 9096	60406‡	Red
60 D 9087	70406*	Amb	60 D 9097	60406‡	Grn
60 D 9088	80406†	Red	60 D 9098	60406‡	Blue
60 D 9089	80406†	Grn	60 D 9099	60406‡	Amb
60 D 9090	80406†	Blue	60 D 9100	50406**	Red
60 D 9091	80406†	Amb	60 D 9101	50406**	Grn
60 D 9092	60406§	Red	60 D 9102	50406**	Blue
60 D 9093	60406§	Grn	60 D 9103	50406**	Amb

1-9....Ea. 1.59 10-24....Ea. 1.43 25-99....Ea. 1.29
100-249.....Ea. 1.17 250-499.....Ea. 1.07



CM20 SERIES SUBMINIATURE LENS END-LITES

The CM20 family has finely controlled characteristics for demanding optical applications. Spots produced are axially centered. Ideally suited for close proximity use with photosensors where an intense spot of luminous and infrared energy is required. Applications are encoders, tape sensors, card readers, optical scanners. CM20-1 and -2 (right angle lens) are mounted in Bi-Pin cartridges. Clear anodized aluminum body; stainless steel terminals; nylon insulation. CM20-3 thru -7 are packaged in gold anodized aluminum sleeves with #24 AWG stranded wire leads. Type B insulation per MIL-W-16878. Semi-resilient thermosetting resin encapsulation. CM20-5 thru -7 can be mounted on .250" centers for card reader uses. ½ oz.

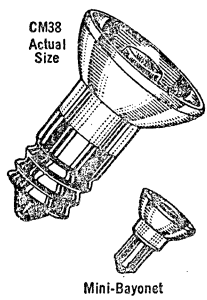


Stock No.	Mfr's Type	EACH 1-9	10-24	25-99	100-Up
60 D 9104	CM20-1	2.70	2.30	2.03	1.82
60 D 9105	CM20-2	4.40	3.74	3.30	2.97
60 D 9106	CM20-3	3.36	2.86	2.52	2.27
60 D 9107	CM20-4	3.30	2.81	2.48	2.23
60 D 9108	CM20-5	2.62	2.23	1.97	1.77
60 D 9109	CM20-6	2.68	2.28	2.01	1.81
60 D 9111	CM20-7	2.72	2.31	2.04	1.84

SPECIFICATIONS

Mfr's Type	Lamp Type	Volts	Amps ±10%	Life (Hours)
CM20-1*	TL-1¾	2.5	.350	10,000
CM20-2†	TL-1¾	2.5	.325	10,000
CM20-3§	TL-1¾	2.5	.350	10,000
CM20-4‡	TL-1¾	2.5	.350	10,000
CM20-5**	TL-1¼	2.5	.200	1000
CM20-6**	TL-1¼	2.1	.180	10,000
		6.0	.200	1000
		5.1	.180	10,000
CM20-7**	TL-1¼	28.0	.040	1000
		24.00	.036	10,000

Spot Specifications: *Spot covers 1/8" dia. target when projected 3/8" from end of bulb at min. intensity of 750 foot-candles. †When projected 1" from end of bulb, spot covers 1" dia. at 350 foot-candles. §3/8" from bulb, spot covers 1/16" dia. at 750 foot-candles. Spot is narrow elliptical. ‡Same as CM20-3 except spot covers 1/8" dia. target. Spot is round elliptical. **None, however lamp is axially aligned.



CM38 SERIES "REFLECT-O-LITE" DISPLAY INDICATOR LIGHTS

- Extra-Long Life and Maximum Lighting Efficiency
- "Hi-Brite" Parabolic Reflector Emits Controlled Light
- Candelabra Screw and Miniature Bayonet Bases

Display-indicator lights are an exciting new approach for high-voltage subminiature indicator applications. Although the units are low cost, they feature extra-long life and maximum lighting efficiency. The "hi-brite" parabolic reflector emits a controlled area of light in voltages ranging from 12 V to 60 V to 120 V standard operation. For designer preference, aluminum candelabra screw and nickel-plated brass miniature bayonet bases are available. And, for easy installation, the units mount in standard lamp holders. All lamps are integral with the throw-away housing. Aluminized polycarbonate reflector. Polycarbonate insulator. Average shpg. wt., ½ oz.

LAMP TABLE

Lamp No.	V	A	End fc	Life (Hrs)
07	12	.170	2500	5000
08	60	.050	2600	5000
06	120	.025	1500	5000

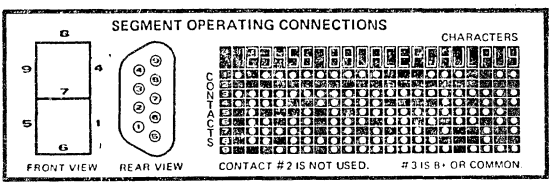
Stock No.	Type CM38-	Description	EACH 1-9	10-24	25-99	100-249	250-499
60 D 9112	1-07	12V Cand.	.73	.69	.67	.65	.64
60 D 9113	2-07	12V Bay.	.73	.69	.67	.65	.64
60 D 9114	1-08	60V Cand.	.73	.69	.67	.65	.64
60 D 9115	2-08	60V Bay.	.73	.69	.67	.65	.64
60 D 9116	1-06	120V Cand.	.73	.69	.67	.65	.64
60 D 9117	2-06	120V Bay.	.73	.69	.67	.65	.64

Specify Stock No. and Full Mfr's Type No. When Ordering

Chicago Miniature Readouts and Indicators

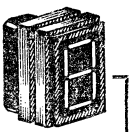
SERIES CM5 "DIGI-LITE" DISPLAY READOUTS

Direct-view subminiature seven-segment filament display devices which offer optimum character height/volume ratio. Permit outstanding design flexibility with minimum space required for total display area. Exceptionally high contrast and brilliance permit direct reading even in bright sunlight. Low power consumption per segment—only 66 mW—eliminates the need for high-powered lamp drivers and allows direct driving from integrated circuits. Requires only 5/16 x 15/32" panel space per digit and a mounting depth of 3/8". Wide-angle viewing design. No loss of readability even at long distances. Type CM5-3. Features shroud and connector pins—mates with Cannon MDB-1-9P connector. Has Type SDG diallyl phthalate housing with epoxy encapsulation for long life. Size, .466x.306x.530". Type CM5-5. Has wire leads, Kovar housing, no encapsulation. Size, .466x.306x.128", less leads. See specifications at right. Order from table below. Av. shpg. wt., 1 oz.



CM5-5

CM5-3



- High Contrast and Brilliance
- Direct-Reading, Even in Sunlight

SPECIFICATIONS. Recommended voltages: 4 V in sunlight; 3.5 V in artificial light; 2.0 V in dark. Current at 4 V, 16.5 mA per filament. Clear glass face plate. Brightness: 8000 foot-lamberts. Response time, 20 ms. Ambient temperature range, —55° C to +85° C. Life, 20,000 hours.

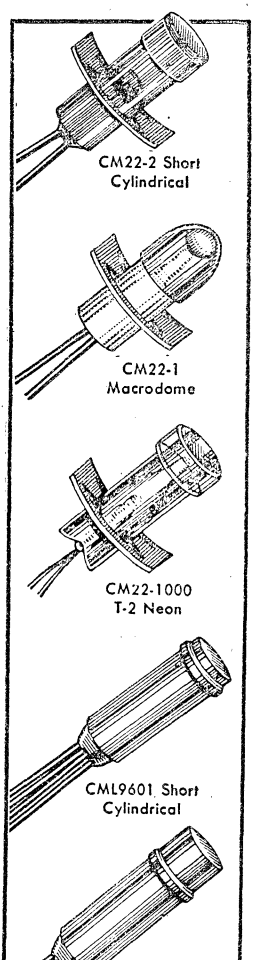
Stock No.	Mfr's Type	Description	EACH 1-9	10-24	25-99	100-249	250-499
60 D 7550	CM5-3	Shroud and connector pins	86.12	72.30	64.59	58.13	51.67
60 D 7551	CM5-5	Wire leads	40.20	34.17	30.15	27.14	24.12

CM22 T-1¾ INCANDESCENT PEANUT-LITES

Incandescent lamp indicators feature high-temperature polycarbonate shells with standard T-1¾ lamps. Permanently potted AWG #24 6" insulated wire leads. Mounting hole, .309" diameter, nominal. Spring steel spring mounting clip for positive connections. Final digits in Type No. indicate lamp type (from Lamp Table below). Specify Color: clear, red, amber, green, white. Av. wt., ¼ oz.

LAMP TABLE (*indicates long-life lamps)

Lamp No.	Design Volts	Amps	Lamp No.	Design Volts	Amps	Lamp No.	Design Volts	Amps	Lamp No.	Design Volts	Amps	Lamp No.	Design Volts	Amps
15	1.35	.06	50	3.0	.03	27	6.3	.04	08	10.0	.04	54	22.0	.04
17	2.5	.20	56	5.0	.18	19	6.3	.075	28	14.0	.08*	40	28.0	.04*
51	2.5	.350	12	6.0	.04	13	6.3	.20*	09	14.0	.08	11	28.0	.04
18	2.7	.06	06	6.0	.20	20	6.3	.20	53	14.0	.088	45	28.0	.06*
43	3.0	.015	52	6.3	.20	07	10.0	.014	10	18.0	.04	55	28.0	.06


CM22-2 Short Cylindrical

CM22-1 Macrodome

CM22-1000 T-2 Neon

CML9601 Short Cylindrical

CML9501 Flush Style

CM22-2 WITH SHORT CYLINDRICAL CAP

Stock No.	Mfr's Type CM22-	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 8950 C	2-00-15	.72	.61	.54	.49	.43
60 D 8951 C	2-00-17	.76	.65	.57	.51	.46
60 D 8952 C	2-00-51	.96	.82	.72	.65	.58
60 D 8953 C	2-00-18	.64	.54	.48	.43	.38
60 D 8954 C	2-00-43	1.16	.99	.87	.78	.70
60 D 8955 C	2-00-50	.92	.78	.69	.62	.55
60 D 8956 C	2-00-56	1.68	1.43	1.26	1.13	1.01
60 D 8957 C	2-00-12	.88	.75	.66	.59	.53
60 D 8958 C	2-00-06	.72	.61	.54	.49	.43
60 D 8959 C	2-00-52	1.88	1.60	1.41	1.27	1.13
60 D 8960 C	2-00-27	.92	.78	.69	.62	.55
60 D 8961 C	2-00-19	.70	.60	.53	.47	.42
60 D 8962 C	2-00-13	.76	.65	.57	.51	.46
60 D 8963 C	2-00-20	.72	.61	.54	.49	.43
60 D 8964 C	2-00-07	1.00	.85	.75	.68	.60
60 D 8965 C	2-00-08	1.06	.90	.80	.72	.64
60 D 8966 C	2-00-28	.80	.68	.60	.54	.48
60 D 8967 C	2-00-09	.76	.65	.57	.51	.46
60 D 8968 C	2-00-53	.76	.65	.57	.51	.46
60 D 8969 C	2-00-10	.82	.70	.62	.55	.49
60 D 8970 C	2-00-54	1.06	.90	.80	.72	.64
60 D 8971 C	2-00-40	.92	.78	.69	.62	.55
60 D 8972 C	2-00-11	.72	.61	.54	.49	.43
60 D 8973 C	2-00-45	1.04	.88	.78	.70	.62
60 D 8974 C	2-00-55	.94	.80	.71	.63	.56

CM22-1 WITH MACRODOME CAP

Stock No.	Mfr's Type CM22-	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 8975 C	1-00-15	.72	.61	.54	.49	.43
60 D 8976 C	1-00-17	.76	.65	.57	.51	.46
60 D 8977 C	1-00-51	.96	.82	.72	.65	.58
60 D 9005 C	1-00-18	.64	.54	.48	.43	.38
60 D 9006 C	1-00-43	1.16	.99	.87	.78	.70
60 D 9007 C	1-00-50	.92	.78	.69	.62	.55
60 D 9008 C	1-00-56	1.68	1.43	1.26	1.13	1.01
60 D 9009 C	1-00-12	.88	.75	.66	.59	.53
60 D 9013 C	1-00-06	.72	.61	.54	.49	.43
60 D 9014 C	1-00-52	1.88	1.60	1.41	1.27	1.13
60 D 9015 C	1-00-27	.92	.78	.69	.62	.55
60 D 9016 C	1-00-19	.70	.60	.53	.47	.42
60 D 9017 C	1-00-13	.76	.65	.57	.51	.46
60 D 9018 C	1-00-20	.72	.61	.54	.49	.43
60 D 9037 C	1-00-07	1.00	.85	.75	.68	.60
60 D 9038 C	1-00-08	1.06	.90	.80	.72	.64
60 D 9039 C	1-00-28	.80	.68	.60	.54	.48
60 D 9040 C	1-00-09	.76	.65	.57	.51	.46
60 D 9041 C	1-00-53	.76	.65	.57	.51	.46
60 D 9042 C	1-00-10	.82	.70	.62	.55	.49
60 D 9043 C	1-00-54	1.06	.90	.80	.72	.64
60 D 9044 C	1-00-40	.92	.78	.69	.62	.55
60 D 9045 C	1-00-11	.72	.61	.54	.49	.43
60 D 9046 C	1-00-45	1.04	.88	.78	.70	.62
60 D 9047 C	1-00-55	.94	.80	.71	.63	.56

CM22 T-2 NEON PEANUT-LITES

Low-cost indicator assembly with T-2 neon lamp that snaps into butyrate shell. Two shoulders in shell hold lamp in place. Dumet wire leads can be soldered to lamp terminals before or after installation. Short cylindrical cap. Mtg. hole, .310" nominal. Unassembled. With mtg. clip. Choice of three lamp types (also accepts other T-2 lamps). State clear, red, amber or white. ¼ oz.

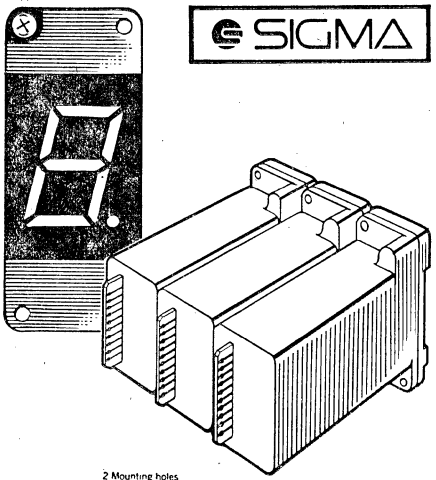
Stock No.	Mfr's Type CM22-	Lamp Type	Volts	Nominal mA	Nominal Watts	Series Ohms Required	Life, Hours	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 9048 C	1000-00-A1A	NE-2	105-125	0.3	1/25	200,000	25,000	.24	.20	.18	.16	.14
60 D 9049 C	1000-00-A9A	NE-2E	105-125	1.0	1/10	62,000	5000	.24	.20	.18	.16	.14
60 D 9118 C	1000-00-C2A	NE-2H	105-125	2.0	¼	22,000	5000	.24	.20	.18	.16	.14

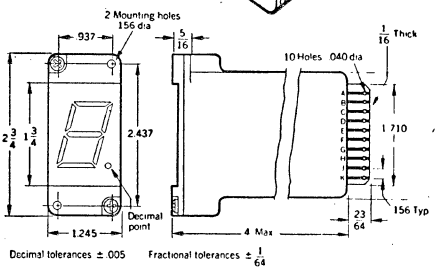
CML SERIES TRI-A-LITE INDICATOR LAMPS

Appears white in "off" position, but takes on color when voltage is applied to one of the color-coded leads. Provides three colors (red, green and yellow) in a single indicator. Mounts in 19/64" hole, with a single mounting clip (included). 5 volts, 0.115 amp per lamp. Anodized aluminum housing with white polycarbonate cap (*flush, †cylindrical). AWG #24 wire lead#. 1 oz.

Stock No.	Type CML-	EACH 1-9	10-24	25-99	100-249	250-Up
60 D 9119	9501-RGY*	7.40	6.30	5.55	5.00	4.45
60 D 9120	9601-RGY†	7.40	6.30	5.55	5.00	4.45

Digital Readout-Translator and Readout Indicators





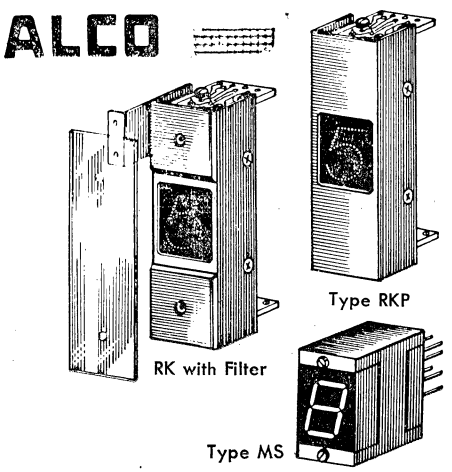
TYPE 321 MODULE WITH 7-BAR INTEGRAL NEON DISPLAY

- Code Translation and Numerical Display in a Single Opto-Electronic Module
- Applicable in Computer and Peripheral Equipment, Office Machines, Other Devices
- Eliminates High-Voltage Switching Transistors and Isolates High-Voltage Supply

Combines functions of code translation and numerical display in a single opto-electric module. Accepts binary coded decimal input and generates corresponding decimal output, 0 through 9, on an integral 7-bar neon display. Combined decoding and display function ends need for high-voltage transistors and high-voltage power supply. Units may be grouped to provide multi-digit display with single-plane, high reading visibility. High-reliability construction consists of photoconductor matrix coupled optically to incandescent lamps controlled by binary coded decimal input circuits. Translation is provided by matrix photocells which control 7-bar display. Inputs interface directly with integrated circuit or transistor levels of 6 and 12 volts. Display lights from 115 VAC. —20° C to +50° C. Characters: 1⅛x1 1/16". Size, 2¾x1¼x4". *Logic level must be supplied. †Logic level must be drained away. §With decimal point. ‡No decimal. Electrical connections may be made by direct wiring or by using Amphenol #225-21031-101 sockets. Wt., 10 oz.

Stock No.	Mfr's Type 321-	Logic Input per Line		Lamp Input	EACH
		On (VDC)	Off (VDC)	VDC @ mA	
60 D 9125	A0-N6‡	6 @ 46 mA	0	± 6 @ 120	27.50
60 D 9140	A0-N12‡	12 @ 20 mA	0	±12 @ 60	27.50
60 D 9126	A0-P6§	6 @ 40 mA	0	±6 @ 160	29.15
60 D 9141	A0-P12§	12 @ 20 mA	0	±12 @ 80	29.15
60 D 9127	B1-N6*‡	−2 min. @ 0.3 mA	−.6 @ 50 μA	6 @ 120	32.45
60 D 9142	B1-N12*‡	−2 min. @ 0.3 mA	−.6 @ 50 μA	12 @ 60	32.45
60 D 9128	B1-P6*§	−2 min. @ 0.3 mA	−.6 @ 50 μA	6 @ 160	34.10
60 D 9143	B1-P12*§	−2 min. @ 0.3 mA	−.6 @ 50 μA	12 @ 80	34.10
60 D 9129	B2-N6†‡	−2.4 to −25 @ 5 μA	−.6 @ 0.3 mA	6 @ 120	33.00
60 D 9144	B2-N12†‡	−2.4 to −25 @ 5 μA	−.6 @ 0.3 mA	12 @ 60	33.00
60 D 9130	B2-P6†§	−2.4 to −25 @ 5 μA	−.6 @ 0.3 mA	6 @ 160	34.65
60 D 9145	B2-P12†§	−2.4 to −25 @ 5 μA	−.6 @ 0.3 mA	12 @ 80	34.65
60 D 9131	C1-N6*‡	2 @ 0.3 mA	.6 @ 50 μA	6 @ 120	32.45
60 D 9146	C1-N12*‡	2 @ 0.3 mA	.6 @ 50 μA	12 @ 60	32.45
60 D 9132	C1-P6*§	2 @ 0.3 mA	.6 @ 50 μA	6 @ 160	34.10
60 D 9147	C1-P12*§	2 @ 0.3 mA	.6 @ 50 μA	12 @ 80	34.10
60 D 9133	C2-N6†‡	2.4 to 25 @ 50 μA	.6 @ 0.3 mA	6 @ 120	33.00
60 D 9148	C2-N12†‡	2.4 to 25 @ 5 μA	.6 @ 0.3 mA	12 @ 60	33.00
60 D 9134	C2-P6†§	2.4 to 25 @ 5 μA	.6 @ 0.3 mA	6 @ 160	34.65
60 D 9149	C2-P12†§	2.4 to 25 @ 5 μA	.6 @ 0.3 mA	12 @ 80	34.65

ALCO MINIATURE READOUT INDICATORS

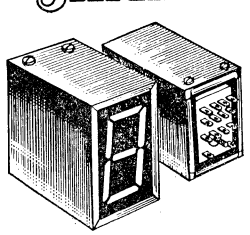


RK AND RKP SERIES. In-line design provides clear, easy-to-read displays without focusing problems. Displays .55" numerals 0-9, plus period. Engraved non-yellowing acrylic plates form numerals through selective lighting. Precision machined aluminum case, 2.56x.78x.83", for easy installation in limited spaces. Uses T-1¾ bulbs. Type RK has solder terminals, type RKP plugs into printed circuit socket (order below). Shpg. wt., 8 oz.

MS SERIES. Displays numerals 0-9 by illuminating a combination of seven lamps through external diode matrix or encoding switch (not included). Figure size, 35/32" high. Wide 150° viewing angle. Machined aluminum case, 1.73x .82x1.69". Fits standard 10-terminal connector (order below). Shpg. wt., 8 oz.

Stock No.	Mfr's Type	Description	EACH	
			1-99	100-999
60 D 7700	RK-6	6.3 volts	8.25	6.19
60 D 7701	RK-14	14 volts	8.25	6.19
60 D 7703	RKP-6	6.3 volts	8.25	6.19
60 D 7704	RKP-14	14 volts	8.25	6.19
60 D 7702	RK-FLV	Violet filter for RK and RKP	.40	.28
60 D 7705	RK-SKT	Pair of sockets	1.65	1.24
60 D 7706	MS-6A	6.3 volts	8.25	6.19
60 D 7707	MS-14A	14 volts	8.25	6.19
60 D 7709 C	MS-FLV	Violet filter for MS	.40	.28
60 D 7709 C	MS-FLR	Red filter for MS	.40	.28
60 D 7709 C	MS-FLG	Green filter for MS	.40	.28
47 D 0503	MS-SKT	Socket for MS	1.16	.97

C-RITE NUMERIC READOUT INDICATORS



Unique electromagnetic seven-segment readout is not dependent on light source for character appearance. If power fails, indicator takes on character of memory device. Not subject to burning out of light source or character intensity due to use. "L" suffix indicates latching memory; "M", momentary readout. NA series: figure size 1", case 1⅜x1¼x 2⅜" plus mtg. ears. NB series: figure 1½", case 2x1½x2⅜" plus ears. Solder/plug-in terms. 5 oz.

Stock No.	Mfr's Type	Volts	EACH			
			1-9	10-49	50-99	100-249
60 D 9280	NA-6-L-03	6	23.00	20.50	18.50	16.75
60 D 9281	NA-12-L-03	12	23.00	20.50	18.50	16.75
60 D 9282	NA-24-L-03	24	23.00	20.50	18.50	16.75
60 D 9283	NB-6-L-03	6	23.00	20.50	18.50	16.75
60 D 9284	NB-6-M-03	6	23.00	20.50	18.50	16.75
60 D 9286	NB-12-L-03	12	22.00	19.75	17.50	15.25
60 D 9287	NB-12-M-03	12	22.00	19.75	17.50	15.25
60 D 9289	NB-24-L-03	24	22.00	19.75	17.50	15.25
60 D 9290	NB-24-M-03	24	22.00	19.75	17.50	15.25
60 D 9291	Converter	..	14.95	14.20	13.45	12.50
41 D 5990	Socket	..	.66	.63	.59	.46

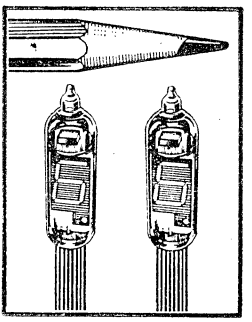
Call Your Nearest Facility for All Your Electronic Needs

Digital Readouts, Neon Lamps, Pilot Lights

ALCO

MG-19 "ELFIN" SUBMINIATURE READOUT INDICATOR

- Low Cathode Current Permits Use with Integrated Circuit Equipment
- Small Size—Only .413" Diameter
- Easy-to-Read with All Numerals on Same Plane
- Extremely Bright Appearing Numerals and Decimal



Designed for use as a numeral indicating tube in electronic desk-top calculators and various kinds of digital instruments. Cold cathode tube has nine cathode segments that form numerals 0 through 9, ' , - , and decimal point. Side illumination with wide-angle viewing. Red-orange color indication. Anode is in the form of mesh placed in front of the numeral. Low cathode current of 0.4 mA makes it suitable for use in calculators containing integrated circuits. Numeral height, 7/16". Tube height, 1.54" excluding leads. Base, special 11 leads. Life, 20,000-30,000 hours. Shpg. wt., 1 oz.

60 D 7710. 1-99 ..... Each 4.95
100-Up ..... Each 3.75

DC OPERATION

Anode Supply Voltage	230 VDC
Breakdown Voltage	180 VDC
Cathode Current per Segment	500 μA
Power Consumption per Segment	0.1 watt

ABSOLUTE RATINGS—DC OPERATION

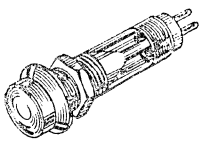
Peak Cathode Current per Segment	4 mA
Ambient Temperature	—65° C to +70° C

ABSOLUTE RATINGS—PULSED OPERATION

Peak Cathode Current per Segment	1-8 mA
Average Cathode Current per Segment	.04-.6 mA
Pulse Width	20-500 μsec.
Ambient Temperature	—66° C to +70° C

BNE SERIES PILOT LIGHT ASSEMBLIES

Standard or High-Intensity Indications



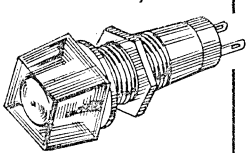
Excellent choice for indicating toggle switch positions or display configurations where space is a critical factor. Neon lamp. Rugged one-piece construction. Lens system protrudes slightly above panel. Operating voltage: all types without resistor, 75 VAC. Type BNE-2 standard intensity requires 150K resistor for 115 VAC; Type BNE-3 high intensity, 33K for 115 VAC. Less resistors. Single 5/16-32 mounting. Specify color—red, amber, clear or white. 1/4 oz.

- Sturdy One-Piece Construction
- Choice of Colors

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999
60 D 7721 C	BNE-2	Standard Intensity	.49	.33	.29	.24
60 D 7722 C	BNE-3	High Intensity	.59	.39	.35	.29

BND SERIES PILOT LAMP ASSEMBLIES

Unique Design Provides Maximum Visibility

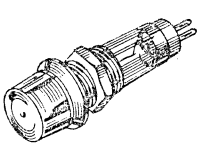


Combines an entirely new look in a compact, space-saving pilot light assembly. Neon protrudes beyond panel to provide maximum light intensity and visibility. Available with or without built-in series resistor for 75 V or 115 VAC operation, standard or high intensity light level. Easily installed in single 3/8-32 mtg. Specify color—red, amber, clear or white. Shpg. wt., 1/4 oz.

- Choice of Colors
- With or Without Resistor

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999
60 D 7723 C	BND-2	Std., less res.	.49	.33	.29	.24
60 D 7724 C	BND-2R	Std., with res.	.59	.39	.35	.29
60 D 7725 C	BND-3	Hi-Intens., less res.	.59	.39	.35	.29
60 D 7726 C	BND-3R	Hi-Intens., with res.	.69	.46	.41	.35

BNF SERIES PILOT LIGHT ASSEMBLIES

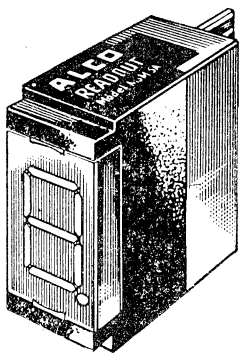


Similar to the BNE series except lens system extends greater distance beyond the panel for brighter illumination. Permanent built-in neon bulb. Operating current, 1.5 mA. Operating voltage: all types without resistor, 75 VAC. For use on 115 VAC, Type BNF-2 requires 150K resistor, Type BNF-3 requires 33K. Less resistors. Single 5/16-32 mounting. Specify lens color—red, amber, clear or white. Shpg. wt., 1/4 oz.

- 5/16-32 Mount
- Turret-Type Lugs

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-999
60 D 7727 C	BNF-2	Standard Intensity	.49	.33	.29	.24
60 D 7728 C	BNF-3	High Intensity	.59	.39	.25	.29

3-5V MINIATURE DIGITAL READOUT

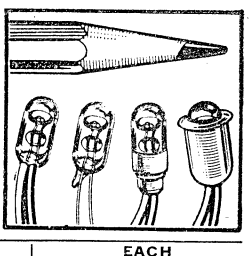


- Displays Numerals 0-9 plus Some Alpha Indications
- Plugs Into Standard PC Socket

Versatile, compact 7 segment device is capable of displaying numerals 0-9, some alpha indications by illuminating a combination of lamps through a matrix or decoder (not supplied). High illumination, wide-angle viewing with 3-5V, high-reliability T-1 lamps. With decimal point. Current drain, 40-60 mA per segment. Life expectancy 100,000 hrs. Plugs into standard Amphenol 64-17 printed circuit socket. 1 1/8 x 1 5/32 x 1 11/32". *Plus, minus indication only. Wt., 2 oz.

Stock No.	Type	Display	1-99, EACH	100-999, EACH
60 D 7711	MSM-5A	Numeric	8.25	6.19
60 D 7712	MSM-5S	Symnol*	8.25	6.19

T-1 3/8 "BRITE-GLO" NEON LAMPS

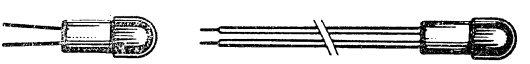


- Unique "Crater" Electrode
- Exceptionally Bright Red Glow

Subminiature neon lamps feature unusual "crater" electrode construction. Provide bright red glow. Available with choice of short bare leads, or with 10" insulated leads with or without protective metal shield or with plastic holder and speed nut for 1/4" panel hole. Operating voltage; all types without resistor, 75 VAC; requires 47K resistor for 115 VAC. 1/4 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-Up
60 D 7713	MNE-4	Short bare leads	.49	.33	.29	.24
60 D 7714	MNE-4L	10" insulated leads	.53	.36	.32	.27
60 D 7715	MNE-4SL	10" leads and shield	.59	.39	.35	.29
60 D 7716	PLN-100	With plastic holder	.89	.59	.54	.45

5-V SUBMINIATURE PANEL LIGHTS



- Dome or Cylindrical Design
- High-Temperature Plastic Housing
- 100,000-Hour Life Rating
- Choice of Color

New approach to subminiature panel light applications. Each indicator contains a standard #680 long life (T-1) subminiature lamp sealed in a high temperature plastic housing. All types listed mount in a 3/8" hole, held in place with one speed nut (supplied). Rated 5V at 60 mA, 100,000 hrs. Choice of rigid bi-pin terminals or 6" insulated stranded wire leads. Specify color: ME Series—red, white, green, blue or yellow; MC series—red or green. 1/4 oz.

Stock No.	Mfr's Type	Description	EACH 1-24	25-99	100-499	500-Up
60 D 7717 C	ME-680	Dome, Bi-Pin	.89	.59	.54	.45
60 D 7718 C	MEL-680	Dome, 6" Leads	.89	.59	.54	.45
60 D 7719 C	MC-680	Cyl, Bi-Pin	.99	.67	.60	.49
60 D 7720 C	MCL-680	Cyl, 6" Leads	.99	.67	.60	.49

Sylvania Pilot Lamps, Lenses and Sockets

EXTENDED-SERVICE PILOT LAMPS

Slide Base

Miniature Bayonet Base

- 5000-Hr. Minimum Life
- Flat-Top Bulb
- Flare-Stem Design

All have T2 type bulbs, 1.075" long x ¼" dia. Slide or miniature bayonet bases. See listing at right for housings. Wt., 2 oz.

Slide Base		Bayonet Base		Volts	Av. Watts	Av. Amps	End Foot-Candles
Stock No.	Type	Stock No.	Type				
60 D 7248	6PSB	60 D 8828	6MB	6	.8	.140	800
60 D 7249	12PSB	60 D 8829	12MB	12	2.0	.170	2400
60 D 7250	24PSB	60 D 8830	24MB	24	1.7	.073	2200
60 D 7251	28PSB	60 D 8831	28MB	28	1.1	.040	1900
60 D 7252	48PSB	60 D 8832	48MB	48	2.5	.053	1500
60 D 7253	60PSB	60 D 8833	60MB	60	3.0	.050	2400
60 D 7254	120PSB	60 D 8834	120MB	120	3.0	.025	1600

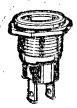
EACH (IN PKGS. OF 10). 10-99....Each .44 100-499....Each .42
500-999.....Each .37 1000-Up.....Each .34

END COLOR CAPS

Profax and pyrex hard glass types. Profax for use below 1½ watts. For housings, this page. 2 oz.

Stock No.	Mfr's Type	Desc.	Color	EACH (IN PKGS. OF 10)			
				10-99	100-499	500-999	1000-Up
60 D 7425	38001-0	Profax	Red	.065	.06	.055	.05
60 D 7426	38002-0	Profax	Yel	.065	.06	.055	.05
60 D 7427	38003-0	Profax	Wht	.065	.06	.055	.05
60 D 7428	38004-0	Profax	Grn	.065	.06	.055	.05
60 D 7429	38005-0	Profax	Blue	.065	.06	.055	.05
60 D 7430	38071-0	Pyrex	Red	.065	.06	.055	.05
60 D 7431	38072-0	Pyrex	Yel	.065	.06	.055	.05
60 D 7432	38073-0	Pyrex	Wht	.065	.06	.055	.05
60 D 7433	38074-0	Pyrex	Grn	.065	.06	.055	.05
60 D 7434	38075-0	Pyrex	Blue	.065	.06	.055	.05

PHENOLIC UNIVERSAL HOUSINGS



All metal parts nickel-plated. Rated 75 watts, 125 volts. U.L. Component-Program Recognized. Use AMP connector 42197-2, or leads can be soldered through holes in contacts. Lgth., 1 27/32". Max. pnl. thickness, 1 3/32". 2 oz.
60 D 7274. 1-9.....Each .65 10-99.....Each .56
100-499..Each .51 500-999..Each .49 1000-Up..Each .47

ASSEMBLED HOUSINGS AND LAMPS (Less lens)

Stock No.	Mfr's Type	Volts	Av. Watts	Av. Amps	End Foot-Candles
60 D 7275	6PSB/30099-0	6	.8	.140	800
60 D 7276	12PSB/30099-0	12	2.0	.170	2400
60 D 7277	24PSB/30099-0	24	1.7	.073	2200
60 D 7278	28PSB/30099-0	28	1.1	.040	1900
60 D 7279	48PSB/30099-0	48	2.5	.053	1500
60 D 7280	60PSB/30099-0	60	3.0	.050	2400
60 D 7281	120PSB/30099-0	120	3.0	.025	1600

1-9....Each 1.16 10-99.....Each 1.00 100-499.....Each .93
500-999.....Each .86 1000-Up.....Each .81

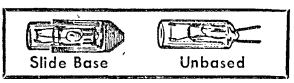
LENSES FOR PILOT LIGHT ASSEMBLIES

For housings on this page. Made of high-temperature thermoplastic that operates satisfactorily up to 290° F. at 66 psi without signal distortion. Av. shpg. wt., 1 oz.

Color	JEWELED LENS		CLEAR LENS		OPAQUE LENS	
	Stock No.	Mfr's Type	Stock No.	Mfr's Type	Stock No.	Mfr's Type
Red	60 D 7255	30100-0	60 D 7259	30110-0	60 D 7270	30130-0
Blue	60 D 7256	30103-0	60 D 7262	30113-0	.....	.....
Green	60 D 7257	30102-0	60 D 7261	30112-0	60 D 7272	30132-0
Amber	60 D 7258	30106-0	60 D 7260	30111-0	.....	.....
Yellow	.....	.....	60 D 7263	30114-0	60 D 7271	30131-0
Clear	.....	.....	60 D 7264	30116-0	.....	.....
White	.....	.....	.....	.....	60 D 7273	30133-0

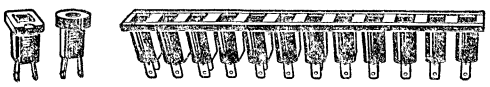
EACH (IN PKGS. OF 10). 10-99....Each .19 100-499....Each .17
500-999.....Each .15 1000-Up.....Each .14

INDICATOR LAMPS AND SOCKETS


Slide Base Unbased

Long life, minimum 5000 hours. Electrical contact made with AMP connector 42197-2 or by soldering leads through holes in contacts. T2 bulb. *Cherry-red glow. Shpg. wt., 2 oz.

SLIDE BASE LAMPS									UNBASED LAMPS				
Volts	Current (mA)	End Foot-Candles	Stock No.	Mfr's Type	EACH (IN PKGS. OF 10) 10-99	100-499	500-999	1000-Up	Stock No.	Mfr's Type	EACH (IN PKGS. OF 10) 10-99	100-499	500-999	1000-Up
4.0	35-45	200	60 D 7288	4ESB	.40	.38	.33	.31	60 D 7411	4ES	.31	.28	.25	.23
5.0	35-45	225	60 D 7289	5ESB	.40	.38	.33	.31	.....	.....	.....	.....	.....	.....
6.0	35-45	250	60 D 7290	6ESB	.40	.38	.33	.31	60 D 7413	6ES	.31	.28	.25	.23
10.0	35-45	450	60 D 7291	10ESB	.40	.38	.33	.31	60 D 7414	10ES	.31	.28	.25	.23
10.0	15-20	100	60 D 7292	10CSB	.40	.38	.33	.31	60 D 7415	10CS	.31	.28	.25	.23
10.0	9-11	*	60 D 7293	10ASB	.60	.53	.50	.46	60 D 7416	10AS	.48	.42	.37	.35
12.0	35-45	650	60 D 7294	12ESB	.40	.38	.33	.31	60 D 7417	12ES	.31	.28	.25	.23
16.0	35-45	900	60 D 7295	16ESB	.40	.38	.33	.31	60 D 7418	16ES	.31	.28	.25	.23
16.0	15-20	150	60 D 7296	16CSB	.40	.38	.33	.31	60 D 7419	16CS	.31	.28	.25	.23
18.0	35-45	1000	60 D 7297	18ESB	.40	.38	.33	.31	.....	.....	.....	.....	.....	.....
24.0	35-45	1100	60 D 7298	24ESB	.40	.38	.33	.31	60 D 7421	24ES	.31	.28	.25	.23
24.0	15-20	200	60 D 7299	24CSB	.40	.38	.33	.31	60 D 7422	24CS	.31	.28	.25	.23
28.0	35-45	1285	60 D 7409	28ESB	.40	.38	.33	.31	60 D 7423	28ES	.31	.28	.25	.23
48.0	35-45	2000	60 D 7410	48ESB	.48	.42	.37	.35	60 D 7424	48ES	.35	.33	.28	.26



INDICATOR SOCKETS (Single-Socket Type)

60 D 7282. 30150-0. Round. Body: 55/64x1/2" dia. Flange: 5/8" dia. 2 oz.
1-9.....Ea. .26 10-99.....Ea. .24 100-499.....Ea. .22
500-999.....Ea. .19 1000-Up.....Ea. .18
60 D 7283. 30151-0. Rectangular. Same body size as above. Flange: ½x¾".
1-9.....Ea. .26 10-99.....Ea. .24 100-499.....Ea. .22
500-999.....Ea. .19 1000-Up.....Ea. .18

STRIP SOCKETS (12 Sockets per Strip)

Overall depth, 55/64" (less pins). Sockets are 47/64"x1/2" dia. 3 oz.
60 D 7284. 31250-0. ½" center, alternate contacts. 1-9...Ea. 2.98
10-19.....Ea. 2.79 20-49.....Ea. 2.54
50-99.....Ea. 2.39 100-Up.....Ea. 2.24
60 D 7285. 31275-0. ¾" center, alternate contacts. 1-9...Ea. 2.98
10-19.....Ea. 2.79 20-49.....Ea. 2.54
50-99.....Ea. 2.39 100-Up.....Ea. 2.24
60 D 7286. 33250-0. ½" ctr., individual contacts. 1-9.....Ea. 3.10
10-19.....Ea. 2.95 20-49.....Ea. 2.75
50-99.....Ea. 2.58 100-Up.....Ea. 2.39
60 D 7287. 33275-0. ¾" ctr., individual contacts. 1-9.....Ea. 3.10
10-19.....Ea. 2.95 20-49.....Ea. 2.75
50-99.....Ea. 2.58 100-Up.....Ea. 2.39

PANEL LIGHT SOCKETS

Type 30152-0 panel socket takes Series PSB slide base lamp. Black phenolic. U.L. Component-Program Recog. Lenses below. 30154-0 same, but for use without lens. 30153-0 is black nylon, takes slide base lamps above, lenses below. 2 oz.
60 D 7010. Type 30152-0. Panel Socket. 1-9.....Ea. .30
10-99 Ea. .27 100-499 Ea. .25 500-999 Ea. .23 1000-Up Ea. .21

60 D 6879. Type 30154-0 Single Socket. 1-9.....Ea. .30
10-99.Ea. .27 100-499.Ea. .25 500-999.Ea. .23 1000-Up.Ea. .21
60 D 6880. Type 30153-0 Panel Socket. 1-9.....Ea. .28
10-99.Ea. .25 100-499.Ea. .23 500-999.Ea. .21 1000-Up.Ea. .19

LENSES FOR ABOVE SOCKETS

Polycarbonate lenses for Types 30152 and 30153 sockets above. Round and square types. Av. shpg. wt., 2 oz.

Color	ROUND LENS Stock No.	Type	SQUARE LENS Stock No.	Type
Red	60 D 6881	30160-0	60 D 6887	30170-0
Clear	60 D 6882	30161-0	60 D 6888	30171-0
Amber	60 D 6883	30162-0	60 D 6889	30172-0
White	60 D 6884	30163-0	60 D 6890	30173-0
Green	60 D 6885	30164-0	60 D 6891	30174-0
Blue	60 D 6886	30165-0	60 D 6892	30175-0

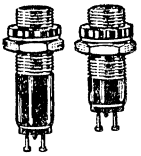
EACH (IN PKGS. OF 10). 10-99....Each .17 100-499....Each .15
500-999.....Each .13 1000-Up.....Each .11

Call Your Nearest Allied Office for Fastest Service

Lamps, Lenses, Thermoelectric Devices

SYLVANIA LAMPS AND LENSES

CARTRIDGE LIGHT HOUSINGS

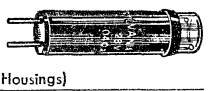

SM2 SM1

Cartridge housings accept either standard pilot lamps or indicator lamps below. Made of black anodized aluminum per MIL-A-8625; base insulation of molded phenolic. Withstand environmental requirements of MIL-STD-202B as prescribed in MIL-L-3661A. Rated at 250 volts; maximum current, 1 amp. Breakdown voltage, 1000 V rms at 60 Hz. Easily installed from rear of panel with lockwasher and hex nut. *Solder lugs; others turret lugs. Wt., 1 oz.

FOR PILOT LAMPS			FOR INDICATOR LAMPS		
Stock No.	Mfr's Type	Size, Dia. x L.	Stock No.	Mfr's Type	Size, Dia. x L.
60 D 6893	SM-2/300950	½x1⅜"	60 D 6895	SM-1/300970	½x1 1/32"
60 D 6894	SM-2A/300960	½x1⅜"	60 D 6896	SM-1A/300980	½x1 1/32"*

1-9.....Each .91 10-24.....Each .82 25-99.....Each .76
100-249...Each .68 250-499.....Each .61 500-Up.....Each .55

CARTRIDGE LAMPS



Black anodized metal sleeves and clear ends. Stainless steel, polarized pins. Dia., .290". Lgth.: *1.110" max.; †.912" max., less pins. 1 oz.

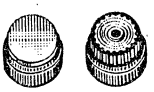
*PILOT LAMPS (For Above Housings)

Stock No.	Mfr's Type	Volts	Average Watts	Average Amps	EACH 1-9	10-24	25-99	100-249	250-499	500-Up
60 D 6897	21	6	0.8	.140	.97	.87	.80	.72	.63	.56
60 D 6898	31	12	2.0	.170	.97	.87	.80	.72	.63	.56
60 D 6899	41	24	1.7	.073	.97	.87	.80	.72	.63	.56
60 D 6900	51	28	1.1	.040	.97	.87	.80	.72	.63	.56
60 D 6901	61	48	2.5	.053	.97	.87	.80	.72	.63	.56
60 D 6902	71	60	3.0	.050	.97	.87	.80	.72	.63	.56
60 D 6903	81	120	3.0	.025	.97	.87	.80	.72	.63	.56

†INDICATOR LAMPS (For Above Housings)

Stock No.	Mfr's Type	V	Av. Watts	Current Amperes Min.-Max.	EACH 1-9	10-24	25-99	100-249	250-499	500-Up
60 D 6904	901	4	.16	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6905	905	5	.20	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6906	909	6	.24	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6907	914	10	.18	.015-.020	.97	.87	.80	.72	.63	.56
60 D 6908	915	10	.40	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6909	918	12	.36	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6910	925	16	.28	.015-.020	.97	.87	.80	.72	.63	.56
60 D 6911	926	16	.64	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6912	930	18	.72	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6913	933	24	.42	.015-.020	.97	.87	.80	.72	.63	.56
60 D 6914	934	24	.96	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6915	938	28	1.12	.035-.045	.97	.87	.80	.72	.63	.56
60 D 6916	941	48	1.92	.035-.045	1.00	.90	.80	.72	.63	.56
60 D 6917	913	10	.10	.009-.011	1.09	.99	.92	.84	.75	.68

CARTRIDGE LENSES (For Above)

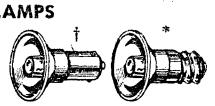


Polycarbon lenses have high working temperature, no melting, distortion. Black anodized aluminum bezels. Special inner surface provides almost total peripheral vision. Dia., .505". Transparent or translucent types. Av. shpg. wt., 1 oz.

TRANSPARENT LENS			TRANSLUCENT LENS		
Stock No.	Type	Color	Stock No.	Type	Color
60 D 6918	301400	Amber	60 D 6923	301450	Yellow
60 D 6919	301410	Clear	60 D 6924	301460	White
60 D 6920	301420	Red	60 D 6925	301470	Red
60 D 6921	301430	Blue	60 D 6926	301480	Blue
60 D 6922	301440	Green	60 D 6927	301490	Green

1-9.....Each .26 10-24.....Each .25 25-99.....Each .24
100-249.....Each .23 250-499.....Each .22 500-Up.....Each .21

ANNUNCIATOR LAMPS



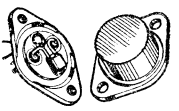
High-brightness, long life lamps for use in elevator panels, call boards, etc. 5000 hour life rating. Self-contained reflector speeds assembly. *Caudelabra base; †miniature bayonet base. 2 oz.

V	W	A	Candelabra Stock No.	Candelabra Mfr's Type	Bayonet Stock No.	Bayonet Mfr's Type
12	2.0	.170	60 D 7515	12RC 35121-0	60 D 7518	12RB 35212-0
60	3.0	.050	60 D 7516	60RC 35127-0	60 D 7519	12RB 35227-0
120	3.0	.025	60 D 7517	120RC 35128-0	60 D 7520	12RB 35229-0

1-9.....Each .73 10-99.....Each .69
100-499.....Each .65 500-999.....Each .62

NUCLEAR SYSTEMS, INC.

THERMOELECTRIC MODULES

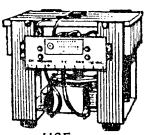


Miniature low-current solid-state modules for applications including temperature stabilization of infra-red detectors, light emitting diodes or integrated circuits. Also can be used for freezing and dew point determinations and freezing of biological samples. Modules either cool or heat depending on polarity of DC voltage applied. Type FP modules are supplied on 1⅜x2⅛" copper plate. Type TO-3 modules are soldered to standard TO-3 header base with 5-pin accessory feed-thru and tv top seal module. All devices can be used with power supplies below. With detailed instructions. Order from Table below. Av. shpg. wt., 8 oz.

THERMOELECTRIC MODULE SPECIFICATIONS

Type No.	Amps	Volts	Max. ΔT @ Q=0	Max. Q @ ΔT=0
1KA-TO-3	1.2	1.2	55° C	0.7 W
1KA-FP				
2KA-TO-3	2.0	1.0	55° C	1.1 W
2KA-FP				
5AB-TO-3	5	1.1	55° C	3.0 W
5AB-FP				
5AB8-TO-3	4	1.2	75° C	.....
5AB8-FP				
5HF-FP	5.0	4.1	55° C	11 W
5HF2-FP	4.0	4.0	75° C	.....
5HF28-FP	3.5	3.5	90° C	.....

HEAT SINKS AND SPECIAL ASSEMBLIES

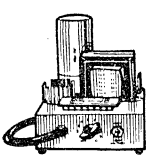

HSF

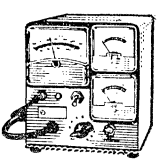
TC-400

Model HSF Heat Sink. Finned heat sink with muffin fan and terminal board for power input. Has connection for AC voltage to fan, DC voltage to thermoelectric modules with Type FP mounting. Modules attach with two #6-32 screws. Use thermal compound to assure maximum heat transfer. Order from Table below.

Model TC-400 Environmental Chamber. Small insulated chamber for temperature variation or stabilization of electronic components. Suitable for laboratory test chamber, storage chamber or permanent in-circuit installation. Temperature variable devices mount with clip springs to ½x2" plate. Use with power supplies below. ΔT=50° C at Q=0. Q=6 W at ΔT=0. Order from Table below.

TEMPCYC COLD PLATE AND POWER SUPPLIES


6470CV


Tempcyc

Tempcyc Cold Plate. Provides temperature cycling capability from −5° C to +80° C when used with power supplies below. Cold plate is 2" diameter and will stabilize from one extreme to the other within three minutes. Temperature is read directly in °C or °F. Input voltages and currents are monitored on two panel meters. Peltier cooler heat pumping element. For 110-120 V, 60 Hz AC. Order from Table Below.

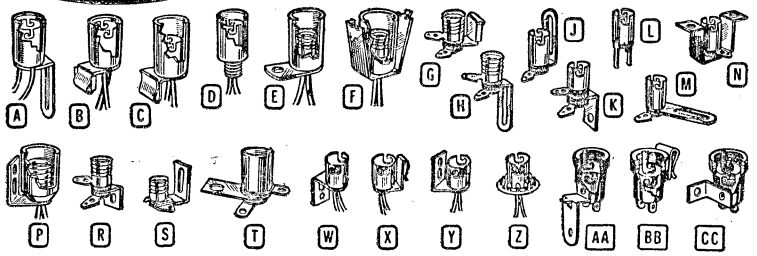
Model 6470CV Power Supply. For operation of thermoelectric modules in heating or cooling modes. Dual output voltages: fixed 115 VAC (for Tempcyc Cold Plate) and variable 0-5 VDC with current capacity of 0-5 amps. 6x6x6". Order from Table below.

Model 6471 CHV Power Supply. As above, with 6' cable for dual voltages (115 VAC or 0-5 VDC), and pyrometer for temperature reference. I/C thermocouple leads. 7x6x6". Order from Table below.

PRICES FOR ABOVE UNITS

Stock No.	Mfr's Type	Desc.	EACH 1-9	EACH 10-24
60 D 9467	1KA-TO-3	TE Module	55.00	49.50
60 D 9468	1KA-FP	TE Module	43.00	38.70
60 D 9469	2KA-TO-3	TE Module	49.00	44.10
60 D 9470	2KA-FP	TE Module	39.00	35.10
60 D 9471	5AB-TO-3	TE Module	44.00	39.60
60 D 9472	5AB-FP	TE Module	32.00	28.80
60 D 9473	5AB8-TO-3	TE Module	145.00	130.50
60 D 9474	5AB8-FP	TE Module	132.00	118.80
60 D 9475	5HF	TE Module	54.00	48.60
60 D 9476	5HF2-FP	TE Module	97.00	87.30
60 D 9633	5HF28-FP	TE Module	232.00	208.80
60 D 9634	HSF	Heat Sink	64.50	58.05
60 D 9636	TC400	Chamber	162.50	146.25
60 D 9648	Tempcyc	Cold Plate	420.00	378.00
60 D 9674 U	6470CV	Power Supply	88.60	79.74
60 D 9675 U	6471CHV	Power Supply	238.00	214.20

LEECRAFT Lampholders and Pilot Light Sockets



SERIES 200 MINIATURE BAYONET

Miniature bayonet sockets with insulating sleeves. Have .025 to .032" steel brackets; zinc-plated for corrosion resistance. Built-in 6" long #22 (7x30) wire leads. ■U.L. rated at 80°C., PVC insulated. Use T-3¼, G-3½ or G-4½ bulb. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Skt. Fig.	Bkt. Fig.	EACH 1-24	25-99	100-Up
60 D 8054	2-01	A	X	.46	.30	.25
60 D 8055	2-04	B	B	.46	.30	.25
60 D 8056	2-06	A	A	.46	.30	.25
60 D 8057	2-13	A	M	.46	.30	.25
60 D 8058	2-15	A	F	.46	.30	.25

SERIES 300 MINIATURE BAYONET

Miniature bayonet sockets in molded bakelite with wire leads. Type 3-30N complete with nut ■U.L. and C.S.A. Listed. Use T-3¼, G-3½, G-4½ or NE-51 lamps. Av. shpg. wt., 1 oz.

60 D 8059	3-01	C	X	.50	.37	.30
60 D 8060	3-02	C	C	.50	.37	.30
60 D 8061	3-05	C	J	.50	.37	.30
60 D 8062	3-06	C	A	.50	.37	.30
60 D 8065	3-20	C	K	.50	.37	.30
60 D 9327	3-30N	D	D	.66	.52	.42

SERIES 400 CANDELABRA SCREW

Candelabra screw sockets in molded bakelite. #18 black and white wire leads 6" long with ends stripped ½". Type 4-40 snaps into 15/16" hole. Type 4-30N with nut. For both incandescent and neon-glow lamps. Use NE-45, S6 or 10C7 lamps. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Skt. Fig.	Bkt. Fig.	EACH 1-24	25-99	100-Up
60 D 8066	4-01	F	X	.50	.37	.30
60 D 8068	4-05	F	J	.50	.37	.30
60 D 8069	4-06	F	A	.50	.37	.30
60 D 8070	4-08	F	R	.50	.37	.30
60 D 9328	4-40	F	Z	.50	.37	.30
60 D 9329	4-30N	F	D	.66	.52	.42

SERIES 500 MINIATURE SCREW

Miniature screw sockets with solder terminals tinned for easy connection. Useful for low-voltage incandescent lamp applications. Heavily zinc-plated steel brackets resist corrosion. Use T-3¼, TL-3, or G-3½ lamps. *No bracket. Shpg. wt., 1 oz.

60 D 8072	5-01	G	X	.35	.26	.20
60 D 8073	5-04	G	B	.35	.26	.20
60 D 8074	5-05	G	J	.35	.26	.20
60 D 8075	5-06	G	A	.35	.26	.20
60 D 8076	5-07	G	*	.35	.26	.20
60 D 8077	5-08	G	R	.35	.26	.20
60 D 8078	5-13	G	M	.35	.26	.20

SERIES 600 CANDELABRA SCREW

Candelabra sockets with tinned solder terminals. Have .025 to .032" steel brackets; zinc-plated to fight corrosion. Use G6 or S6 lamps. *No bracket. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Skt. Fig.	Bkt. Fig.	EACH 1-24	25-99	100-Up
60 D 8080	6-01	H	X	.39	.26	.20
60 D 8081	6-04	H	B	.39	.26	.20
60 D 8082	6-05	H	J	.39	.26	.20
60 D 8083	6-06	H	H	.39	.26	.20
60 D 8084	6-07	H	*	.39	.26	.20
60 D 8085	6-08	H	R	.39	.26	.20
60 D 8086	6-11	H	N	.39	.26	.20
60 D 8087	6-13	H	M	.39	.26	.20

SERIES 700 MINIATURE BAYONET

Miniature bayonet sockets with insulated mounting brackets. Terminals are tinned for easy soldering. For low-voltage incandescent lamps as T-3¼, G-3½, and G-4½. *No bracket. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Skt. Fig.	Bkt. Fig.	EACH 1-24	25-99	100-Up
60 D 8089	7-01	K	X	.40	.26	.20
60 D 8090	7-04	K	B	.40	.26	.20
60 D 8091	7-05	J	J	.40	.26	.20
60 D 8092	7-06	K	A	.40	.26	.20
60 D 8093	7-07	K	*	.40	.26	.20
60 D 8094	7-08	K	R	.40	26	.20
60 D 8095	7-11	N	N	.40	.26	.20
60 D 8096	7-13	M	M	.40	.26	.20
60 D 8097	7-15	K	F	.40	.26	.20
60 D 8098	7-20	K	K	.40	.26	.20
60 D 8099	7-35	L	L	.61	.47	.36

SERIES 11-200 CANDELABRA BAYONET

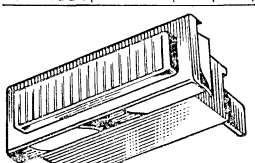
Single-contact candelabra bayonet socket. Has one 6" #18 (16x30) wire lead, with a 1/32" wall of PVC insulation ■U.L. and C.S.A. rated at 80°C. Has .035 to .042" thick steel brackets, cadmium-plated to fight corrosion. For T-4½ bulb. Wt., 1 oz.

60 D 8100	11-271	Y	V	.46	.37	.30
60 D 8101	11-272	Y	V	.46	.37	.30

SERIES 12-200 CANDELABRA BAYONET

Double-contact candelabra bayonet sockets with wire leads. Contacts are mounted in an insulating bakelite disc and separated by small coils. Disc is spring-loaded to assure positive contact. #18-gauge (16x30) leads rated at 80° C. Rated 75 watts, 125 volts. Type 12-230BN with nut. Type 12-240 snaps into 15/16" hole. For incandescent and neon glow lamps as G6, S6, 10C7 and NE-48. ■U.L. and C.S.A. Listed. Wt., 1 oz.

60 D 8102	12-201	X	X	.55	.43	.36
60 D 8104	12-212	X	E	.55	.43	.36
60 D 8105	12-240	Z	Z	.55	.43	.36
60 D 8106	12-271	Y	V	.55	.43	.36
60 D 8107	12-272	Y	W	.55	.43	.36
60 D 9330	12-230BN	Z	D	.71	.58	.46



SERIES 31 AND 31T NEON INDICATOR LIGHTS

Rectangular shape for maximum message display in compact areas. Have white nylon housings and chrome plated bezels. Equipped with high-brightness neon lamp and plastic lens which is available in four different colors. Includes proper dropping resistor for neon lamp. Series 31 includes 18-gauge insulated plastic leads, 6" long, stripped ½". Series 31T has .250" male brass tabs. ■U.L., C.S.A. Listed. 1 25/64 x 1 7/64 x 21/32" deep. Shpg. wt., 2 oz.

SERIES 31 NEON INDICATOR LIGHTS (6-Inch Wire Leads)

Stock No.	Mfr's Type	Lens Color	Volts	EACH 1-24	25-99	100-249	250-499
60 D 6018	31-2111-6	Red	110-125	.92	.74	.48	.43
60 D 6019	31-2113-6	Amber	110-125	.92	.74	.48	.43
60 D 6020	31-2117-6	Clear	110-125	.92	.74	.48	.43
60 D 6021	31-2115-6	White	110-125	.92	.74	.48	.43

SERIES 31T NEON INDICATOR LIGHTS (.250" Tabs)

60 D 6022	31-2111T	Red	110-125	.92	.74	.48	.43
60 D 6023	31-2113T	Amber	110-125	.92	.74	.48	.43
60 D 6024	31-2117T	Clear	110-125	.92	.74	.48	.43
60 D 6038	31-2115T	White	110-125	.92	.74	.48	.43

SERIES 1400 INTERMEDIATE SCREW

Intermediate screw sockets with wire leads. For incandescent and ozone lamps, as S-6 or S-11 intermediate lamps. ■U.L. and C.S.A. Listed. Shpg. wt., 1 oz.

Stock No.	Mfr's Type	Skt. Fig.	Bkt. Fig.	EACH 1-24	25-99	100-Up
60 D 8108	14-71	P	P	.55	.43	.36
60 D 8109	14-72	P	W	.55	.43	.36

SERIES 1600 MIDGET SCREW

Midget screw sockets with solder terminals, tinned for easy connections. For P-2½ or T-1¾ lamps. Shpg. wt., 1 oz.

60 D 8111	16-08	R	R	.50	.37	.30

SERIES 1800 CANDELABRA SCREW

Candelabra screw base socket. For incandescent and neon-glow lamps, as S6 and NE-45. Rated 75 watts, 125 volts. Insulating sleeve for use over screw sleeve is supplied to meet ■U.L. and C.S.A. requirements. *Bracket turned down. 1 oz.

60 D 8114	18-76	S	S*	.46	.31	.25
60 D 8115	18-79	S	S	.46	.31	.25

SERIES 25-00 MIDGET GROOVED

Subminiature midget-grooved sockets for midget-grooved base incandescent lamps as TL-1¾ and T-1¾ lens-end lamps. Have two solder terminals. Provision for rapid lamp insertion; built-in ejection feature. Shpg. wt., 1 oz.

60 D 8942	25-08	T	R	.61	.47	.42
60 D 8943	25-12	T	T	.61	.47	.42
60 D 8944	25-05	T	J	.61	.47	.42
60 D 8945	25-06	T	A	.61	.47	.42

SERIES 25-200 MIDGET GROOVED

Subminiature midget-grooved sockets. Same as Series 25-00 above, but have two insulated wire leads. For TL-1¾ and T-1¾ lamps. Shpg. wt., 1 oz.

60 D 8980	25-208	T	R	.66	.52	.46
60 D 8981	25-212	T	T	.66	.52	.46
60 D 8982	25-277R	T	N	.66	.52	.46

SERIES 25-200-1 MIDGET-GROOVED

Subminiature midget-grooved sockets. Same as Series 25-00 above, but grounded types with single wire lead. Type 25-230N-1 with nut. Type 25-240-1 snaps into 15/16" hole. For TL-1¾ and T-1¾. 1 oz.

60 D 8946	25-230N-1	D	D	.82	.68	.57
60 D 8947	25-240-1	T	Z	.66	.52	.46

SERIES 57-00 CANDELABRA BAYONET

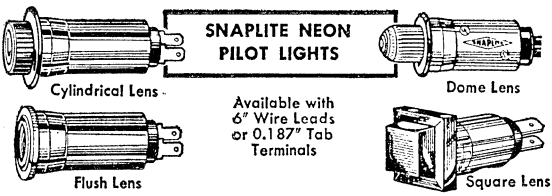
Double-contact candelabra bayonet with tabs. Rated 75 watts at 125 V. Zinc-plated steel brackets, .035-.042". For NE-48 or S6. Shpg. wt., 1 oz.

60 D 8120	57-24	CC	CC	.50	.37	.30
60 D 8121	57-41	AA	AA	.50	.37	.30
60 D 8122	57-45	BB	BB	.50	.37	.30

■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Indicator and Pilot Lights

LEECRAFT



Indicator lights with high-brightness neon lamps. Snap into ½" panel hole, no additional hardware required. Choice of four lens-cap styles. Built-in resistor, lamp replacement unnecessary during life of equipment. Insulated wire leads or 0.187" tab terminals (indicated by "T" in Type No.) ⅓-watt. Series 32 is for 110-125 volts. Series 35 (indicated by *) for 210-250 volts. U.L. Component Program-Recognized, and C.S.A. Listed. Shpg. wt., 1½ oz.

NEON LAMPS—CYLINDRICAL, DOME, FLUSH CAPS

Lens Color	Cylindrical Lens		Dome-Shape Lens		Flush Lens	
	Stock No.	Type 32-	Stock No.	Type 32-	Stock No.	Type 32-
Red	60 D 7921	2111	60 D 8126	2211	60 D 7982	2311
Amber	60 D 7922	2113	60 D 8127	2213	60 D 7983	2313
White	60 D 8124	2115	60 D 8129	2215	60 D 7984	2315
Clear	60 D 7923	2117	60 D 8128	2217	60 D 7985	2317
Red	60 D 7750	2111T	60 D 7758	2211T	60 D 7986	2311T
Amber	60 D 7751	2113T	60 D 7783	2213T	60 D 8749	2313T
White	60 D 7755	2115T	60 D 7882	2215T	60 D 6102	2315T
Clear	60 D 7756	2117T	60 D 7911	2217T	60 D 6103	2317T
Red	60 D 7925	2111*	60 D 6100	2211*	60 D 6104	2311*
Amber	60 D 7926	2113*	60 D 6101	2213*	60 D 6105	2313*

1-24, EA.	25-99, EA.	100-249, EA.	250-499, EA.	500-999, EA.
.86	.69	.45	.41	.37

ABOVE TYPES WITH CHROME BEZEL

Red	60 D 8999	R2111	60 D 6106	R2211	60 D 6108	R2311
Amber	60 D 9000	R2113	60 D 6107	R2213	60 D 6109	R2313
Red	60 D 9003	R2111T	60 D 9011	R2211T	60 D 9019	R2311T
Amber	60 D 9004	R2113T	60 D 9012	R2213T	60 D 9020	R2313T

1-24, EA.	25-99, EA.	100-249, EA.	250-499, EA.	500-999, EA.
.92	.75	.48	.44	.41

SQUARE LENS WITH CHROME BEZEL—110 VOLTS

Lens Color	6" Wire Leads		Tab Terminals	
	Stock No.	Mfr's Type	Stock No.	Mfr's Type
Red	60 D 6110	32R2911	60 D 6114	32R2911T
Amber	60 D 6111	32R2913	60 D 6115	32R2913T
White	60 D 6112	32R2915	60 D 6116	32R2915T
Clear	60 D 6113	32R2917	60 D 6117	32R2917T

1-24, EA.	25-99, EA.	100-249, EA.	250-499, EA.	500-999, EA.
.92	.75	.48	.44	.41

INCANDESCENT PILOT LAMPS WITH CHROME BEZEL

Like Type 32, but with incandescent lamp. 6" wire leads. 1½ oz.

Lens Cap	Lens Color	6 Volts (200 mA)		14 Volts (80 mA)		28 Volts (40 mA)	
		Stock No.	Type 32 R-	Stock No.	Type 32 R-	Stock No.	Type 32 R-
Cyl	Red	60 D 6118	G1-2111	60 D 6136	G3-2111	60 D 6154	G5-2111
Cyl	Grn	60 D 6119	G1-2112	60 D 6137	G3-2112	60 D 6155	G5-2112
Cyl	Amb	60 D 6120	G1-2113	60 D 6138	G3-2113	60 D 6156	G5-2113
Cyl	Blue	60 D 6121	G1-2114	60 D 6139	G3-2114	60 D 6225	G5-2114
Cyl	Wht	60 D 6122	G1-2115	60 D 6140	G3-2115	60 D 6157	G5-2115
Cyl	Clr	60 D 6123	G1-2117	60 D 6141	G3-2117	60 D 6158	G5-2117
Dome	Red	60 D 6124	G1-2211	60 D 6142	G3-2211	60 D 6159	G5-2211
Dome	Grn	60 D 6125	G1-2212	60 D 6143	G3-2212	60 D 6160	G5-2212
Dome	Amb	60 D 6126	G1-2213	60 D 6144	G3-2213	60 D 6161	G5-2213
Dome	Blue	60 D 6127	G1-2214	60 D 6145	G3-2214	60 D 6162	G5-2214
Dome	Wht	60 D 6128	G1-2215	60 D 6146	G3-2215	60 D 6163	G5-2215
Dome	Clr	60 D 6129	G1-2217	60 D 6147	G3-2217	60 D 6164	G5-2217
Flush	Red	60 D 6130	G1-2311	60 D 6148	G3-2311	60 D 6165	G5-2311
Flush	Grn	60 D 6131	G1-2312	60 D 6149	G3-2312	60 D 6166	G5-2312
Flush	Amb	60 D 6132	G1-2313	60 D 6150	G3-2313	60 D 6167	G5-2313
Flush	Blue	60 D 6133	G1-2314	60 D 6151	G3-2314	60 D 6168	G5-2314
Flush	Wht	60 D 6134	G1-2315	60 D 6152	G3-2315	60 D 6169	G5-2315
Flush	Clr	60 D 6135	G1-2317	60 D 6153	G3-2317	60 D 6170	G5-2317
Sq	Red	60 D 6171	G1-2911	60 D 6177	G3-2911	60 D 6183	G5-2911
Sq	Grn	60 D 6172	G1-2912	60 D 6178	G3-2912	60 D 6184	G5-2912
Sq	Amb	60 D 6173	G1-2913	60 D 6179	G3-2913	60 D 6185	G5-2913
Sq	Blue	60 D 6174	G1-2914	60 D 6180	G3-2914	60 D 6186	G5-2914
Sq	Wht	60 D 6175	G1-2915	60 D 6181	G3-2915	60 D 6187	G5-2915
Sq	Clr	60 D 6176	G1-2917	60 D 6182	G3-2917	60 D 6188	G5-2917

Series	1-24, EA.	25-99, EA.	100-249, EA.	250-499, EA.	500-999, EA.
G1	1.28	1.01	.617	.594	.574
G3, G5	1.23	1.06	.638	.623	.58

"TINEON" MINIATURE NEON INDICATOR LIGHTS

Flush-Mount Hi-Hat

High-brightness neon indicator lamps in white nylon housing. Built-in resistor to suit applied voltage. Press-fit into 5/16" hole. Choice of flush-mounting or hi-hat lens; red, amber, white or clear lens. Plastic insulated 6" leads, 18-ga., stripped ½". Speed nut for maximum security. ⅓-watt at 125 V. U.L. Component Program-Recognized, and C.S.A. Listed. Av. shpg. wt., 1 oz.

STANDARD FLUSH MOUNT

Stock No.	Mfr's Type	Color	EACH				
			1-24	25-99	100-249	250-499	500-999
60 D 8698	36N2311	Red	.81	.64	.45	.41	.37
60 D 8699	36N2313	Amber	.81	.64	.45	.41	.37
60 D 8700	36N2315	White	.81	.64	.45	.41	.37
60 D 8701	36N2317	Clear	.81	.64	.45	.41	.37

HI-HAT WITH ALUMINUM BEZEL

60 D 7000	36EN2111	Red	.97	.79	.55	.48	.41
60 D 7048	36EN2113	Amber	.97	.79	.55	.48	.41
60 D 7052	36EN2115	White	.97	.79	.55	.48	.41
60 D 7053	36EN2117	Clear	.97	.79	.55	.48	.41

FLUSH MOUNT WITH ALUMINUM BEZEL

60 D 7066	36EN2311	Red	.97	.79	.55	.48	.41
60 D 7068	36EN2313	Amber	.97	.79	.55	.48	.41
60 D 7069	36EN2315	White	.97	.79	.55	.48	.41
60 D 7498	36EN2317	Clear	.97	.79	.55	.48	.41

"TINEON" MINIATURE INCANDESCENT INDICATOR LIGHTS WITH ALUMINUM BEZEL

Meet low-voltage characteristics in white nylon housing. Press-fit into 5/16" hole. Choice of 6, 14 or 28 V.; flush-mounting or hi-hat lens; red, green, amber, blue, white, or clear lens. Aluminum bezels. 6" insulated leads. With speed nut. Ratings: 6 V. types, 200 mA; 14 V., 80 mA; 28 V., 40 mA. U.L. Component Program-Recognized, and C.S.A. Listed. Av. shpg. wt., 1 oz.

INDICATOR LIGHTS WITH HI-HAT LENS (Prices Below)

Lens Color	6 Volts (200 mA)		14 Volts (80 mA)		28 Volts (40 mA)	
	Stock No.	Type 41EN-	Stock No.	Type 41EN-	Stock No.	Type 41EN-
Red	60 D 6189	G1-2111	60 D 6201	G3-2111	60 D 6213	G5-2111
Green	60 D 6190	G1-2112	60 D 6202	G3-2112	60 D 6214	G5-2112
Amber	60 D 6191	G1-2113	60 D 6203	G3-2113	60 D 6215	G5-2113
Blue	60 D 6192	G1-2114	60 D 6204	G3-2114	60 D 6216	G5-2114
White	60 D 6193	G1-2115	60 D 6205	G3-2115	60 D 6217	G5-2115
Clear	60 D 6194	G1-2117	60 D 6206	G3-2117	60 D 6218	G5-2117

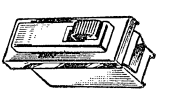
INDICATOR LIGHTS WITH FLUSH-MOUNT LENS (Prices Below)

Red	60 D 6195	G1-2311	60 D 6207	G3-2311	60 D 6219	G5-2311
Green	60 D 6196	G1-2312	60 D 6208	G3-2312	60 D 6220	G5-2312
Amber	60 D 6197	G1-2313	60 D 6209	G3-2313	60 D 6221	G5-2313
Blue	60 D 6198	G1-2314	60 D 6210	G3-2314	60 D 6222	G5-2314
White	60 D 6199	G1-2315	60 D 6211	G3-2315	60 D 6223	G5-2315
Clear	60 D 6200	G1-2317	60 D 6212	G3-2317	60 D 6224	G5-2317

PRICES FOR INCANDESCENT INDICATOR LIGHTS ABOVE

Series	1-24, EA.	25-99, EA.	100-249, EA.	250-499, EA.	500-999, EA.
G1	1.33	.96	.633	.599	.586
G3	1.28	1.01	.654	.628	.607
G5	1.23	.96	.63	.604	.584

"SLIDELITE" PILOT INDICATOR/SLIDE SWITCH

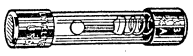


Slide switch and pilot indicator light in a single white nylon housing. Saves space and cost. For panels up to .090". Snaps into 1.281x.395" hole. Neon types rated ⅓-watt. SPST switch rated 3 amps AC or 0.5 amps DC at 125 V. U.L. Component Program-Recognized, and C.S.A. Listed. Chromed bezel. 6" wire leads. *Neon. Specify red, amber or white lens; †incandescent, specify red, green, amber, blue or white lens. Shpg. wt., 6 oz.

Stock No.	Mfr's Type	Light	Volts	Amps	EACH	
					1-24	25-99
60 D 6000C	51	*Neon	125	.....	1.50	1.05
60 D 6001C	51G1	†Incand.	6	.20	1.60	1.15
60 D 6002C	51G3	†Incand.	12-14	.08	1.60	1.15
60 D 6003C	51G5	†Incand.	28	.04	1.60	1.15

Fuses and Accessories

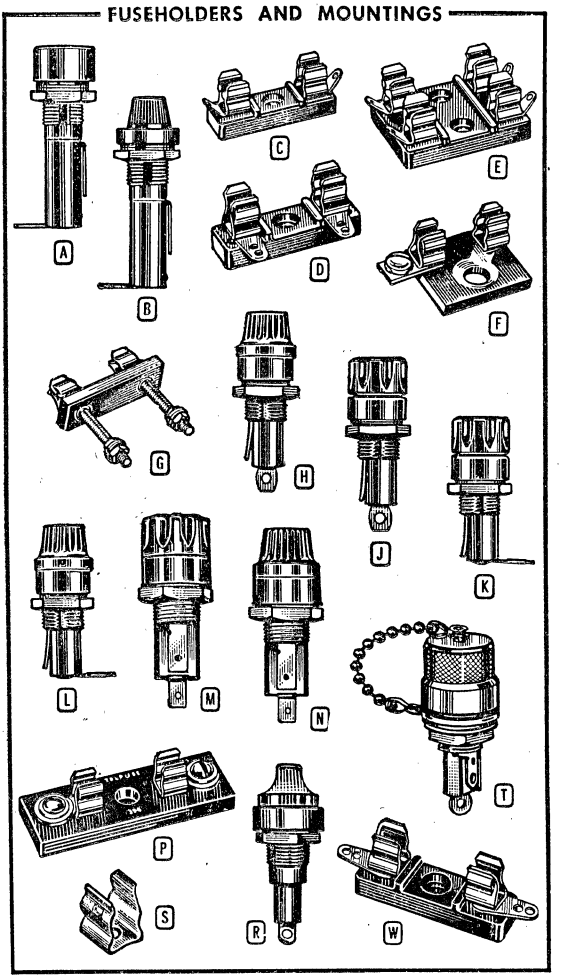
TYPE 3AG SLO-BLO FUSES



Series 313000. Have high time-lag to withstand heavy surges, yet blow quickly on short-circuits. Excellent where high inductive or capacitive surges or heavy starting currents are present. Blowing specifications: 110% of rating, 4 hrs. minimum; 135%, 1 hour maximum; 200%, 5 seconds minimum. Employ anti-fatigue construction—compound element, with spring and resistor. Fuses rated up to 5 amps are ▪U.L. Recog. All are rated at 125 V maximum except *32 V maximum. ‡Mfr's type is 3AG (amp) ASB, eg. 3AG 1/100 ASB. 1¼x¼". 2 oz.

‡ Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199	‡ Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199
1/100	57 D 3073	1.68	1.40	1.12	1-2/10	57 D 3643	1.14	.95	.76
1/32	57 D 3074	1.68	1.40	1.12	1-1/4	57 D 3090	1.14	.95	.76
1/16	57 D 3075	1.23	1.03	.82	1-1/2	57 D 3091	1.14	.95	.76
1/10	57 D 3076	1.23	1.03	.82	1-6/10	57 D 3092	1.14	.95	.76
1/8	57 D 3077	1.23	1.03	.82	2	57 D 3093	1.14	.95	.76
15/100	57 D 3078	1.23	1.03	.82	2-1/2	57 D 3094	.90	.75	.60
.175	57 D 3079	1.23	1.03	.82	2-8/10	57 D 3099	.90	.75	.60
3/16	57 D 3080	1.23	1.03	.82	3	57 D 3095	.90	.75	.60
2/10	57 D 3081	1.23	1.03	.82	3-2/10	57 D 3096	.90	.75	.60
1/4	57 D 3082	1.23	1.03	.82	4	57 D 3097	.90	.75	.60
3/10	57 D 3083	1.23	1.03	.82	5	57 D 3098	.90	.75	.60
3/8	57 D 3084	1.23	1.03	.82	6-1/4*	57 D 3100	.90	.75	.60
4/10	57 D 3641	1.23	1.03	.82	7*	57 D 3644	.90	.75	.60
1/2	57 D 3085	1.23	1.03	.82	8*	57 D 3101	.90	.75	.60
6/10	57 D 3086	1.23	1.03	.82	10*	57 D 3102	.90	.75	.60
7/10	57 D 3642	1.23	1.03	.82	15*	57 D 3103	.90	.75	.60
3/4	57 D 3087	1.23	1.03	.82	20*	57 D 3104	.90	.75	.60
8/10	57 D 3088	1.23	1.03	.82	25*	57 D 3105	.90	.75	.60
1	57 D 3089	1.23	1.03	.82	30*	57 D 3106	.90	.75	.60

FUSEHOLDERS AND MOUNTINGS



TYPE 3AG STANDARD FUSES

Series 312000. For short time-lag applications. Ideal for radios, amplifiers, transmitters, etc. Diagonal alignment of fuse element assures accurate blowing even when element is expanded by heat. Completely unaffected by high operating temperatures. Blowing specifications: 110% of rating, 4 hours min.; 135%, 1-hour max.; 200%, 10 sec. max. ▪U.L. Recog. All are rated 250 volts maximum except *125 and †32 V. ‡Complete Mfr's type is 3AG (amp) A, e.g. 3AG 1/100 A. 1¼x¼". 2 oz.

‡ Amps	Stock No.	PKG. OF 5 1-19	20-99	100-199	‡ Amps	Stock No.	PKG. OF 5 1-19	20-99	100-199
1/100	57 D 3600	2.25	1.88	1.50	2	57 D 3119	.39	.33	.26
1/32	57 D 3601	1.98	1.65	1.32	2-1/2	57 D 3657	.39	.33	.26
1/16	57 D 3107	.87	.73	.58	3	57 D 3120	.39	.33	.26
1/8	57 D 3108	.87	.73	.58	4	57 D 3121	.48	.40	.32
15/100	57 D 3654	.87	.73	.58	5	57 D 3122	.48	.40	.32
3/16	57 D 3110	.87	.73	.58	6	57 D 3125	.48	.40	.32
2/10	57 D 3656	.87	.73	.58	8*	57 D 3126	.69	.58	.46
1/4	57 D 3111	.57	.48	.38	4†	57 D 3703	.39	.33	.26
3/10	57 D 3112	.57	.48	.38	5†	57 D 3704	.28	.24	.19
3/8	57 D 3113	.57	.48	.38	6†	57 D 3709	.28	.24	.19
1/2	57 D 3114	.57	.48	.38	7-1/2†	57 D 3710	.28	.24	.19
6/10	57 D 3115	.57	.48	.38	10†	57 D 3705	.28	.24	.19
3/4	57 D 3116	.57	.48	.38	15†	57 D 3706	.28	.24	.19
1	57 D 3117	.39	.33	.26	25†	57 D 3707	.28	.24	.19
1-1/2	57 D 3118	.39	.33	.26	30†	57 D 3708	.28	.24	.19

FUSE MOUNTINGS AND HOLDERS

Fuse extractor panel mount posts and mounting, provide a quick, safe, simple method of mounting fuses. Shpg. wt., 2 oz.

INDUSTRIAL—FOR 3A AND 3AB

Stock No.	Mfr's Type	Fig.	Description	EACH 1-99	100-499	500-999
57 D 3000	341001	A	Screw slot	.57	.48	.38
57 D 3001	342001	B	Thumb knob	.57	.48	.38
57 D 3002	342012	H	Extractor post	.41	.35	.28
57 D 3003	342014	J	Miniature fuse post	.41	.35	.28
57 D 3004	342004	K	Miniature fuse post	.48	.40	.32
57 D 3005	342022	L	Miniature fuse post	.48	.40	.32
57 D 3300	342028	K	Quick Connect 3/16" Term.	.49	.41	.32
57 D 3301	342038	M	Quick Connect 3/16" Term.	.49	.41	.32
57 D 3302	342048	L	Quick Connect 3/16" Term.	.49	.41	.32
57 D 3303	342058	N	Quick Connect 3/16" Term.	.49	.41	.32
57 D 3006	350218	D	Single Fuse Mounting	.19	.16	.13
57 D 3304	350288	W	Single Fuse Mounting	.19	.16	.13
57 D 3007	353001	G	Panel-type mounting	.56	.47	.38
57 D 3008	356001	P	Screw terminals	.38	.32	.25
57 D 3009	357001	C	Lug terminals	.19	.16	.13
57 D 3010	357002	E	Double fuse mounting	.35	.30	.24
57 D 3238	101001	S	Phosphor bronze clips	.04	.03	.02

FOR 8AG

57 D 3013	372001	B	Thumb knob	.57	.48	.38
57 D 3014	383002	F	"Meter-back" mounting	.37	.31	.24
57 D 3015	387001	C	Lug terminals	.19	.16	.13
57 D 3016	387002	E	Double fuse mounting	.35	.30	.24

MILITARY—MIL-F-19207A (*RF Shield)

Stock No.	Mfr's Type	MIL No.	Fig.	Post Description	EACH 1-99	100-499	500-999
57 D 3677	342025	FHN20G	K	3AG miniature	1.36	1.14	.91
57 D 3676	342024	FHN26G2	H	3AG miniature	1.32	1.10	.88
57 D 3052	340255	FHN26G2*	T	3AG miniature	4.77	3.98	3.18
57 D 3678	342021	FHN26W	M	3AG waterproof	3.20	2.67	2.13
57 D 3680	372003	FHN31G2	B	8AG extractor	2.65	2.21	1.77

INDICATING TYPES—INDUSTRIAL *Fused circuit V 20A.

Stock No.	Type or MS No.	*Volt Range	Fig.	Knob Color	EACH 1-99	100-499	500-999
57 D 3019	344006	2½-7	R	Amber	2.80	2.33	1.86
57 D 3020	344012	7-16	R	Amber	2.80	2.33	1.86
57 D 3021	344024	16-32	R	Amber	2.80	2.33	1.86
57 D 3022	344125	100-125	R	Clear	1.80	1.50	1.20
57 D 3023	344250	200-250	R	Clear	1.80	1.50	1.20

INDICATING TYPES—MILITARY—MIL-F-19206A

57 D 3647	FHL-17G2	90-300	R	Clear	2.21	1.85	1.48
57 D 3648	FHL-18G2-1	12-22	R	Amber	3.32	2.77	2.22
57 D 3649	FHL-18G2-2	23-33	R	Amber	3.32	2.77	2.22
57 D 3650	FHL-18G2-3	34-45	R	Amber	3.32	2.77	2.22
57 D 3651	FHL-18G2-4	46-60	R	Amber	3.32	2.77	2.22
57 D 3652	FHL-18G2-5	61-80	R	Amber	3.32	2.77	2.22
57 D 3653	FHL-18G2-6	81-90	R	Amber	3.32	2.77	2.22

▪Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Fuses and Holders; Circuit Breakers

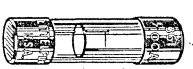
LITTELFUSE FUSES AND FUSE-HOLDERS

TYPE 3AB MEDIUM LAG FUSES

Series 314000. Steatite enclosed arc-quenching, powder-filled fuses. ▣U.L. Recog. to 15 A. Medium time lag. Shatter-proofed against quick shorts. For amplifiers, rectifiers, battery chargers, radios, etc. Max. volts 250, except *125. 1¼x¼". 2 oz. †Complete Mfr's type is 3AB (amp) A, e.g. 3AB ⅛A.

† Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199	† Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199
1/8	57 D 3711	.78	.65	.52	5	57 D 3719	.69	.58	.46
1/4	57 D 3712	.78	.65	.52	6	57 D 3720	.69	.58	.46
3/8	57 D 3713	.78	.65	.52	8	57 D 3721	.69	.58	.46
1/2	57 D 3714	.78	.65	.52	10	57 D 3722	.69	.58	.46
3/4	57 D 3715	.78	.65	.52	12	57 D 3723	.75	.63	.50
1	57 D 3716	.75	.63	.50	15	57 D 3724	.75	.63	.50
2	57 D 3717	.75	.63	.50	20*	57 D 3725	.75	.63	.50
3	57 D 3718	.75	.63	.50	25*	57 D 3726	.93	.78	.62

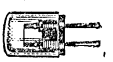
TYPE 8AG FAST-ACTION INSTRUMENT FUSES



Series 361000. High-speed action for the protection of delicate equipment. Ideal for microammeters, galvanometers, milliammeters, wattmeters, thermocouples, voltmeters, test equipment, small rectifiers and power tubes. 250 volts max. *125 volts. 1x¼". 2 oz. 5 FUSES PER PKG.

1/500	57 D 3214	6.00	5.00	4.00	3/8	57 D 3221	.57	.48	.38
1/200	57 D 3215	2.52	2.20	1.68	1/2	57 D 3222	.57	.48	.38
1/100	57 D 3216	2.25	1.88	1.50	1	57 D 3224	.39	.33	.26
1/32	57 D 3217	1.98	1.65	1.32	1½	57 D 3225	.39	.33	.26
1/16	57 D 3218	1.23	1.03	.82	2	57 D 3235	.39	.33	.26
1/10	57 D 3658	.87	.73	.58	3*	57 D 3236	.39	.33	.26
1/8	57 D 3219	.87	.73	.58	5*	57 D 3237	.39	.33	.26
1/4	57 D 3220	.57	.48	.38	.....	.....	.....	.....	.....

MICROFUSES



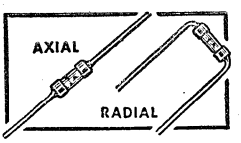
Type 273000. Submin. plug-in fuses with low res. and high-speed action. Glass cap for visible indication. Short-circuit interrupting capacity, 125 volts, 10,000 amps DC. Blowing specs: 100%, 4 hrs. min.; 200%, 5 sec. max. Holders below. †Mfr's type is Micro (amp) A, e.g. Micro 1/500 A. ¼x1¼". 2 oz.

† Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199	† Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199
1/500	57 D 3033	5.13	4.28	3.42	4/10	57 D 3059	4.29	3.58	2.86
1/200	57 D 3034	5.13	4.28	3.42	½	57 D 3060	4.29	3.58	2.86
1/100	57 D 3035	5.13	4.28	3.42	6/10	57 D 3061	4.29	3.58	2.86
1/64	57 D 3036	5.13	4.28	3.42	7/10	57 D 3062	4.29	3.58	2.86
1/32	57 D 3037	5.13	4.28	3.42	8/10	57 D 3063	4.29	3.58	2.86
1/20	57 D 3038	4.29	3.58	2.86	1	57 D 3064	4.29	3.58	2.86
1/16	57 D 3039	4.29	3.58	2.86	1½	57 D 3065	4.29	3.58	2.86
1/10	57 D 3040	4.29	3.58	2.86	2	57 D 3066	4.29	3.58	2.86
1/8	57 D 3041	4.29	3.58	2.86	3	57 D 3067	4.29	3.58	2.86
2/10	57 D 3056	4.29	3.58	2.86	4	57 D 3068	4.29	3.58	2.86
1/4	57 D 3057	4.29	3.58	2.86	5	57 D 3069	4.29	3.58	2.86
3/10	57 D 3058	4.29	3.58	2.86	.....	.....	.....	.....	.....

FUSEMASTER RACK ASSORTMENT

Type 094047. Rack displays 300 fuses. Sixty individual compartments for easy self-service. Holds index card on back of rack. Ideal for servicemen, laboratories, etc. With 100 fuses, inventory control backboard, pressure-sensitive blank inventory labels, mounting screws. 100 fuses includes: TYPE 3AG—ten ¼-amp; ten ½-amp, five 1-amp; five 2-amp; five 5-amp. TYPE 3 AG SLO-BLO-ten ¼-amp; five ½-amp; five 1-amp; five 2-amp; five 3-amp; ten 5-amp. TYPE C—ten 3/10-amp. TYPE N—five 3/10-amp; five 4/10-amp; five ½-amp fuses.
57 D 3071. Shpg. wt., 2 lbs. 16.57

PICOFUSE MICROMINIATURE FUSES



For micro-circuits of 125 volts or less where short circuit may be 300 amps at 125 VDC requiring fast action. Fuses can be encapsulated. Blow specifications: 100%. Four hours min.; 200%. 5 seconds max. 7/32x5/64". Shpg. wt., 1/5 gram, 2 oz. 5 FUSES PER PACKAGE.

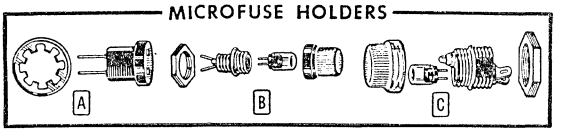
SERIES 275000 AXIAL LEADS					SERIES 276000 RADIAL LEADS				
Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199	Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199
1/8	57 D 3250	2.13	1.78	1.42	1/8	57 D 3260	2.13	1.78	1.42
1/4	57 D 3251	2.13	1.78	1.42	1/4	57 D 3261	2.13	1.78	1.42
3/8	57 D 3252	2.13	1.78	1.42	3/8	57 D 3262	2.13	1.78	1.42
1/2	57 D 3253	2.13	1.78	1.42	1/2	57 D 3263	2.13	1.78	1.42
3/4	57 D 3254	1.86	1.55	1.24	3/4	57 D 3264	1.86	1.55	1.24
1	57 D 3255	1.86	1.55	1.24	1	57 D 3265	1.86	1.55	1.24
2	57 D 3256	1.86	1.55	1.24	2	57 D 3266	1.86	1.55	1.24
3	57 D 3257	1.86	1.55	1.24	3	57 D 3267	1.86	1.55	1.24
4	57 D 3258	1.86	1.55	1.24	4	57 D 3268	1.86	1.55	1.24
5	57 D 3259	1.86	1.55	1.24	5	57 D 3269	1.86	1.55	1.24

3AG INDICATING FUSES

Series 334000. Medium acting fuses employ a silver plated pin which extends from end when fuse is blown. Pin acts as a visual indication or may be used to actuate an alarm or light. Rating: ¾-5A, 125 V; 6-20 A, 32 V. All types carry 110% of rating four-hours minimum; 135%. One-hour maximum. Mfr's type is "Indicating" followed by Amps. Shpg. wt., 2 oz.

3/4	57 D 3200	2.34	1.95	1.56	6	57 D 3207	2.52	2.10	1.68
1	57 D 3201	1.89	1.58	1.26	8	57 D 3208	2.52	2.10	1.68
1-1/2	57 D 3202	1.89	1.58	1.26	10	57 D 3209	2.52	2.10	1.68
2	57 D 3203	1.89	1.58	1.26	12	57 D 3210	2.52	2.10	1.68
3	57 D 3204	1.89	1.58	1.26	15	57 D 3211	2.52	2.10	1.68
4	57 D 3205	1.89	1.58	1.26	20	57 D 3213	2.52	2.10	1.68
5	57 D 3206	1.89	1.58	1.26	.....	.....	.....	.....	.....

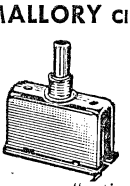
MICROFUSE HOLDERS



Stock No.	Mfr's Type	Fig.	Description	EACH 1-99	100-499	500-999
57 D 3123	281001	A	Miniature P/C Mtg.	.29	.24	.19
57 D 3633	281002	B	Front Panel	.72	.60	.48
57 D 3410	282001	B	Front Panel Alum.	1.31	1.09	.87
57 D 3412	282002	B	Rear Panel Alum.	1.24	1.03	.82
57 D 3413	282007	B	R/F Shielded	2.27	1.89	1.51
57 D 3414	282008	B	R/F Shielded	2.22	1.85	1.48
57 D 3415	284004	C	2½-7 V Indicating	2.21	1.84	1.47
57 D 3416	284005	C	7-16 V Indicating	2.21	1.84	1.47
57 D 3417	284006	C	16-32 V Indicating	2.21	1.84	1.47
57 D 3637	284003	C	100-125 V Indicating	1.55	1.29	1.03
57 D 3418	284107	C	12-22 V R/F Shielded Ind.	7.82	6.52	5.21
57 D 3419	284108	C	23-33 V R/F Shielded Ind.	8.83	7.36	5.88
57 D 3420	284109	C	34-45 V R/F Shielded Ind.	8.83	7.36	5.88
57 D 3280	284110	C	46-60 V R/F Shielded Ind.	8.83	7.36	5.88
57 D 3281	284111	C	61-80 V R/F Shielded Ind.	8.83	7.36	5.88
57 D 3283	284112	C	81-90 V R/F Shielded Ind.	8.83	7.36	5.88
57 D 3284	284113	C	91-125 V R/F Shielded Ind.	6.07	5.06	4.04

MALLORY CIRCUIT BREAKERS

- Provide Positive Overload Protection
- Tripping Time is Within 10 Seconds
- Have "Anti-Cheat" Reset Action



Stack-type circuit breakers available in 18 different current ratings from 0.5 to 7.0 amperes. For use in a wide variety of commercial and industrial applications. Precision engineered to ensure long-life and reliable operation plus positive overload protection. Non-cycling, constant-pressure "anti-cheat" reset action: will not permit resetting of circuit breaker until short circuit is eliminated. Fully compensated for temperature changes. Tripping time is within 10 seconds. Bushing mount. * indicates heavy-duty contacts. Av. shpg. wt., 3 oz.

Stock No.	Type CBB-	Amps	Stock No.	Type CBB-	Amps	EACH 1-24	25-49	50-99	100-249
57 D 3574	050	0.5	57 D 3579	200	2.0	.95	.84	.73	.59
57 D 3575	075	0.75	57 D 3580	225	2.25	.95	.84	.73	.59
57 D 3576	100	1.0	57 D 3581	250	2.5	.95	.84	.73	.59
57 D 3577	150	1.5	57 D 3582	275	2.75	.95	.84	.73	.59
57 D 3578	175	1.75	57 D 3583	300	3.0	.95	.84	.73	.59
57 D 3584	325*	3.25	57 D 3588	450*	4.5	1.02	.91	.79	.64
57 D 3585	350*	3.5	57 D 3589	500*	5.0	1.02	.91	.79	.64
57 D 3586	375*	3.75	57 D 3590	600*	6.0	1.02	.91	.79	.64
57 D 3587	400*	4.0	57 D 3591	700*	7.0	1.02	.91	.79	.64

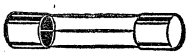
Bussmann Fuses, Mountings and Holders

MDL FUSETRON FUSES

Long time-lag prevents needless blows. Operates instantaneously on high overloads. Thermal cutout operates slowly on low overloads. 250 volts max. except *125 volts max. Size, 1¼x¼". ■U.L. Recog. 2 oz. 5 FUSES PER PKG.

Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199	Amp	Stock No.	PKG. OF 5 1-19	20-99	100-199
2/10	57 D 3451	1.25	1.05	.80	8/10	57 D 3456	1.25	1.05	.80
¼	57 D 3407	1.25	1.05	.80	1	57 D 3461	1.25	1.05	.80
½	57 D 3454	1.25	1.05	.80	2*	57 D 3464	1.15	.95	.75

AGC AND MTH FUSES



Low-resistance fuses with high-speed action to protect delicate meters and test equipment. Carry 110% of rated current; open in 1 hour or less at 135%. 250 volts maximum. ■U.L. Recog. Size, 1¼x¼". *Type MTH. 2 oz. 5 FUSES PER PKG.

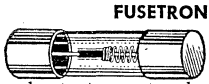
¼	57 D 3422	.55	.48	.38	2	57 D 3428	.40	.35	.26
½	57 D 3424	.55	.48	.38	3	57 D 3429	.40	.35	.26
1	57 D 3426	.40	.35	.26	4*	57 D 3430	.48	.40	.32
1½	57 D 3427	.40	.35	.26	5*	57 D 3431	.48	.40	.32

FUSETRON FNM FIBRE TUBE FUSES

Dual-element, slow-blowing fuses prevent needless blows resulting from high starting currents or sudden surges. Fuse link operates only on high overloads or short-circuits. Thermal cut-out functions on low overloads, slowly, giving a long time-lag. Protection is afforded against short-circuits or continued overloads. 250 V max. 1½x1³⁄₃₂". ■U.L. Recog. 2 oz. 10 FUSES PER PKG.

Amp	Stock No.	PKG. OF 10 1-7	8-Up	Amp	Stock No.	PKG. OF 10 1-7	8-Up
1/10	57 D 3756	3.50	3.00	3½	57 D 3271	3.50	3.00
2/10	57 D 3757	3.50	3.00	4	57 D 3272	3.50	3.00
3/10	57 D 3758	3.50	3.00	4½	57 D 3273	3.50	3.00
4/10	57 D 3759	3.50	3.00	5	57 D 3274	3.50	3.00
½	57 D 3760	3.50	3.00	6¼	57 D 3275	3.50	3.00
6/10	57 D 3761	3.50	3.00	7	57 D 3276	3.50	3.00
8/10	57 D 3762	3.50	3.00	10	57 D 3277	3.50	3.00
1	57 D 3763	3.50	3.00	12	57 D 3278	3.50	3.00
2	57 D 3270	3.50	3.00	15	57 D 3279	3.50	3.00

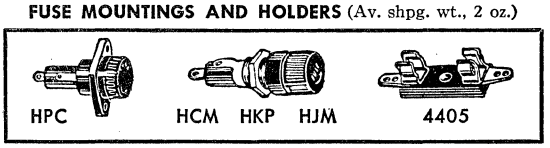
FUSETRON MDR GLASS TUBE FUSES



Dual-element fuses give two-way protection. Fuse link operates instantaneously on high overloads or short circuits. Thermal cutout operates slowly on low overloads. No needless blows resulting from high starting-currents or sudden surges. 250-V max. 1½x1³⁄₃₂". ■U.L. Recog. 2 oz. 10 FUSES PER PKG.

1/10	57 D 3764	4.00	3.30	½	57 D 3768	4.00	3.30
2/10	57 D 3765	4.00	3.30	6/10	57 D 3769	4.00	3.30
3/10	57 D 3766	4.00	3.30	8/10	57 D 3770	4.00	3.30
4/10	57 D 3767	4.00	3.30	.....	.....	.....	.....

FUSE MOUNTINGS AND HOLDERS (Av. shpg. wt., 2 oz.)



Stock No.	Mfr's Type	For Fuses	EACH 1-99	100-499	500-999
57 D 3500	HPC	13⁄32x1½"	.64	.53	.42
57 D 3477	HCM	13⁄32x1¼"	.58	.49	.39
57 D 3475	HKP	¼x1¼"	.41	.35	.28
57 D 3478	HJM	1x¼"	.41	.35	.28
57 D 3480	4405	1¼x¼"	.19	.16	.13

HKL AND HKR INDICATOR FUSEHOLDERS

For 1¼x¼" fuses. HKL has neon indicator which lights when fuse has blown, and is for use in 100 to 250-volt circuits. HKR is for 32-volt circuits, has incandescent indicator. ■U.L. Recog. Wt., 2 oz.

57 D 3501. HKL. 1-99 Ea. 1.70 100-499 Ea. 1.42 500-999 Ea. 1.14
57 D 3502. HKR. 1-99 Ea. 2.80 100-499 Ea. 2.33 500-999 Ea. 1.86

HKW PILOT LIGHT FUSEHOLDER

Neon lamp in fuseholder glows as long as fuse is unblown. Lamp goes out when fuse blows. 20 amps at 90-250 V. For panels up to ⅛" thick. With bulb. Length, 2¹³⁄₁₆"; dia., 13⁄16". Shpg. wt., 2 oz.

57 D 3573. 1-99..Ea. 3.40 100-499..Ea. 2.82 500-999..Ea. 2.26

TRON RECTIFIER FUSES

High interrupting capacity and very fast clearing which restricts let-through current and energy to very low values. Give safe short-circuit protection for systems with fault current to 200,000 amperes at 600 volts or less. Test specifications: carry 100% of rating; open at 1000 seconds between 120% and 180% of rating; open within 1 second at 250% of rating. In Table below, size is overall length by diameter, except * overall length by width, including terminals.

KAA SERIES (Max. Volts, 130. 1½x1³⁄₃₂".)

Amps	Stock No.	EACH 1-24	25-Up	Amps	Stock No.	EACH 1-24	25-Up
½	57 D 3127	1.10	.82	8	57 D 3135	1.10	.82
1	57 D 3128	1.10	.82	10	57 D 3137	1.10	.82
2	57 D 3129	1.10	.82	12	57 D 3138	1.10	.82
3	57 D 3130	1.10	.82	15	57 D 3139	1.10	.82
4	57 D 3131	1.10	.82	20	57 D 3140	1.10	.82
5	57 D 3132	1.10	.82	25	57 D 3141	1.10	.82
6	57 D 3133	1.10	.82	30	57 D 3142	1.10	.82

KAW SERIES (Max. Volts, 130. 1½x1³⁄₃₂".)

2	57 D 3144	1.10	.82	5	57 D 3147	1.10	.82
3	57 D 3145	1.10	.82	7	57 D 3148	1.10	.82
4	57 D 3146	1.10	.82	10	57 D 3150	1.10	.82

KAB SERIES (Max. Volts, 250. 2x9⁄16"; *3⅛x17⁄32".)

1	57 D 3157	1.23	.93	10	57 D 3166	1.23	.93
2	57 D 3158	1.23	.93	12	57 D 3167	1.23	.93
3	57 D 3159	1.23	.93	15	58 D 3168	1.23	.93
4	57 D 3160	1.23	.93	20	57 D 3169	1.23	.93
5	57 D 3161	1.23	.93	25	57 D 3170	1.23	.93
6	57 D 3162	1.23	.93	30	57 D 3171	1.23	.93
8	57 D 3164	1.23	.93	70*	57 D 3172	7.50	5.70

KAC SERIES (Max. Volts, 600. 2⅞x9⁄16".)

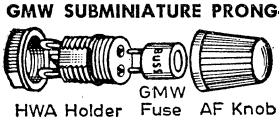
1	57 D 3179	1.65	1.23	10	57 D 3188	1.65	1.23
2	57 D 3180	1.65	1.23	12	57 D 3189	1.65	1.23
3	57 D 3181	1.65	1.23	15	57 D 3190	1.65	1.23
5	57 D 3183	1.65	1.23	30	57 D 3197	1.65	1.23

GLD INDICATING FUSES

Actuates a signal when used in HKA fuseholder or Signal Fuse Block. Fiber tube with silver-plated indicating pin that extends when fuse is blown. Dual-tube construction in sizes larger than 5 amps cannot be used in HKA fuseholder. Rated 125 V, except 8 amp and over, which are 32 V. ¼x1¼". Wt., 2 oz. 5 FUSES PER PKG.

Amps	Stock No.	PKG. OF 5 1-19	20-99	100-199	Amps	Stock No.	PKG. OF 5 1-19	20-99	100-199
¾	57 D 3548	2.35	1.95	1.55	6	57 D 3555	2.50	2.10	1.70
1	57 D 3549	1.90	1.60	1.25	8	57 D 3556	2.50	2.10	1.70
1½	57 D 3550	1.90	1.60	1.25	10	57 D 3557	2.50	2.10	1.70
2	57 D 3551	1.90	1.60	1.25	12	57 D 3558	2.50	2.10	1.70
3	57 D 3552	1.90	1.60	1.25	15	57 D 3559	2.50	2.10	1.70
4	57 D 3553	1.90	1.60	1.25	20	57 D 3560	2.50	2.10	1.70
5	57 D 3554	1.90	1.60	1.25	.....	.....	.....	.....	.....

GMW SUBMINIATURE PRONG-TYPE FUSES AND HOLDERS



Type GMW subminiature prong-type fuse rated 125 V maximum; fault current 300 A maximum. Opens at 200% within 10 seconds or less. Size, 0.27-in. diameter, ¼-in. long. Designed for Type HWA holder. Use Type AF knob for waterproof installation. *With Type AF knob. †Without Type AF knob. Av., 2 oz.

Amps	Stock No.	PKG. OF 10 1-9	10-49	50-99	Amps	Stock No.	PKG. OF 10 1-9	10-49	50-99
1/10	57 D 3592	5.60	4.70	3.80	1½	57 D 3597	5.60	4.70	3.80
¼	57 D 3593	5.60	4.70	3.80	2	57 D 3598	5.60	4.70	3.80
½	57 D 3594	5.60	4.70	3.80	3	57 D 3599	5.60	4.70	3.80
¾	57 D 3595	5.60	4.70	3.80	4	57 D 3602	5.60	4.70	3.80
1	57 D 3596	5.60	4.70	3.80	5	57 D 3603	5.60	4.70	3.80

Stock No.	Description	PKG. OF 10 1-9	10-49	50-99
57 D 3616	Type HWA* Holder, fits all Type GMW fuses	7.20	6.00	4.80
57 D 3617	Type HWA† Holder, fits all Type GMW fuses	6.40	5.30	4.20
57 D 3618	Type AF Knob, fits Type HWA holder	.90	.75	.60

■Recognized Under the Component Program of Underwriters' Laboratories, Inc.

Wood-Electric Circuit Breakers

SINGLE-POLE THERMAL TYPES

MODEL 105 MILITARY TYPE

Critically designed to meet the requirements of MIL-C-5809D and Drawing MS25244 for AC and DC circuits. Interrupts over 2000 amps. Maximum operating voltages are 250 volts AC and 32 volts DC. Units carry indefinitely 116% of rated load with ultimate trip at 138%. Trip time at 200% is approx. 25 seconds. Size, 1¾x¾x1". Shp'g. wt., 1½ oz.

Stock No.	Mfr's Type	Amps	EACH 1-9	10-24	25-99	100-249
57 D 3324	105-205-101	5	8.10	6.75	5.85	5.18
57 D 3325	105-507-101	7.5	8.10	6.75	5.85	5.18
57 D 3326	105-210-101	10	8.10	6.75	5.85	5.18
57 D 3327	105-215-101	15	8.10	6.75	5.85	5.18
57 D 3328	105-220-101	20	8.10	6.75	5.85	5.18
57 D 3329	105-225-101	25	8.10	6.75	5.85	5.18
57 D 3330	105-230-101	30	8.10	6.75	5.85	5.18
57 D 3331	105-235-101	35	8.10	6.75	5.85	5.18
57 D 3332	105-240-101	40	8.10	6.75	5.85	5.18
57 D 3333	105-250-101	50	8.10	6.75	5.85	5.18

MODEL 112 TOGGLE TYPE

Combination switch and circuit breaker. Carries 100% of rated load indefinitely, with ultimate trip at 135%. Tripping time at 200%, 3 sec. Interruption, over 3000 amps. For 250 VAC, 32 VDC. 2x¾x1¼". Shpg. wt., 2 oz.

57 D 3334	112-205-101	5	4.68	3.90	3.38	2.99
57 D 3335	112-507-101	7.5	4.68	3.90	3.38	2.99
57 D 3336	112-210-101	10	4.68	3.90	3.38	2.99
57 D 3337	112-215-101	15	4.68	3.90	3.38	2.99
57 D 3338	112-220-101	20	4.68	3.90	3.38	2.99
57 D 3339	112-225-101	25	4.68	3.90	3.38	2.99
57 D 3340	112-230-101	30	4.68	3.90	3.38	2.99
57 D 3341	112-235-101	35	4.68	3.90	3.38	2.99
57 D 3342	112-240-101	40	4.68	3.90	3.38	2.99
57 D 3343	112-250-101	50	4.68	3.90	3.38	2.99

MODEL 109 PUSH-PULL TYPE

Features push-pull button for opening or closing circuits. For 250 VAC, 32 VDC. Carries 100% rated load indefinitely, trips at 135%. Trip time, 12 sec. Interruption, over 5000 amps. 2x¾x1¼". Shpg. wt., 2 oz.

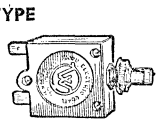
Stock No.	Mfr's Type	Amps	EACH 1-9	10-24	25-99	100-249
57 D 3344	109-205-101	5	4.41	3.68	3.19	2.83
57 D 3345	109-507-101	7.5	4.41	3.68	3.19	2.83
57 D 3346	109-210-101	10	4.41	3.68	3.19	2.83
57 D 3347	109-215-101	15	4.41	3.68	3.19	2.83
57 D 3348	109-220-101	20	4.41	3.68	3.19	2.83
57 D 3349	109-225-101	25	4.41	3.68	3.19	2.83
57 D 3350	109-230-101	30	4.41	3.68	3.19	2.83
57 D 3351	109-235-101	35	4.41	3.68	3.19	2.83
57 D 3352	109-240-101	40	4.41	3.68	3.19	2.83
57 D 3353	109-250-101	50	4.41	3.68	3.19	2.83

MODEL 111 PUSH-PULL TYPE

Features same specifications as Model 109 above, but with faster trip time of only 1 second. Shpg. wt., 2 oz.

57 D 3354	111-201-101	1	9.50	7.92	6.86	6.07
57 D 3355	111-202-101	2	9.50	7.92	6.86	6.07
57 D 3356	111-203-101	3	9.50	7.92	6.86	6.07
57 D 3357	111-204-101	4	9.50	7.92	6.86	6.07

MODEL 374 PUSH-TO-RESET TYPE



For economical low current protection. Button extends to indicate overload. Operates to 250 VAC, 32 VDC. Carries 100% of rated load, with ultimate trip of 135%. Trip time, 25 seconds at 200%. Interruption over 5000 amps. Size, 1⅜x1 1/16x1⅜". Shpg. wt., 1½ oz.

57 D 3358	374-201-101	1	2.77	2.31	2.00	1.77
57 D 3359	374-202-101	2	2.77	2.31	2.00	1.77
57 D 3360	374-203-101	3	2.77	2.31	2.00	1.77
57 D 3361	374-204-101	4	2.77	2.31	2.00	1.77

MODEL 375 PUSH-TO-RESET TYPE

Same specifications as above, but with faster trip time of only 12 seconds at 200%. Shpg. wt., 1½ oz.

57 D 3362	375-205-101	5	1.71	1.43	1.24	1.09
57 D 3363	375-207-101	7	1.71	1.43	1.24	1.09
57 D 3364	375-210-101	10	1.71	1.43	1.24	1.09
57 D 3365	375-215-101	15	1.71	1.43	1.24	1.09
57 D 3366	375-220-101	20	1.71	1.43	1.24	1.09

MAGNETIC TYPES

MODEL 130 SINGLE-POLE DC TYPE

For up to 50 VDC. Includes switch for aux. circuit. Carries 100% of rated load indefinitely, with ultimate trip at 120%. Trip time at 200%, approximately 15 milliseconds. Interrupts over 2000 amps at 50 volts DC. Size, ¾x2x2½". Shpg. wt., 4½ oz.

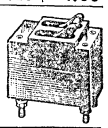
Stock No.	Mfr's Type	Amps	EACH 1-9	10-24	25-99	100-249
57 D 3367	130-201-101	1	9.38	7.82	6.77	5.99
57 D 3368	130-202-101	2	9.38	7.82	6.77	5.99
57 D 3369	130-203-101	3	9.38	7.82	6.77	5.99
57 D 3370	130-204-101	4	9.38	7.82	6.77	5.99
57 D 3371	130-205-101	5	9.38	7.82	6.77	5.99
57 D 3372	130-207-101	7	9.38	7.82	6.77	5.99
57 D 3373	130-210-101	10	9.38	7.82	6.77	5.99
57 D 3374	130-215-101	15	9.38	7.82	6.77	5.99
57 D 3375	130-220-101	20	9.38	7.82	6.77	5.99
57 D 3376	130-225-101	25	9.38	7.82	6.77	5.99
57 D 3377	130-230-101	30	9.38	7.82	6.77	5.99
57 D 3378	130-235-101	35	9.38	7.82	6.77	5.99
57 D 3379	130-240-101	40	9.38	7.82	6.77	5.99
57 D 3380	130-250-101	50	9.38	7.82	6.77	5.99

MODEL 122 SINGLE-POLE AC TYPE

(Not illustrated.) Similar to Model 130 above, except no auxiliary switch. Designed for 60 Hz AC, up to 250 volts. Will carry 100% of rated load indefinitely, with ultimate trip at 125%. Trip time at 200% is approximately 5 seconds. Interrupts over 1000 amps at 250 volts AC. Size, ¾x2x2½". Shpg. wt., 4½ oz.

57 D 3381	122-201-101	1	7.20	6.00	5.20	4.60
57 D 3382	122-202-101	2	7.20	6.00	5.20	4.60
57 D 3383	122-203-101	3	7.20	6.00	5.20	4.60
57 D 3384	122-204-101	4	7.20	6.00	5.20	4.60
57 D 3385	122-205-101	5	7.20	6.00	5.20	4.60
57 D 3386	122-207-101	7	7.20	6.00	5.20	4.60
57 D 3387	122-210-101	10	7.20	6.00	5.20	4.60
57 D 3388	122-215-101	15	7.20	6.00	5.20	4.60
57 D 3389	122-220-101	20	7.20	6.00	5.20	4.60
57 D 3390	122-225-101	25	7.20	6.00	5.20	4.60
57 D 3391	122-230-101	30	7.20	6.00	5.20	4.60
57 D 3392	122-235-101	35	7.20	6.00	5.20	4.60
57 D 3393	122-240-101	40	7.20	6.00	5.20	4.60
57 D 3394	122-250-101	50	7.20	6.00	5.20	4.60

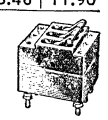
MODEL 190 TWO-POLE AC TYPE



For use up to 250 volts, 60 Hz AC. Both poles are interlocked and operate simultaneously. Carries 100% of rated load indefinitely, ultimate trip at 125%. Trip time at 200%, approx. 5 seconds. Interrupts over 1000 amps at 250 volts. 1½x2x2½". Wt., 9 oz.

Stock No.	Mfr's Type	Amps	EACH 1-9	10-24	25-99	100-249
57 D 3728	190-201-101	1	18.63	15.53	13.46	11.90
57 D 3729	190-202-101	2	18.63	15.53	13.46	11.90
57 D 3730	190-203-101	3	18.63	15.53	13.46	11.90
57 D 3731	190-204-101	4	18.63	15.53	13.46	11.90
57 D 3732	190-205-101	5	18.63	15.53	13.46	11.90
57 D 3733	190-207-101	7	18.63	15.53	13.46	11.90
57 D 3734	190-210-101	10	18.63	15.53	13.46	11.90
57 D 3735	190-215-101	15	18.63	15.53	13.46	11.90
57 D 3736	190-220-101	20	18.63	15.53	13.46	11.90
57 D 3737	190-225-101	25	18.63	15.53	13.46	11.90
57 D 3738	190-230-101	30	18.63	15.53	13.36	11.90
57 D 3755	190-235-101	35	18.63	15.53	13.46	11.90
57 D 3739	190-240-101	40	18.63	15.53	13.46	11.90
57 D 3740	190-250-101	50	18.63	15.53	13.46	11.90

MODEL 220 THREE-POLE AC TYPE



For use up to 250 volts, 60 Hz AC. All three poles are interlocked and operate simultaneously. Carries 100% rated load indefinitely, with ultimate trip at 125%. Trip time; 200%, 5 sec. Interrupts over 1000 amps at 250 V. 2⅝x2x2½". Shpg. wt., 14 oz.

57 D 3741	220-201-101	1	28.71	23.93	20.74	18.34
57 D 3742	220-202-101	2	28.71	23.93	20.74	18.34
57 D 3743	220-203-101	3	28.71	23.93	20.74	18.34
57 D 3744	220-204-101	4	28.71	23.93	20.74	18.34
57 D 3745	220-205-101	5	28.71	23.93	20.74	18.34
57 D 3746	220-207-101	7	28.71	23.93	20.74	18.34
57 D 3747	220-210-101	10	28.71	23.93	20.74	18.34
57 D 3748	220-215-101	15	28.71	23.93	20.74	18.34
57 D 3749	220-220-101	20	28.71	23.93	20.74	18.34
57 D 3750	220-225-101	25	28.71	23.93	20.74	18.34
57 D 3751	220-230-101	30	28.71	23.93	20.74	18.34
57 D 3752	220-235-101	35	28.71	23.93	20.74	18.34
57 D 3753	220-240-101	40	28.71	23.93	20.74	18.34
57 D 3754	220-250-101	50	28.71	23.93	20.74	18.34

ROTRON

Fans for Electronic Cooling

The complete distributor line of Rotron air-moving devices is shown on these five pages. Choose the model that fits your needs by checking index below, or compare the specs. of each type on pp. 434-439. Choose commercial flushing fans that deliver from 33-575 cfm; Nugget blower; Military cooling and flushing fans; rack panel cool units; interlock switches; plus accessories for mounting and maintenance.

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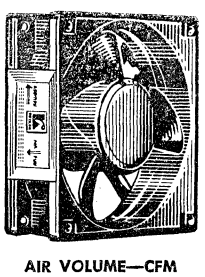


MARK 4 MUFFIN FAN

- Extra Lightweight—Only 1 lb.
- Low Noise Level of 42 dB
- Choose from Four Models

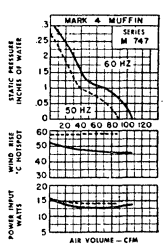
Small size and high air performance make this fan ideal for flushing computers, power supplies, office machinery, instruments and electronic control equipment. Weighs only 1 pound and measures only 4 11/16" square by 1½" deep.

Delivers 100 cubic feet per minute (free delivery) at a scarcely audible noise level of 42 dB. No lubricating necessary. Airflow is reversible by turning fan end-to-end.

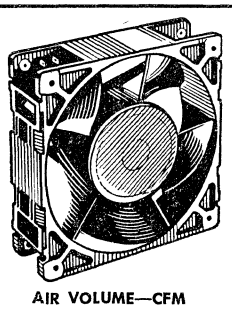
Ambient temperature: 0° to 160° F. Operating life: up to 10 years at normal room temperature. Aluminum heatsink at base of bearing. Encapsulated winding resists moisture and humidity. Impedance protected, ■U.L. Recognized motor. Electrical connection to tinned terminals or by using plug and cord assembly (sold below).

Available in four models: Skeleton Fan, Venturi Fan, Grille Fan (including attractive grille and mounting clips), and Filter Fan (including matched filter box and mounting clips). Draws 14 watts, 115 VAC. Av. shpg. wt., 1 lb.

AIR VOLUME—CFM



Stock No.	Description	EACH				
		1-9	10-24	25-49	50-99	100-499
60 D 8775	Skeleton Fan	12.65	11.50	10.30	9.30	8.65
60 D 8776	Venturi Fan	12.90	11.75	10.55	9.55	8.90
60 D 8777	Grille Fan	13.95	12.80	11.60	10.60	9.95
60 D 8778	Filter Fan	15.80	14.65	13.45	12.45	11.90



CENTAUR CT3A2 FAN

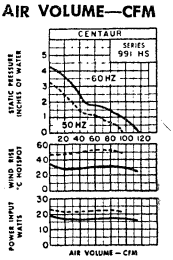
- Flame-Retardant Propeller
- Impedance Protected Motor
- Interchangeable with Muffin Fan

New aerodynamic principles provide maximum air performance of 115 cfm free delivery) on 60 Hz and operation up to .43" of water at zero delivery. Only 4 11/16" square by 1½" deep. Interchangeable with Muffin Fan. Ideal for flushing electronic control equipment, office copying machines, telephone equipment, and other industrial applications.

Equipped with 5-blade, high impact polycarbonate propeller that is flame retardent. Vinyl venturi block. Die-cast aluminum alloy mounting spiders. Sleeve bearings suitable for operation over range of —40° to +55° C. Impedance protected, ■U.L. Recognized motor.

Tinned brass terminals or Plug and Cord assembly (sold below). Exceptionally low noise level of 41 dB. Reversible airflow. Venturi Model CT3A2 only. Draws 16 watts, 115 VAC. Net wt., 1 lb. Shpg. wt., 1 lb.

AIR VOLUME—CFM



Stock No.	Description	EACH					
		1-9	10-24	25-49	50-99	100-249	250-499
60 D 8779	Venturi Fan	16.80	15.20	13.70	12.25	11.45	9.30

60 D 8614. Type 16238 Spiral Grille. ..... Each 1.00
60 D 8613. Type A15449 Filter Assembly. ..... Each 3.00
60 D 8615. Type 13996 Mounting Clips (set of 2) ..... Per pair .30
60 D 9268. Type 20132-2 Finger Guard. ..... Each .70
60 D 8616. Type 16415 Plug and Cord Assembly. ..... Each .70
60 D 7071. Type 18440 Filtercoat ..... Each 1.25
60 D 8618. Type 19263 Oiler Kit. ..... Each 3.50
60 D 8617. Type 19263-4 Lubricant. ..... Each 2.00

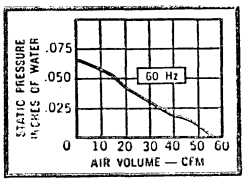
■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

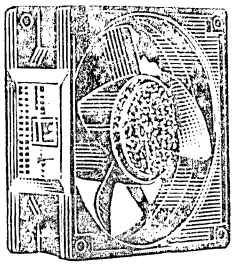
Rotron Commercial Flushing Fans

DELIVERS 65-CFM

Whisper Fan

SUPER-QUIET





- Only 4 11/16" Square x 1½" Deep
- 65 cfm Free Delivery
- Ambient Temperature to 160°F

Exceptionally quiet operation makes the Whisper Fan a first choice for all applications where noise must be minimized. Low 18 dB noise level makes it perfect for offices, laboratories, commercial sound systems, as well as many other industrial applications. Extends component life and improves performance by delivering a substantial quantity of cooling air. Advanced bearing system and relative slow speed (1800 rpm nominal) assure long life. Interchangeable with the Muffin Fan (on facing page). Can be used in round or square opening or mounted with two spring-steel clips (order below). High-impact, flame-retardant, polycarbonate frame. Encapsulated bus-bar leads with solder terminals provide maximum resistance to humidity. Draws only 8 watts. U.L. approved. 115 V, 50-60 Hz AC. *Less venturi block. Net wt., 1 lb. Av. shpg. wt., 1 lb.

Stock No.	Description	EACH				
		1-9	10-24	25-49	50-99	100-249
60 D 9400	Skeleton Fan*	14.65	13.35	12.45	10.55	9.75
60 D 8611	Venturi Fan	14.90	13.60	12.70	10.80	10.00
60 D 8610	Grille Fan	15.95	14.65	13.75	11.85	11.05
60 D 8612	Filter Fan	17.80	16.50	15.60	13.70	12.90

DELWYN WHISPER FAN KIT. Venturi Fan, cord, plug, mtg. hdwe.
16 D 2031 ..... Each 15.95

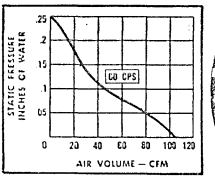
ACCESSORIES FOR MUFFIN, WHISPER, SENTINEL FANS

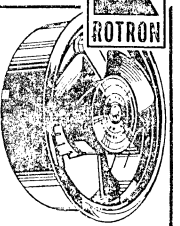
A15449. Filter Assembly. Includes filter, frame and clips.
60 D 8613. ..... Each 3.00
60 D 8614. #16238 Standard Spiral Grille ..... Each 1.00
60 D 9401. #17826 Grille, Expanded Metal ..... Each 1.00
60 D 8615. #13996 Mounting Clips ..... Per Pair .30
60 D 9268. #20132-2 Finger Guard ..... Each .70
60 D 8616. #16415 Plug and Cord Assembly ..... Each .70
60 D 8619. A15448 Filter Cartridge for Muffin Fan ..... Each 2.25
60 D 7071. #18440 Filtercoat ..... Each 1.25

LOW-COST 100-CFM

Skipper

COMPACT FAN





- Only 5 3/16" Diameter, 1 47/64" Deep
- 100 cfm Free Delivery
- Shaded-Pole Motor Lasts to 5 Years

Handsomely designed fan provides really economical cooling. Ideal for computers, office equipment, general electronic equipment, vending machines, sound systems, and many other applications. Delivers 100 cubic feet of cooling air per minute (free delivery) at ambient temperatures up to 140° F. Heat sink at base of bearing helps keep motor cool. Quiet in operation—only 38 dB noise level. Airflow can be easily reversed with mounting accessories listed below. Mounts easily with a single retaining ring; no mounting holes needed—just a hole for the air flow, in which the fan inserts.

Venturi is molded from rugged polypropylene; motor and mounting spiders are die-cast thermal conductive aluminum. Highly resistant to damage. Solder terminals. 115 volts, 50-60 Hz AC. 15 watts. Recog. under component program of U.L., Inc. Life expectancy in excess of 5 years if lubricated regularly with oiler kit (below). Skeleton fan includes only fan and motor; Venturi fan includes fan, motor and venturi ring. Net wt., 14 oz. Shpg. wt., 15 oz.

Stock No.	Mfr's Type	Fan Type	EACH					
			1-9	10-24	25-49	50-99	100-249	250-499
60 D 9766	SKP4	Skel.	8.60	7.90	7.70	7.55	7.25	6.80
60 D 8715	SKR4	Ven.	9.15	8.35	8.15	7.95	7.70	7.25

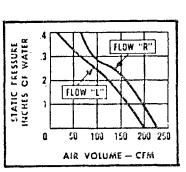
ACCESSORIES FOR SKIPPER FAN

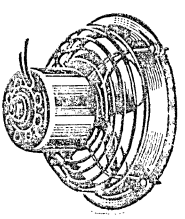
60 D 9768. Type 19561-2 Mounting Plate ..... Each .50
60 D 8716. Type 19342 Ring ..... Each .50
60 D 9767. Type 20575 Clamp ..... Each .50
60 D 9769. Type 20757 Grille ..... Each .45
60 D 9770. Type 18944 Plug and Cord Set ..... Each .75
60 D 9771. Type 20576 Solder Boat ..... Each .15
60 D 8618. Type 19263 Oiler Kit ..... Each 3.50
60 D 8617. Type 19263-4 Lubricant ..... Each 2.00

COMPACT 220-CFM

PF

PROPELLER FAN





- Only 8⅛" Diameter, 4½" Deep
- 220 cfm Free Delivery
- Sleeve-Bearing, Shaded-Pole Motor

Compact fan for flushing instrument cabinets, transmitter cubicles, relay racks, and similar enclosures. Inexpensive and highly reliable for mild ambient and non-military cooling requirements. Moves 220 cfm of air, optimum, or 100 cfm at 0.2" water gauge, at an ambient temperature of up to 125° F. Can be mounted directly against enclosure wall without spacers, venturi rings, standoffs or brackets. May be used with dust filter. Has aluminum propeller, anodized aluminum mounting ring, lustre zinc-plated steel wire guard. Motor is shaded-pole type with sleeve bearings. Motor case is drawn steel, finished in green baked enamel. Designed for continuous duty, with choice of airflow direction: Model PF-L is push type, Model PF-R is pull type. Size, 8⅛-inches diameter and 4½-inches deep. For 110-115 volts, 50-60 Hz AC, single-phase. Net wt., 2.8 lbs. Shpg. wt., 3¼ lbs.

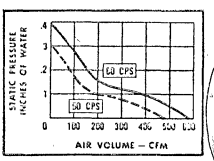
Stock No.	Mfr's Type	Air-Flow	EACH			
			1-9	10-24	25-49	50-99
60 D 8566	PF-L	Push	16.85	14.30	13.55	12.65
60 D 8567	PF-R	Pull	16.85	14.30	13.55	12.65

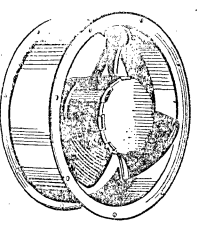
ATTENTION BUYERS—Allied Electronics makes immediate shipment on all models of Rotron fans. Make Allied your headquarters for Rotron fans and all electronic components at quantity prices.

HIGH-CAPACITY 575-CFM

Caravel

THIN FAN





- 10" Diameter, Only 3½" Deep
- 575 cfm Free Delivery
- Sealed Stainless Steel Ball-Bearings

Smartly styled, high-capacity thin fan for cooling large cabinets, relay racks, transmitter cubicles, computers, and other large equipment. Its thinness (only 3½" deep), low noise level (49 dB), reliable performance and low cost make the Caravel an ideal fan for any cabinet. Mounts directly on panel, bottom, side wall, or top of cabinet, using holes around circumference of venturi. Airflow may be reversed by turning fan end-for-end. Ambient temperature range, —20° to +140° F. Die-cast aluminum venturi and spider; polycarbonate propeller and terminal block. Sealed ball-bearing motor assures long, quiet life with no maintenance. Choice of connections: terminal block, Type CL2T; or 24" leads, Type CL2L. Mating cord and plug are available (below). Type 19694-2 Screen Guard is optional (below). 1650 rpm. 115 volts, 50-60 Hz AC, single-phase. Net wt., 4.3 lbs. Shpg. wt., 5¾ lbs.

60 D 9399X. Type CL2T Terminal block connection. 1-9 . Each 28.70
10-24 ..... Each 25.50
25-49 ..... Each 22.45 50-99 ..... Each 20.90

60 D 6875X. Type CL2L. With 24" leads. 1-9 ..... Each 28.20
10-24 ..... Each 24.95
25-49 ..... Each 21.95 50-99 ..... Each 20.40

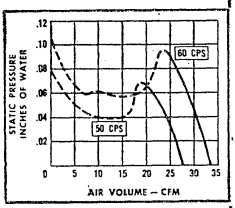
60 D 9804. Type 19694-2 Screen Guard. 1-9 ..... Each 2.15
10-24 ..... Each 1.90
25-49 ..... Each 1.70 50-99 ..... Each 1.65

60 D 3800. Type 17555 Plug and Cord. 1-99 ..... Each .70

Rotron Commercial Flushing Fans

ROTRON

33-CFM SPRITE AXIAL FAN



- Very Small, Only 3⅛" Square, 1⅝" Deep
- Provides 33 cfm Free Delivery
- Ambient Temperatures from —20°F to +140°F
- Very Quiet 35 dB Noise Level

Ideal for applications where space is at a premium. Size, only 3⅛" square by 1.635" deep. Specially designed to fit 3½" panel height in relay racks. Delivers 33 cfm (free delivery) with aerodynamic performance tailored to produce high pressure in the range approaching free delivery. In many applications, the Sprite will outperform larger, conventionally designed fans. Typical commercial uses include: office copying machines, power supplies, transmitters and receivers, counters, core memory equipment, paper-tape equipment, printers, digital voltmeters, etc.

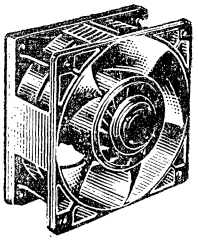
Mounts easily with through-holes in corners of flanges at opposite ends of fan barrel. Extremely quiet operation, only 35 dB noise level. Wide temperature range: —20° F to +140° F. Venturi, spiders, and motor mounting are single aluminum die-casting. Nine-blade propeller is molded of high-impact, flame-retarding polycarbonate. Airflow is reversible by turning fan end-for-end. Life expectancy up to 5 years if lubricated with oiler kit (below).

Brass solder terminals. Plug and cord available as accessory. For 115 volts, 50-60 Hz AC; 11 watts. Motor is impedance-protected to ■U.L. requirements. Accessories for Sprite Fan are listed below. Net wt., 14 oz. Shpg. wt., 12 oz.

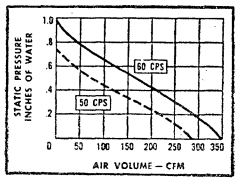
60 D 6764. Model SP2A2 Sprite Fan. 1-9.....Each 13.90
10-24.....Each 13.65 25-49.....Each 12.45
50-99.....Each 11.00 100-249.....Each 10.20

ACCESSORIES FOR SPRITE FAN

60 D 6765. Type 20049 Finger Guard.....Each .75
60 D 6766. Type 20787 Plug and Cord Set.....Each .95
60 D 8588. Type 22509 Oiler Kit.....Each 3.50
60 D 8589. Type 22509-4 Lubricant.....Each 2.00



COMPACT 350-CFM TARZAN FAN



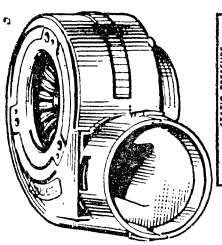
- Compact, 7" Square, 4 11/32" Deep
- 350 cfm Free Delivery
- Life is 3 to 4 Years at 120° F

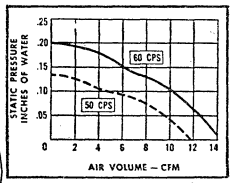
Unique axial fan designed for cooling tightly-packed electronic cabinets and chassis. Large-area air distribution, eliminating space-consuming discharge diffusers, and shallow axial-depth (4 11/32") dramatically reduce the amount of space needed. Radical departure in fan design provides centrifugal blower performance in a compact axial-flow fan. Ideal for compact air-to-liquid heat exchangers, printed-circuit-card chassis for solid-state components, densely packaged relay-rack communications equipment, and other applications where impedance to airflow is higher than normal. Circulates air at 350 cfm (free delivery) and up to 0.9" of water at cutoff. Airflow is reversible by turning fan end-for-end.

For use at ambient temperatures up to 131° F. Life to 4 years when operated at 120° F. Has phenolic venturi, diecast aluminum spiders. High-impact, flame-retarding, polycarbonate 5-blade propeller. Double-shielded ball bearings are lubricated for life to allow continuous-duty operation without maintenance. Ventilated impeller hub to insure positive cooling of motor. Fan is easily mounted by through-holes at corners of flanges, at opposite end of barrel. Size, only 7" square and 4 11/32" deep. Two models give choice of electrical connections: Model TN3B2 has solder terminals; Model TN3D2 has 12" leads. For 115 volts, 50-60 Hz AC, single-phase. Net wt., 5 lbs. Shpg. wt., 5 lbs.

Stock No.	Mfr's Type	Connector Type	EACH 1-9	10-24	25-49	50-99
60 D 8717	TN3B2	Terminals	45.40	39.40	36.50	33.45
60 D 8718	TN3D2	12" leads	44.70	38.75	35.80	32.75
60 D 8719	21196-2	Guard	1.60	1.50	1.40	1.30
60 D 6874	20990	Filter Box	10.00	9.50	8.90	8.25

60 D 8800. Type 17555 Plug and Cord Set. For Model TN3B2 Tarzan Fan, with terminal connections. 1-99.....Each .70
60 D 7071. Type 18440 Filtercoat. 1-99.....Each 1.25





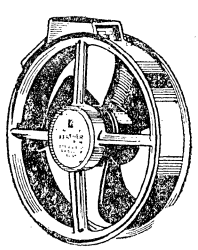
SPOT-COOLING 14-CFM nugget BLOWER

- Compact, Only 3 19/32x4 1/32x2 1/8"
- 14 cfm Free Delivery
- For Ambients to 55° C

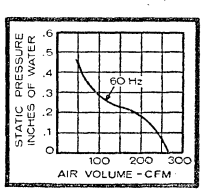
Provides direct blast of air on any specific component or hot spot in electronic equipment. Ideal for test instruments, transmitters, TV cameras, tape recorders, office machinery. Rugged plastic housing is easily rotated to a choice of three positive locking positions to direct air to desired location. Versatile mounting—may be mounted from inlet, end of motor, or outlet—using optional flange, below. Has provision for ducting to inlet or from outlet. Centraxial wheel insures high efficiency, excellent volume to pressure characteristics. Special miniature subfractional horsepower 3200-rpm induction motor draws only 7 watts of power. Weighs only 0.6 lb. *Type NTP2 is supplied without housing, for use as a miniature air stirring device; requires space of only 2½x2". For 115 volts, 50-60 Hz AC, single-phase. ■U. L. Recognized. 14 oz.

Stock No.	Mfr's Type	EACH 1-9	10-24	25-49	50-99	100-249
60 D 8793	NTH2	19.95	18.05	16.20	15.15	14.35
60 D 8794	NTP2*	18.85	16.95	15.10	14.05	13.25

60 D 8720. Type 17181 Housing.....Each 1.75
60 D 8795. Type 17471 Outlet Flange.....Each 1.00
60 D 8796. Type 17469 Inlet Rim.....Each .70
60 D 8797. Type 17597 Inlet Clamp.....Each .70
60 D 8798. Type 17597-1 Outlet Clamp.....Each .70
60 D 8799. Type 19803 Threaded Inserts for Inlet.....Set of 3 for .25
60 D 8800. Type 17555 Plug and Cord.....Each .70



EXTRA-LIGHT 270-CFM FEATHER FAN



- Compact, 7" Diameter, 2 7/16" Deep
- 270 cfm Free Delivery
- For Ambients to 65° C

TYPE 103. Delivers or exhausts large volume of air in limited spaces requiring a shallow fan (only 2 7/16" deep). Excellent for computer consoles, relay racks, power supplies, heat exchangers, and other systems. Powered by multi-slot induction motor with pre-lubricated stainless steel ball bearings. Ambient temperature range, —55° C to +65° C. Easy clamping-rim mounting provides reversible airflow. Tinned brass terminals. High-impact, fungus-proof, 2-tone gray polycarbonate plastic. Includes capacitor mounted on fan venturi. Permanent, non-loading washable Filter Box, cord, plug below. Aerodynamically and mechanically interchangeable with Rotron Saucer Fan. 22 watts. 115 V, 50-60 Hz AC, single-phase. ■U.L. Recog. Net. wt., 1.5 lbs. Shpg. wt., 2 lbs.

Stock No.	Mfr's Type	Description	EACH 1-9	10-24	25-49	50-99
60 D 8593	103	Feather Fan	34.00	30.20	28.50	26.90
60 D 7246	124110	Filter Box	10.15	9.20	8.60	8.10
60 D 8591	14459	Rim-Mount Guard	3.65	3.25	2.90	2.70
60 D 8592	14651	Panel-Mount Guard	3.65	3.25	2.90	2.70

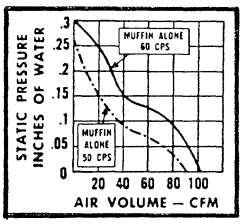
60 D 7247. Type 16410 Mounting Clamp. Uses 3.....Each .05
60 D 7070. Type 14611 Panel-Mount Clip. For Type 14651 Panel-Mount Guard. 3 required per Guard.....Each .15
60 D 9393. Type 16398 Plug and Cord.....Each .90
60 D 7071. Type 18440 Filtercoat. 1-99.....Each 1.25

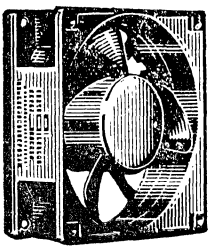
■Recognized Under the Component Program of Underwriter's Laboratories, Inc.

Rotron Military and Panel Fans

ROTRON COMPACT 100-CFM COMMERCIAL FLUSHING FANS

GOLD SEAL *muffin fan*





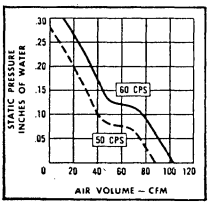
- Provides 100 cfm Free Delivery
- Only 4 11/16" Square x 1 ½" Deep
- For Ambient Temperatures to 160° F
- Operating Life Up to 6 Years at 70° F

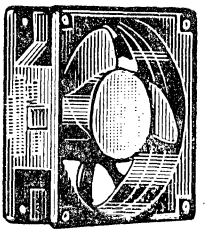
Cools, directs heat, or ventilates at moderate cost. Excellent for computers, office machinery, electronic equipment, TV cameras, many other industrial applications. Only 4 11/16" square by 1½" deep. High-impact polycarbonate grille of advanced aerodynamic design allows amazingly quiet operation. Delivers 100 cubic feet per minute (free delivery) at a scarcely audible noise level of 42 dB. Airflow is reversible by turning the fan end-for-end. Temp.: 0° to 160° F. Operating life: up to 6 years at normal room temperature. Filter fan has 14x18 mesh aluminum filter in high-impact polycarbonate frame. Solder terminals allow fast, easy hook-up. Mounting clips included with Grille Fan and Filter Fan. 14 watts. 115 V, 50-60 Hz AC. Net wt., 1 lb. Av. shpg. wt., 1 lb.

Stock No.	Description	EACH				
		1-9	10-24	25-49	50-99	100-499
60 D 8599	Skeleton Fan	12.65	11.50	10.30	9.30	8.65
60 D 8597	Venturi Fan	12.90	11.75	10.55	9.55	8.90
60 D 8596	Grille Fan	13.95	12.80	11.60	10.60	9.95
60 D 8598	Filter Fan	15.80	14.65	13.45	12.45	11.90

60 D 8618. Type 19263 Oiler Kit.....Each 3.50
60 D 8617. Type 19263-4. Lubricant.....Each 2.00

Sentinel FAN





Meets MIL-E-4970A

- Provides 100 cfm Free Delivery
- Dimensionally Interchangeable with Muffin Fan
- For Ambient Temperatures to 100° C
- Meets MIL-E-4970A • U.L. Recognized

Lightweight fan with heavyweight stamina and power. For ultra-rugged applications where heat and the avoidance of maintenance are major factors. Weighs only 1 pound and measures only 4 11/16" square by 1½" deep, yet delivers 100 cfm at ambient temperatures up to 100° C. Every feature for cool operation at high ambient temperatures and long life. Aluminum heat sink draws heat from the winding for a cooler running motor. Lifetime-lubricated stainless-steel ball bearings. Venturi is high-impact glass-filled phenolic for maximum durability and insulation. Stator is completely encapsulated for protection from moisture and humidity. Meets requirements of MIL-E-4970A. *U.L. Recog. motor Series 747. For 115 V, 50-60 Hz AC. Skeleton fan for use where only fan and motor are required. Available with glass-filled phenolic venturi (Venturi Fan); with venturi, grille and mtg. clips (Grille Fan); with filter assembly, mtg. clips (Filter Fan). Shpg. wt., 1 lb.

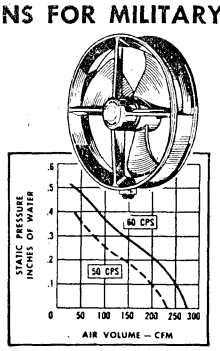
Stock No.	Description	EACH				
		1-9	10-24	25-49	50-99	100-249
60 D 8804	Skeleton Fan	24.75	23.45	21.25	18.55	17.85
60 D 8803	Venturi Fan	25.00	23.70	21.50	18.80	18.10
60 D 8802	Grille Fan	26.10	24.80	22.60	19.90	19.20
60 D 8801	Filter Fan	28.00	26.70	24.50	21.80	21.10

See Page 439 for Muffin and Sentinel Fan Accessories.

FLUSHING FANS FOR MILITARY GROUND-SUPPORT EQUIPMENT

SAUCER® FAN

- 280 cfm Free Delivery
- Very Thin 7" Diameter x 2½" Deep
- For Ambients to 72° C
- Meets Applicable MIL Specs



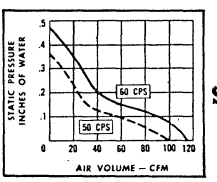
TYPE 340ZS. Specially designed for flushing tightly packaged electronic equipment cabinets and consoles where high air performance is required and space limited to where depth of fan is critical. Provides an air delivery of 280 cubic feet per minute. Powered by a multi-slot induction motor which incorporates stainless-steel ball bearings that are prelubricated for life. Ambient temperature range of −55° C to +72° C. Airflow is reversible by turning the fan end-for-end. Electrical connections are made to a compact terminal block. Requires a 2.0 μF capacitor for motor operation (order below). Dimensionally interchangeable with Feather Fan on facing page. Clamping rims are located at each end of the venturi for easy mounting. A filter box is available with a permanent, non-loading washable filter (below). Meets MIL specs for ground, shipboard. 115 VAC, 50-60 Hz. Actual wt., 1.6 lbs. Shpg. wt., 2 lbs.

60 D 8587. 1-9.....Each 70.40 10-24.....Each 58.30
25-49.....Each 51.90 50-99.....Each 49.15
43 D 4625. Capacitor. 1-9 Each 3.33 10-24.....Each 2.22

ACCESSORIES

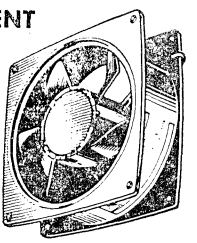
Stock No.	Mfr's Type	Description	EACH			
			1-9	10-24	25-49	50-99
60 D 8591	14559	Rim mt. guard	3.65	3.25	2.90	2.70
60 D 8592	14651	Panel mt. guard	3.65	3.25	2.90	2.70
60 D 8590	121802	Filter box	21.40	20.00	18.75	17.65

60 D 8578. 109074-337 Synclamps. (3 required per fan.)....Each .60
60 D 6872. 309074 Reverse Synclamps. (3 required).....Each .60
60 D 7070. 14611 Panel Mtg. Clip. (3 per 14651 guard).....Each .15
60 D 7071. 18440 Filtercoat, Can.....Each 1.25



VERY THIN MILITARY-TYPE FAN

SPARTAN



- Provides 110 cfm Free Delivery
- Size is Only 4 11/16" Square x 1½" Deep
- For Ambient Temperatures to 100° C
- Meets Applicable Military Specifications

Military version of famous Muffin Fan, but with higher pressure-to-volume characteristics. Has all the utility of vane-axial and tube-axial fans. Only 4 11/16" sq. x 1½" deep. 5-blade propeller; double-shielded, stainless-steel, lifetime-lubricated ball bearings for 100° C max. ambient. Reversible by turning fan end-for-end. Venturi ring, mtg. spider and hub are black-enameled, integral aluminum casting. Through-hole mtg. Meets MIL specs for ground, shipboard. For 115 V, 50-60 Hz AC, *400 Hz., single-phase. With terminal block (Types SL682YS and ST810DS) or 12" leads (Types ST682YS and SL810DS). Actual, 1 lb. Shpg. wt., 1¼ lbs.

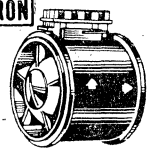
Stock No.	Mfr's Type	EACH			
		1-9	10-24	25-49	50-99
60 D 8784	SL682YS	45.50	38.20	34.00	33.10
60 D 6876	ST682YS	48.55	40.70	36.20	34.15
60 D 8805	SL810DS*	68.25	57.30	51.05	48.10
60 D 8806	ST810DS*	71.30	59.80	53.20	50.15

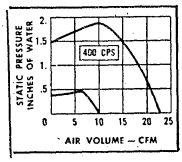
43 D 6261. Capacitor. 1.0 μF, required for SL682YS and ST682YS.
1-24.....Each 1.56 25-49.....Each 1.17
43 D 5525. Capacitor. 0.39 μF, required for SL810DS and ST810DS.
1-24.....Each .84 25-49.....Each .62

Allied Makes Immediate Shipment of Rotron Fans

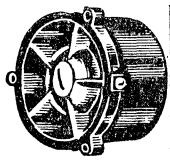
Rotron Military Cooling Fans

AXIMAX® MINIATURE FANS FOR AIRBORNE COOLING

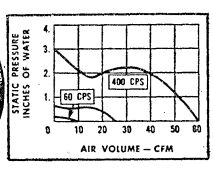


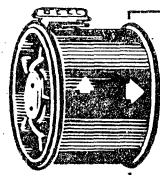


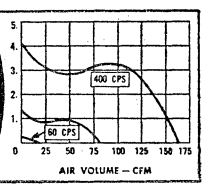
AXIMAX 1



AXIMAX 2







AXIMAX 3

- For Aircraft and Missile Cooling Applications
- 115 or 200 VAC, 60 or 400 Hz
- Constant or Variable Speed

Vane-axial fans for airborne cooling where fan size and weight are critical. Recommended for use where space is too limited to permit the use of a propeller-type fan. Choice of 115 or 200 VAC, 60 or 400 Hz, 1 or 3-phase installations. Constant-speed motor or *Altivar® design that increases shaft speed inversely with density, for constant cooling at all altitudes.

Lubricated for maximum ambient temperature of 125° C. Running life, 5000 hours at 72° C ambient at 14.7 psi, at 20,000 rpm. Airflow is parallel to motor shafts; can be reversed by turning fan end-for-end (Aximax 1 and Aximax 3 only). Meet applicable MIL specifications. †60 Hz only; all others for 400 Hz. Single-phase fans require capacitors (order appropriate type at right). Av. shpg. wt., 1 lb.

Aximax 1. Clamping rims at end of venturi for easy mounting (use Synclamps at right). Terminal block connections. Actual wt., 4 oz.
Aximax 2. Three mounting lugs, solder terminals. Actual wt., 4½ oz.
Aximax 3. Clamping rims at end of venturi for mounting with Synclamps, terminal block power connections. Actual wt., 14 oz.

AXIMAX 1 (1½x1½" diameter)

Stock No.	Mfr's Type	Volts	Phase	rpm	cfm	EACH 1-9	10-24	25-49	50-99
60 D 8725	464YS	115	1	11,400	11	57.35	48.00	42.70	40.35
60 D 8723	623YS	115	1	22,500	22	57.35	48.00	42.70	40.35
60 D 8724	367JS	200	3	22,500	22	57.35	48.00	42.70	40.35

AXIMAX 2 (1½x2" diameter)

60 D 8554	367JS	200	3	20,500	59	49.60	41.00	36.50	34.40
60 D 8555	368YS	115	1	20,000	58	49.60	41.00	36.50	34.40
60 D 8783	*415YS	115	1	11,000	32	49.60	41.00	36.50	34.40
60 D 8780	*395JS	200	3	11,000	32	49.60	41.00	36.50	34.40
60 D 8558	464YS	115	1	11,000	30	49.60	41.00	36.50	34.40
60 D 8559	†606NS	115	1	3,150	8	52.60	44.00	39.50	37.40

AXIMAX 3 (2 5/16x3" diameter)

60 D 8560	341JS	200	3	22,000	162	65.65	54.60	48.50	46.00
60 D 8565	528YS	115	1	22,000	162	65.65	54.60	48.50	46.00
60 D 8563	*387JS	200	3	13,000	95	65.65	54.60	48.50	46.00
60 D 8562	*400YS	115	1	11,000	80	65.65	54.60	48.50	46.00
60 D 8564	422DS	115	1	11,300	82	65.65	54.60	48.50	46.00
60 D 8561	†599NS	115	1	3,450	23	68.65	57.60	51.50	49.00

SYNCLAMPS FOR MOUNTING AXIMAX 1 AND AXIMAX 3

60 D 8578. Type 109074-337 Synclamp. (3 required per fan.) ..... Each .60
60 D 6872. Type 309074 Reverse Synclamps. (3 required per fan.) ..... Each .60

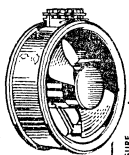
CAPACITORS FOR SINGLE-PHASE AXIMAX FANS

Made by famous American manufacturer (not Rotron). Oil impregnated paper dielectric. Rated 220 VAC for 115-volt fans; 330 VAC for 200-volt fans. Av. shpg. wt., 2 oz.

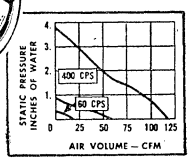
For Fan Types 464YS and 415YS. 0.15 μF capacitor.
43 D 5524. 1-24 ..... Each .48 25-49 ..... Each .36
For Fan Type 623YS. 0.25 μF capacitor.
43 D 5083. 1-24 ..... Each .84 25-49 ..... Each .62
For Fan Types 368YS, 400YS, and 599NS. 0.5 μF capacitor.
43 D 6260. 1-24 ..... Each 1.08 25-49 ..... Each .81
For Fan Types 606NS and 422DS. 1.0 μF capacitor.
43 D 6261. 1-24 ..... Each 1.56 25-49 ..... Each 1.17
For Fan Type 528YS. 2.0 μF capacitor.
43 D 4625. 1-9 ..... Each 3.33 25-49 ..... Each 2.22

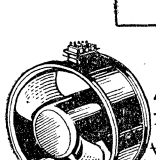
PROPIMAX® MINIATURE HIGH-AIR-PERFORMANCE TUBE-AXIAL FANS

Offers high air performance for their size and weight. Excellent for cooling small airborne equipment in limited-space area. *Altivar® types provide constant cooling at all altitudes. Max. ambient temp.: 125° C. Life: 5000 hours at 72° C, 14.7 psi. Clamping rims (use Synclamps, below). Terminal block connections. Meet applicable MIL specs. †60 Hz; others 400 Hz. Av. shpg. wt., 1 lb.

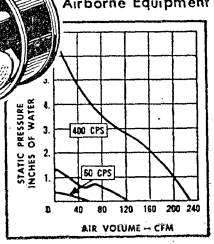


PROPIMAX 2
For Missiles and Airborne Equipment





PROPIMAX 3
For Tightly-Packed Airborne Equipment



PROPIMAX 2 (1½x3¼" diameter; actual wt., 6½ oz.)

Stock No.	Mfr's Type	Volts	Phase	rpm	cfm	EACH 1-9	10-24	25-49	50-99
60 D 8580	366ZS	115	1	21,500	120	66.80	56.45	50.10	47.55
60 D 6870	367JS	200	3	20,700	118	66.80	56.45	50.10	47.55
60 D 8581	*395JS	200	3	12,000	67	66.80	56.45	50.10	47.55
60 D 6871	*415ZS	115	1	12,500	68	66.80	56.45	50.10	47.55
60 D 8583	464ZS	115	1	11,000	62	66.80	56.45	50.10	47.55
60 D 8584	†606NS	115	1	3,250	18	69.80	59.45	53.10	50.55

PROPIMAX 3 AND 3B (2x3¾" diameter; actual wt., 16 oz.)
Propimax 3 has 2 blades, 3B has 4 blades. All are 3B except 341JS and 409ZS.

60 D 8790	341JS	200	3	22,500	220	71.25	59.00	52.50	49.75
60 D 8787	409ZS	115	1	22,500	220	71.25	59.00	52.50	49.75
60 D 8791	473JS	200	3	11,000	187	71.25	59.00	52.50	49.75
60 D 8789	*400ZS	115	1	6,250	117	71.25	59.00	52.50	49.75
60 D 8792	*387JS	200	3	8,300	142	71.25	59.00	52.50	49.75
60 D 8788	754DS	115	1	11,100	192	71.25	59.00	52.50	49.75
60 D 8786	†763ZS	115	1	3,450	58	74.25	62.00	55.50	52.75

60 D 8578. Type 109074-337 Synclamp. (3 required per fan) ..... Each .60
60 D 6872. Type 309074 Reverse Synclamps. (3 per fan) ..... Each .60

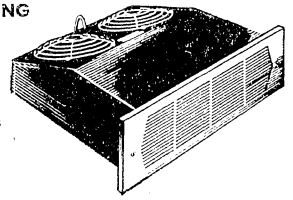
CAPACITORS FOR SINGLE-PHASE PROPIMAX FANS (Same as capacitors above.) Av. wt., 2 oz.

For Fan Types 415ZS and 464ZS. 0.15 μF capacitor.
43 D 5524. 1-24 ..... Each .48 25-49 ..... Each .36
For Fan Types 400ZS and 763ZS. 0.5 μF capacitor.
43 D 6260. 1-24 ..... Each 1.08 25-49 ..... Each .81
For Fan Type 366ZS. Requires 0.75 μF capacitance. Use both listed in parallel.
43 D 5083. 0.25 μF. 1-24 Ea. .84 25-49 Ea. .62 43 D 6260. 0.5 μF 1-24 Ea. 1.08 25-49 Each .81
For Fan Type 606NS. 1.0 μF capacitor.
43 D 6261. 1-24 ..... Each 1.56 25-49 ..... Each 1.17
For Fan Type 754DS. 2.0 μF capacitor.
43 D 4625. 1-9 ..... Each 3.33 10-24 ..... Each 2.22
For Fan Type 409ZS. Requires 2.5 μF capacitance. Use both listed in parallel.
43 D 4625. 2.0 μF. 1-9 Each 3.33 10-24 Each 2.22 43 D 4623. 0.5 μF. 1-9 Each 2.13 10-24 Ea. 1.42

Make Allied Your Headquarters for Everything in Electronics

Rotron Panel Fans and Switches

TWINPAX® 2-400-cfm COOLING PANEL FOR 19" EIA-NOTCHED RELAY RACKS

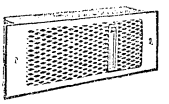


- With Washable Aluminum Filter
- Equipped with Two Feather Fans
- Only 5¼" Panel Height Required for mounting
- Pre-Lubricated Motor

For use under commercial and industrial conditions. Dissipates 1.9 kW of heat at 15°F rise. Has twin feather fans. Pre-lubricated motor utilizes miniature precision stainless steel ball bearings for years of maintenance-free operation. Permanent aluminum washable filter. Ambient temperature range from —55°C to +65°C. Quiet, only 55 dB. 5¼" panel height. Capacitor, cord. 115 V, 50-60 Hz AC, 1-phase. Actual 12 lbs. Shpg. wt., 17 lbs.

60 D 7655 X. 1-9.....Each 96.90 10-24.....Each 87.85
25-49.....Each 79.75 50-99.....Each 71.80
60 D 7071. 18440 Filtercoat.....Can 1.25
60 D 8585. 19699 Guard. 1-9...Each 3.30 10-24.....Each 3.00
25-49.....Each 2.70 50-99.....Each 2.50

RF RELAY RACK COOLING PANEL



- Full 2" Thick Dustfilter
- "Filter Pilot" Safety Gauge

Designed for use in electronic and instrument applications. Flushes standard 19-inch relay racks of any height. Requires no sheet metal operations in mounting. Dissipates 1 kilowatt of heat with 20° F rise or 2 kilowatts with 40° F rise.

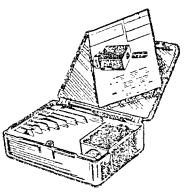
Ambient temperature limit of 125° fahrenheit. Noise level, only 54 decibels. Specially designed cooling system that forces draft upward through the cabinet for more efficient cooling than obtained by the natural convection method alone

Equipped with full size 2-inch thick oiled-wetted fiberglass dust filter. Easy to replace, 2 wing screws. Order additional filters below. Has unique automatic filter pilot which gives visual warning when filter requires replacement. Overall size, 7x19x8⅜". 115 V, 50-60 Hz AC, 1 phase. Actual wt., 7.3 lbs. Shpg. wt., 9½ lbs.

60 D 8576 X. 1-9.....Each 60.00
10-24.....Each 51.00 25-49.....Each 48.00
50-99.....Each 45.00
60 D 8577 X. 12783 Filters.....Package of 6 for 9.40

AIRFLOW INTERLOCK SWITCHES

INTERLOCK SWITCH DETERMINATOR KIT

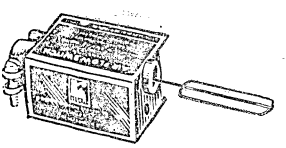


Kit contains all that is needed to determine experimentally which Model 2A Airflow Interlock Switch has the correct size vane to provide the right sensitivity for a given application. Includes: Model 2A switch, set of 8 actuating vanes (as listed in table below). By inter-changing vanes on switch, you determine which has required sensitivity. In plastic box.

60 D 8609. Wt., ½ lb. 1-9.....Each 21.00
10-24.....Each 18.90 25-49.....Each 17.85
50-99.....Each 16.80

MODEL 2A AIRFLOW INTERLOCK SWITCH WITH VANE

SPDT air-velocity-actuated switch protects your equipment against fan failure. Low velocity in fan air-duct opens switch and turns off equipment; correct velocity turns equipment on. Single screw mounting. Switch supplied with any one of 8 different vanes. Rating: 5 amps at 250 volts AC. ‡Vane Type Number indicates maximum feet-per-minute airflow increase that will actuate vane. Av. shpg. wt., 14 oz.



ADDITIONAL VANES

Stock No.	Vane Type*	Vane Lgth.	Stock No.	Vane Type*	Vane Lgth.
60 D 8601	1000	2 27/32"	60 D 8605	2000	1 7/16"
60 D 8602	1350	2 7/32"	60 D 8606	2450	1 1/8"
60 D 8603	1600	1 15/16"	60 D 8607	3000	15/16"
60 D 8604	1800	1 21/32"	60 D 8608	4000	3/4"

Each.....1.25

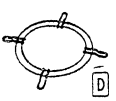
Velocities in ft./minute. 10% tolerance, except *±15%; †±20%.

Vane Type No.	Vertical Airstream				Horizontal Airstream			
	Up-Airstream		Down-Airstream		Arm Horizontal		Arm Vert. Vane Down	
	Actuate	De-actuate	Actuate	De-actuate	Actuate	De-actuate	Actuate	De-actuate
1000	785	700	Unusable	Unusable	735	630	750	615*
1350	1125	1030	720†	685†	1025	970	1000	890
1600	1340	1212	1040*	865†	1215	1095	1225	1130
1800	1550	1450	1280	1115*	1460	1335	1500	1375
2000	1800	1675	1595*	1425*	1790	1580	1760	1580
2450	2340	2120	2125	1950	2120	1867	2270	2035
3000	2925	2700	2780	2395	2690	2420	2880	2570
4000	4000	3680	3760	3565	3720	3485	3870	3520

Stock No.	Vane Type‡	Vane Lgth.	EACH 1-9	10-24	25-49	50-99
60 D 7915	1000	2 27/32"	8.90	8.50	8.20	8.00
60 D 7916	1350	2 7/32"	8.90	8.50	8.20	8.00
60 D 7917	1600	1 15/16"	8.90	8.50	8.20	8.00
60 D 7918	1800	1 21/32"	8.90	8.50	8.20	8.00
60 D 7919	2000	1 7/16"	8.90	8.50	8.20	8.00
60 D 7920	2450	1 1/8"	8.90	8.50	8.20	8.00
60 D 7924	3000	15/16"	8.90	8.50	8.20	8.00
60 D 7981	4000	3/4"	8.90	8.50	8.20	8.00

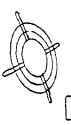
ACCESSORIES FOR ROTRON FANS

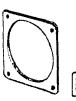
THE SPRITE ACCESSORIES

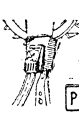


THE MUFFIN AND WHISPER FAN ACCESSORIES

THE SENTINEL ACCESSORIES







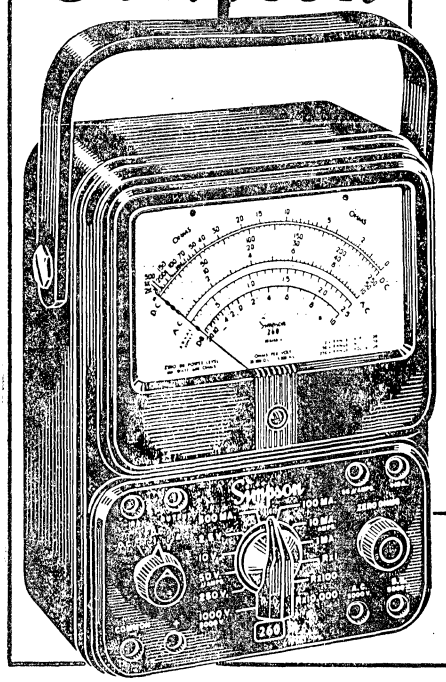
Stock No.	Mfr's Type	Fig.	Device	EACH
60 D 8588	22509	A	Oiling Kit	3.50
60 D 8589	22509-4	B	Oil	2.00
60 D 6766	20787	C	Plug and Cord	.95
60 D 6765	20049	D	Guard	.75
60 D 9268	20132-2	E	Finger Guard	.70
60 D 8616	16415	F	Plug and Cord Assembly	.70
60 D 8615	13996	G	Mounting Clips (Set of 2)	.30
60 D 8614	16238	H	Spiral Grille	1.00
60 D 8613	15449	J	Filter Assembly	3.00

Stock No.	Mfr's Type	Fig.	Device	EACH
60 D 8716	19342	K	Ring	.50
60 D 9768	19561-2	L	Mounting Plate	.50
60 D 9767	20575	M	Clamp	.50
60 D 9769	20757	N	Grille	.45
60 D 9770	18944	P	Plug and Cord	.75
60 D 9771	20576	R	Solder Boot	.15
60 D 8618	19263	S	Oiling Kit	3.50
60 D 8617	19263-4	T	Oil	2.00

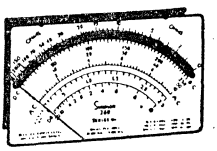
SEE PAGE 434 FOR COMPLETE INDEX OF ROTRON FANS AND ACCESSORIES

Famous 260® and 270 AC-DC VOM's

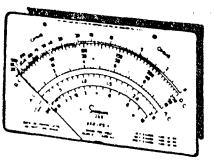
Simpson



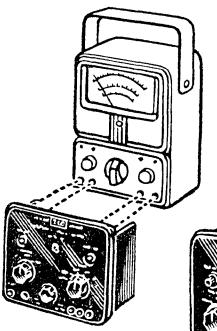
Quality Test Equipment



WITH MIRROR SCALE



WITH STANDARD 260 SCALE



Just Plug In Adapter for Complete Unit

Self-Powered and Self-Contained

Convert Your VOM Into 8 New Testers!

INDIVIDUAL 260 INSTRUMENTS WITH FEATURES AND ACCURACIES FOR EVERY ELECTRONIC NEED

- Input Protected with Internal One-Amp Fuse
- Meter Movements Protected Against Overloads
- Battery Operated and Compact for Top Portability
- Excellent Linearity and Stability • Shielded Movements

260-5. Battery-operated portable VOM is ideal for use where quick, accurate electrical checks must be made. Features easy-to-read two-color scale; fuse protected ohmmeter ranges; 5000 ohms/V AC; 20,000 ohms/V DC sensitivity; polarity reversing switch; full-wave bridge rectifier; AC frequency response to 50 kHz. Ranges: DC mV, 0-250; AC/DC V, 0-2.5-10-50-250-1000-5000; AF output V, 0-2.5-10-50-250; DC μA, 0-50; DC mA, 0-10-100-500; DC amps, 0-10; resistance, 0-20 megs, 3 ranges; dB, −20 to +50, 4 ranges. Accuracy: ±2% DC, ±3% AC. 7x5¼x3⅛". With batteries, leads. Shpg. wt., 5 lbs.

51 D 9199.....62.00

51 D 9200. 260-5RT. As above, but with roll-top case.....68.00

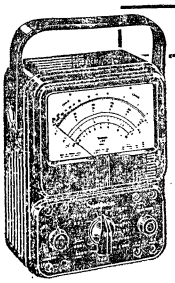
51 D 9585. 260-5M. With mirror scale. 6½ lbs.....64.00

51 D 9586. 260-5MRT. With mirror scale and roll-top case....70.00

MODEL 270. Has 260-5M mirror-scale features, plus knife-edge pointer and higher stability, 1½% accuracy.

51 D 9209.....75.00

51 D 9228. 270RT. As above, but in roll-top case.....81.00



BURNOUTPROOF MODEL 260-5P

- Reset Button Indicates Overload
- Circuits Cannot Be Reset While Overload is Present

Combines all the features of the famous 260-5 with built-in meter and tester protection. Gives you a highly versatile meter that's virtually "burnoutproof." Reset button pops out to indicate overload—cannot be reset while overload is present. All ranges are protected except 1000 and 5000 VAC/VDC and 10 amps. 7x5¼x3⅛". 5 lbs.

51 D 5035.....94.00

HIGHLY VERSATILE PLUG-IN "ADD-A-TESTERS"

Just plug-in adapters and get complete new testing devices. For use with any 260 VOM made since 1947, plus the 270 VOM and Models 250, 255, 261. 4⅜x5⅝x3 7/16". Av. shpg. wt., 2 lbs.

51 D 9334. 650 Transistor Tester. I_{CO} range, 0-100 μA.....41.00

51 D 9336. 651 DC VTVM. 0-.5, 1.0, 2.5, 10, 25, 50, 100, 250, 500 V ranges. Impedance, 10 megohms 48.00

51 D 9337. 652 Temp. Tester. −50 to +250°F in 2 ranges...46.00

51 D 9338. 653 Ammeter. 0.25, 1, 2.5, 12.5, 25A; 50Hz-3 kHz.28.00

51 D 9339. 654 Audio Wattmeter. 17 microwatts to 100 watts. Load ranges, 4, 8, 16 and 600 ohms... .....30.00

51 D 9340. 655 μV Attenuator. 2.5-250,000 μV decade steps..28.00

51 D 9342. 656 Battery Tester.. .....28.00

ACCESSORIES FOR SIMPSON METERS

51 D 9210. Type 0508 High-Voltage DC Probe. 25-kV range. For models 260-5, and 270. Shpg. wt., ½ lb..... .....16.00

51 D 9202. Type 0509 High-Voltage DC Probe. 50-kV range. For models 260-5, and 270. Shpg. wt., ½ lb.....16.00

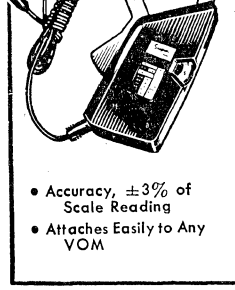
51 D 9196. Type 8375 Leads. Alligator clips, "L" terminals. For models 230, 240, 260-2, and 372. Shpg. wt., ½ lb.....2.75

51 D 9203. Type 7500 Leads. Banana plugs, alligator clip. For model 260-5 and 270. Shpg. wt., 1 lb..... .....2.75

51 D 9151. Type 0805 Ever-Redy Leather Carrying Case. For models 260, 270 and 303. Shpg. wt., 2 lbs.....13.00

51 D 9162. Type 1818 Carrying Case. As above, but standard leather. For models 260 and 270. Shpg. wt., 2 lbs.....11.00

51 D 9225. Type 4236 Leather Carrying Case. For Models 250, 260, 261, and 270. Shpg. wt., 2 lbs.....15.00



- Accuracy, ±3% of Scale Reading
- Attaches Easily to Any VOM

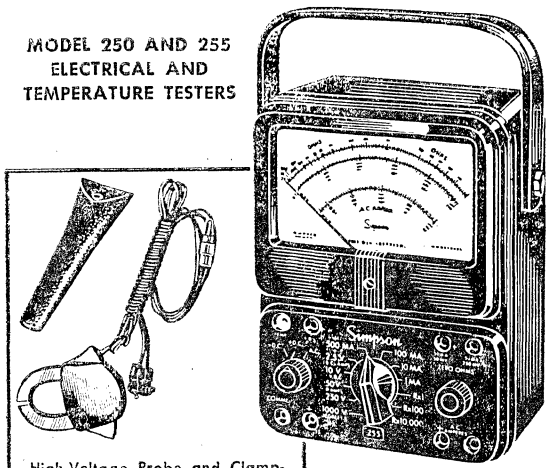
AMP-CLAMP MODEL 150 CLAMP-ON AC AMMETER

Greatly increases the range and versatility of the 250, 255, 260 and 270 Series VOM's; also can be used with any VOM having a 2.5 or 3-volt AC scale. Permits measuring AC currents up to 300 amps without opening circuit. On 2.5-volt-scale VOM's ranges are 5, 10, 25, 50, 100, 250 amps; on 3-volt-scale VOM's ranges are 6, 12, 30, 60, 120, 220, 300 amps. Accuracy is ±3% of full scale. Easily attaches to Model 260 VOM, others. Easy to handle and use, entire unit weighs just 12 ounces. Rugged high impact plastic case, 7¾x3x1 1/16". Shpg. wt., 16 oz.

51 D 9226.....30.00

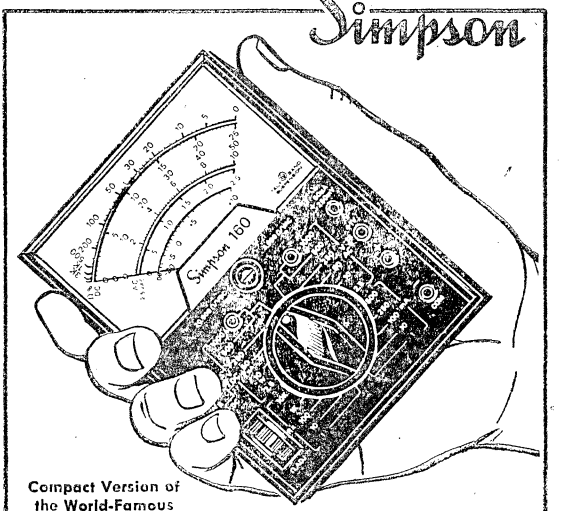
Quality Test Equipment from Simpson

MODEL 250 AND 255 ELECTRICAL AND TEMPERATURE TESTERS



High-Voltage Probe and Clamp-On Adapter are Available to Extend Voltage Range and Permit Easy AC Current Measurements with Both Model 250 and 255

All the Features of the 260 VOM plus Lower Voltage Drop on DC



Compact Version of the World-Famous Model 260 VOM

MODEL 250 LOW-VOLTAGE-DROP VOM

Precision VOM has the top-quality features of the popular model 260 VOM, including provisions for using the ADD-A-TESTER adapters, the high voltage probes and other accessories. Sensitivity: 20,000 ohms per volt DC, 5000 ohms per volt AC. Ranges: DC and AC volts, 0-2.5-10-50-250-500-1000 plus the extra-low voltages on DC, 0-50-250 millivolts. DC current: 0-50 μA, 0-1-10-100-500 milliamperes. Four dB scales: —20 to +10, —8 to +22, +6 to +36 and +20 to +50. Ohms: X10, X100, X10K (12 ohms center scale). Accuracy: ±2% full-scale DC volts and current except 0-50 μA, ±1%; ±3% full scale AC volts. Self-shielding taut-band movement, diode protected. With leads, manual. 7x5¼x3⅛".

51 D 9619. Shpg. wt., 4 lbs. **68.00**

MODEL 255 VOM WITH TEMPERATURE FACILITY

Has all the features of Model 250 described above, but with 5-ft. thermocouple lead for temperature range of +100° to 1050°F. 7x5¼x3⅛". With leads, prods, thermocouple, manual. 4 lbs.

51 D 9620 ..... **90.00**

51 D 9625. Model 0531 Clamp-On Adapter. Measures up to 250 amps without opening circuit. For Model 255 only. Wt., 1 lb. **30.00**

51 D 9626. Model 0161 High-Voltage Probe. Extends range to 10K volts AC. For Model 255 only. Shpg. wt., 1 lb. **16.00**

POCKET-SIZE 160 HANDI-VOM

- Taut-Band, Diode-Protected Meter Movement
- 0.25 DC Voltage Range for Accurate Transistor Work
- Recessed Range Selector Switch • Ohms Adjust

Has the same top-quality features of the famous 260 VOM, plus extended-range coverage for accurate transistor servicing measurements—all in a compact case only 3⅝" wide. Self-shielded taut-band meter movement assures high repeatability and freedom from external magnetic fields. 1-volt plug-in jack permits fast, easy transistor measurements. Diode overload protection. Also has: recessed range selector switch; separate battery compartment. 250-millivolt drop at 50 μA. Ranges: 0.25-1.0-2.5-10-50-250-500-1000 VDC at 20,000 ohms/volt sensitivity. 0-2.5-10-50-250-500-1000 VAC at 5000 ohms/volt. Current ranges: 0-50 μA, 1-10-100-250-500 mA. Ohmmeter ranges: 1-10-100-1K-10K ohms (30 ohms center scale). Accuracy: AC, ±3% of full scale; DC, ±2% full scale. Overall size, 2¼x3⅝x5⅝". With test leads, batteries. Shpg. wt., 6 lbs.

51 D 9591 ..... **53.00**

51 D 9593. Type 2055 Probe-Tip Test Leads. 1 lb. **3.00**

51 D 9595. Type 2929 Carrying Case. Vacuum-formed. Has room for VOM, test leads, probes. Wt., 2 lbs. **10.00**

CONVENIENT ACCESSORIES FOR VOM's ABOVE

51 D 9210. Model 0508 High-Voltage Probe. Extends voltage range to 25-kV. Shpg. wt., ½ lb. **16.00**

51 D 9202. Model 0509 High-Voltage DC Probe. Extends voltage range to 50-kV. Shpg. wt., ½ lb. **16.00**

51 D 9622. Model 0549 Carrying Case. Contains space for tools, test probes etc. Shpg. wt., 2 lbs. **19.00**

51 D 9621. Model 0574 High-Voltage Probe Case. Snaps on above carrying case. Shpg. wt., 1 lb. **5.50**

SIMPSON GENERAL-PURPOSE "MICRO-TESTERS"

All "Micro-Testers are 5⅞x3x2½" except "Midgetester"

Model 372-2 Ohmmeter. 3", 85 μA meter. Ranges: 0-500-5K-50K-500K ohms; 0-5, 0-50 megs. Batteries, leads. Accuracy, ±3° linear arc length.

51 D 9166. Shpg. wt., 3 lbs. **37.00**

Model 362 Low Ohmmeter. Reads 0-5-25 ohms. Accuracy, ±3° of linear arc. Leads. 3 lbs.

51 D 9197 ..... **37.00**

Model 373 DC Milliammeter. 0-1-5-10-25-50-100-250-1000 mA. Accuracy ±3% full scale. 3 lbs.

51 D 9204 ..... **37.00**

Model 374 DC Microammeter. 0-50-100-250-500-1000 μA. With external resistors, can be used as 20K ohms/V voltmeter. Accuracy ±3% F.S.

51 D 9205. Shpg. wt., 3 lbs. **37.00**

Model 375 DC Ammeter. 0-1-2.5-5-10-25 amps. Accuracy, ±3% full scale. 3 lbs.

51 D 9206 ..... **37.00**

Model 370 AC Ammeter. Ranges: 0-1-2.5-5-10-25 amperes. Current transformer. For 60 Hz AC only. Less leads. Accuracy, ±5% full scale. 3 lbs.

51 D 9165 ..... **37.00**

355 VOM Midgetester. Miniature VOM with 10K ohms per volt AC-DC sensitivity. 100-μA meter. Ranges: AC-DC V, 0-3-12-60-300-1200; 0-10K-100K ohms. 0-1-10 megs. Essentially flat to 10 KHz. Accuracy: VDC, ±3% full scale; VAC, ±5%. Only 4½x2¾x1". With batteries and leads. Shpg. wt., 2 lbs.

51 D 9254 ..... **50.00**

51 D 9157. Leather Case. Shpg. wt., 8 oz. **5.50**

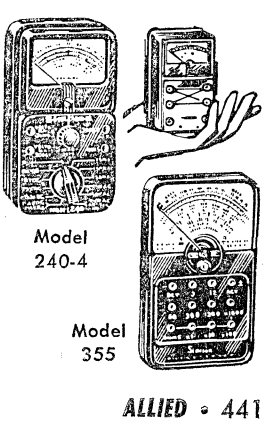
51 D 9198. Extra Leads. Shpg. wt., 6 oz. **3.00**

240-4 "Hammeter" VOM. 1000 ohms per volt AC-DC. VDC, 0-15-75-300-750-3000. VAC, 0-15-150-750-3000. Ohms: 0-3000-300,000. DC current: 0-15-150-750 mA. Accuracy: VDC, ±3% full scale; VAC, ±4% full scale. With batteries and leads.

51 D 9163. Shpg. wt., 3 lbs. **43.00**

390 Volt-Amp-Wattmeter. For 60 Hz AC units. Ranges: VAC, 0-150-300; amps, 0-3-15; watts, 0-300-600-1500-3000. Accuracy, ±3% full scale, or better. 3" meter. With break-in plug and leads. Shpg. wt., 4 lbs.

51 D 9164 ..... **65.00**

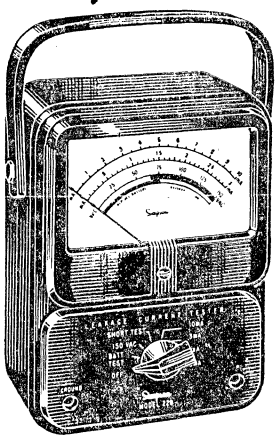


Model 240-4

Model 355

Industrial Test Equipment

Simpson



MODEL 229 CURRENT LEAK TESTER FOR 120-VOLT EQUIPMENT

- Measure AC Current to 5 Microamps
- Detects Shorts and Near Shorts
- Checks to "Threshold of Perception"

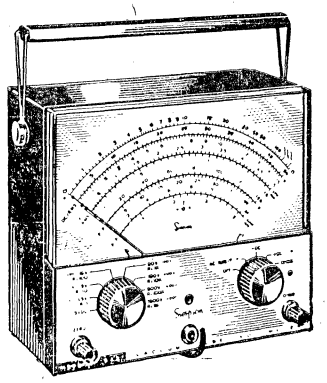
Ruggedly built for use on production line, "in-field" servicing, or anywhere there is a need for quick, accurate checks for possible electrical shorts. Designed especially to detect current near the "Threshold of perception"—the point where small leakage currents can be sensed by human operators. Though this low level cannot normally harm an operator, it can make him react violently, thus causing injury.

Model 229 is designed to test 120-volt AC appliances and electrical equipment in accordance with proposed U.S. Standards Committee specification C101.1 for AC current leakage tests. Measures currents as small as 5 microamperes and approximates normal perception curve within ±0.1 dB. Can be set up quickly by simply connecting ground lead to a water or gas pipe, power-line ground, earth ground, etc.

Ranges: AC Current, 0-0.3, 1, 3, 10 mA; AC Voltage, 0-150 volts; Batt. Test, Replace-Good. Resolution: 5 μA on 0-0.3 mA range. Accuracy: ±2% at 60 Hz. Accuracy Vs. Frequency: Approximates normal perception curve within ±1.0 dB. Input Impedance: 1.5K ohms. Black case measures 7½x5⅝x4½". With leads, batteries, manual.

51 D 9214. Shpg. wt., 5 lbs.....**90.00**

51 D 9151. Leather Case. 2 lbs.....**14.00**



TYPE 312 VACUUM TUBE VOLTMETER

- 16 Megohms Input Resistance
- Large, Easy-to-Read Scale
- ½-Volt DC Range for Transistors

Highly useful servicing aid designed especially for long-term accuracy under maximum operating usage. Ideal for use in the plant for quality control checks, process control tests, component testing, and any other voltage, current or resistance test made at a bench or work station having a 105-125-volt power source. Ideal for lab or other R&D work.

High input resistance produces 40% less circuit loading than most VTVM's. Features ½-volt DC range to permit its use for testing solid-state circuitry. Large 7" meter has multiple scales for easy reading, reduced chance of operator error. Easy-to-operate controls include multi-position range selector, function selector, zero adjust and ohms adjust.

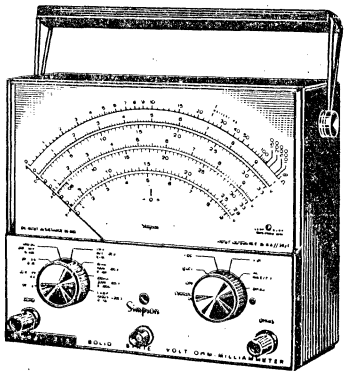
DC voltage ranges: 0-0.5-1.5-5-15-50-150-500-1500 (all with 16 megohm input impedance). AC voltage ranges: 0-4-14-40-140-400-1400-4000 peak-to-peak. Resistance ranges: X1, X10, X100, X1000, X10K, X100K (all on 10 ohms center). Response: ±3%, 15 Hz to 3 MHz to 150 VAC. Accuracy: ±3% of full scale on voltage ranges; ±3° of arc on all resistance ranges. Case, 6¾x7¾x3¾". For 105-125 V, 60 Hz AC. Shpg. wt., 5 lbs.

51 D 9623.....**95.00**

51 D 9604. 0152 RF Probe. For 10 kHz to 250 MHz. Useable to 40 V rms. 1 lb..**11.75**

51 D 9605. Model 0155 High-Voltage Probe. Shpg. wt., 1 lb.....**17.00**

51 D 9606. Model 0577 Case. Vinyl, with room for lead storage. Wt., 2 lbs.....**17.00**



MODEL 313 SOLID-STATE VOM

- Temperature Compensated for Accuracy
- 11 Megohm Input Resitance on DC
- Large, Easy-to-Read 7" Meter

Portable VOM provides all solid-state construction combined with battery operation to give you a high-accuracy instrument that goes where you go. Ideal for use by service men, field technicians, engineers, for "infield" checks of current, voltage, or resistance. Large, easy-to-read 7" meter scale reduces errors in reading while multi-position range and function selector knobs reduce set-up errors. Other controls include zero adjust, ohms adjust, and on/off indicator for easy on-the-job use.

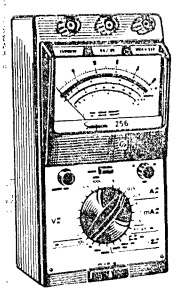
Input impedance: 10 megohms on AC, 11 megohms on DC (with 1 megohm contained in probe). 8 ranges DC volts, .3 through 1000 full scale. 8 ranges AC volts, .3 through 1000 full scale. 5 ranges on DC amps, .1 mA through 1 amp full scale. 7 resistance ranges, 0 through 20 megohms full scale.

Accuracy: DC, ±3% full-scale all ranges; AC, ±3% of full-scale all ranges at 100 Hz. Temperature accuracy: 25°C ±10°C for zero shift of 1° of arc. Overall frequency response: ±.5 dB from 20 Hz to 100 kHz for .3, 1.0. 3.0 voltage ranges; ±.5 dB from 20 Hz to 20 kHz for 10, 30, and 100 voltage ranges.

Operates from one 9-volt battery—life expectancy is approximately 300 hours. Mechanical power On-Off indicator. Battery check position on function switch. Has overload protection on ohms position—line voltage can be applied without chance of damaging field-effect transistors. Size, 6¾x7¾x3¾". Shpg. wt., 5 lbs.

51 D 9227.....**125.00**

MULTI-TESTERS FOR PORTABLE USE



Feature Built-In High Megohm and Capacitance Ranges

VOM'S with built-in capacitance, high megohm ranges and overload protection on all ranges except 100 volts and higher. Mirror scales, knife-edge pointers. Fused input, protected movement. 8½x4⅜x3⅜".

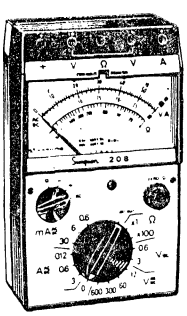
Model 256. Ranges: DC volts, 0-0.1, 0.5, 2.5, 10, 25, 100, 250, 500, 1000, 5000; AC volts, 0-0.5, 2.5, 10, 25, 100, 250, 500, 1000, 5000; DC μA, 0-100; AC and DC mA, 0-0.5, 2.5, 10, 50. AC and DC amps: 0-0.25, 1, 5. DC resistance: X1, X1K, X10K, X1 meg. AC resistance: X1 meg. Capacitance: 100pF, 2000 pF to 5μF. 7 dB ranges from —34 to +56 dB. Sensitivity: DC, 25K ohms/V; AC, 2K ohms/V.

51 D 9216. Shpg. wt., 5 lbs.....**105.00**

Model 257. Ranges: DC volts, 0-0.1, 0.5, 2.5, 10, 25, 100, 250, 1000, 5000. AC volts: 0-10, 50, 250, 1000. DC μA: 0-10, 50, 250. DC mA: 0-1, 5, 25, 100. DC amps: 0-1. DC resistance: X1, X1K, X100K, X10 meg. AC: X1 meg. Capacitance: 2000 pF to 5 μF. 3 dB ranges from —8 to +50. Sens.: DC, 100K ohms/V; AC, 20K ohms/V.

51 D 9217. Shpg. wt., 5 lbs.....**95.00**

MULTI-RANGE POCKET-SIZE VOLT-OHM-MILLIAMMETER



Features Simple Connection for Combined Voltage Current Reading

Compact and rugged, ideal for the field technician or serviceman, yet accurate enough for the most precise requirements. Feature separate sockets for connection to voltage source and load for combined measurements. Also have common linear AC/DC scale, built-in current transformer, continuity test provision and encapsulated movement. Illuminated meter for accurate readings in any light. High impact black case measures 6x3⅝x1¹1⅛". Shpg. wt., 2 lbs.

Model 208. Sensitivity: 10,000 ohms/volt. DC volts: 0-0.6-3-12-60-300-600. AC volts: 0-12-60-300-600. AC and DC current; 0-0.6-6-30-120-600 mA, 0-3 amps. Ohms: X1 and X100, both with 115 ohm center.

51 D 9240.....**72.50**

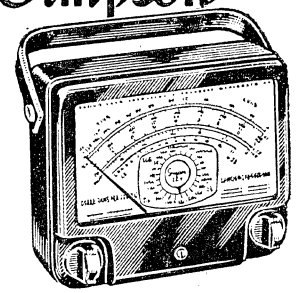
Model 209. Sensitivity: 1660 ohms/volt. DC volts: 0-.06-12-60-300-600. AC volts: 0-12-60-300-600. Current: 0-120-600 mA, 0-3-12 amps DC; 0-6-30-120-600 mA, 0-3-12 amps AC. Ohms: X1 and X100; 43 ohms center.

51 D 9241.....**68.00**

51 D 9242. Carrying Case. 8 oz.....**11.00**

Simpson

Quality Laboratory Test Equipment for a Wide Variety of Applications



MODEL 269-3 MICROAMMETER VOM

- 100,000 Ohms/Volt DC Sensitivity
- Shielded Meter
- 33 Ranges
- Large Easy-to-Read 7-Inch Scale

Features sensitivity of 100,000 ohms-per-volt DC, 5000 ohms AC. Shielded meter with highly sensitive taut-band movement has large 7" scale. Offers 33 ranges: DC, 0-16-160 μA; 0-1.6-16-160 mA; 0-1.6-8 amps; 0-1.6-8-40-160-400-800-1600-4000 volts. AC, 0-3-8-40-160-400-800 volts. Ohms, 0-2K-20K-200K; Megs, 0-2-20-200. AF volts, 0-3-8-40-160. DB (1 mW-600 ohms), —12 to +45.5 in 4 ranges. Accuracy: DC, ±2% of full scale; AC, ±3% of full scale; DC ohms, 2.5° of arc length. Response: essentially flat thru 50 kHz. 6x8x3". "Adjust-A-Vue" handle. Leads, 4000 4 DC probe, batt. 51 D 9153. Shpg. wt., 6 lbs.....98.00

MODEL 262-3 DC/AC VOLT-OHM-MILLIAMMETER

20,000 ohms/volt DC, 5000 ohms/volt AC. 7 DC ranges, 0-4000 V; 6 AC ranges, 0-800 V.; 2 μA ranges, 0-160 DC; 2 amp ranges, 0-8 DC; 4 dB ranges, —12 to +45.5; 6 resistance ranges, 0-50 megs. Accuracy: ±3% DC, ±4% AC, ohms 2.5° of arc. Size, 6x7¼x3". 51 D 9154. Shpg. wt., 6 lbs.....83.00

MODEL 263 DUAL-SENSITIVITY DC/AC VOM

Dual-sensitivity: 20,000/10,000 ohms DC; 10,000/5000 ohms AC. Accurate ranges. Diode protection, external battery compartment. DC, ±1½% of full scale; AC, ±3%. Test leads, batt. 6x7¼x3". 51 D 9212. Shpg. wt., 4 lbs.....97.00

HIGH-VOLTAGE PROBES FOR 7-INCH-SCALE VOM'S

Heavily insulated and protected. High-voltage probes extend range and versatility of VOM. Read accurate measurements to 40,000 volts with Model 269-3 VOM (described at left). Shpg. wt., 2 lbs.

51 D 9130. 0119. Extends range of 269-3 VOM to 16,000 volts. 17.00
51 D 9131. 0157. Extends range of 269-3 VOM to 40,000 volts. 17.00
51 D 9213. 0158. Extends range of 263 VOM to 30,000 volts. 17.00

MODEL 5262 CARRYING CASE FOR 7-INCH SCALE VOM'S. "Ever-Redy" vinyl carrying case for Model 269-3 or Model 262-3. Provides good protection for your instruments while in storage or in transport. 51 D 9155. Shpg. wt., 2 lbs.....14.00

LOW-COST PORTABLE LABORATORY STANDARDS

- Individually-Calibrated Hand-Drawn Scales
- Temperature Compensated Over Wide Range
- Parallax Eliminated • Jewelled Bearings

Portable precision instruments in a wide variety of ranges. Parallax errors are eliminated by knife-edge pointers read against a mirror. Hand-polished, hardened steel pivots. Accuracy: 0.5% of full scale on DC; 1% of full scale on AC and AC/DC. Black phenolic case measures only 5¼x 3½x7". Av. shpg. wt., 2½ lbs.

MODEL 9 DC LAB STANDARD

Stock No.	Range	EACH
51 D 9453	50 Volts	66.00
51 D 9454	50 Microamps	93.50
51 D 9455	1 Milliamp	77.00
51 D 9456	5 Amps	66.00
51 D 9457	15-150 Volts	77.00
51 D 9458	2.5-10-25 Amps	88.00
51 D 9459	5-20-50 Amps	88.00

MODEL 10 PORTABLE AC STANDARD

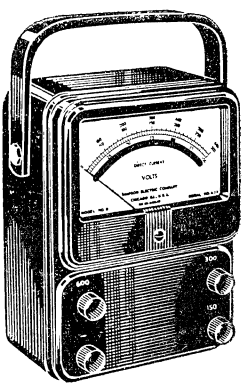
Magnetically damped repulsion-attraction iron vane movement. Rapid response.

Stock No.	Range	EACH
51 D 9460	50-Volt	60.50
51 D 9461	5 Amp	60.50
51 D 9462	150-300-600 Volt	77.00

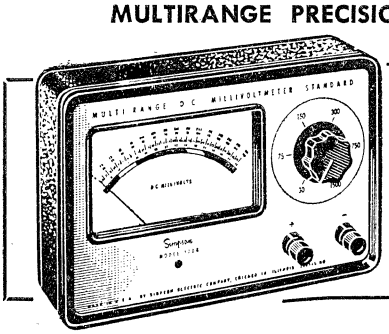
MODEL 880 AC/DC LAB STANDARD

Dynometer movement for DC and low audio AC.

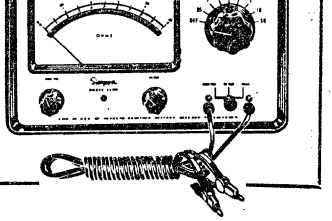
Stock No.	Range	EACH
51 D 9463	150-300-600 V	99.00
51 D 9464	100 Watts at 150 V	82.50
51 D 9465	500 Watts at 150 V	82.50
51 D 9466	1000 Watts at 150 V	82.50
51 D 9467	250-500 Watts at 150 V	104.50
51 D 9468	500-1000 Watts at 150 V	104.50



MULTIRANGE PRECISION SECONDARY STANDARDS, TEST EQUIPMENT



- Maintain High Accuracy Under Maximum Operating Usage
- Spring-Loaded Sapphire Jewels
- Meters Shielded Against Magnetic Fields
- Battery-Operated for Portability
- All Models Temperature Compensated
- Large Easy-to-Read Calibrated Meters



CURRENT, VOLTAGE SECONDARY STANDARDS

Precision standards have large 5½" meters, high damping factor and high torque for maximum accuracy. Models 1700, 1702, 1703, and 1704 feature ceramic rotary switch with silver contacts for range change. Model 1701 has separate set of 3-way binding posts for each range. Model 1704 has special 0.026-ohm test leads. All models are temperature compensated for operation from +15°C to +35°C. Accurate to 0.5% full scale at 25°C. All have steel cases with etched aluminum panel, 11⅜x7⅜x3¼". All have case-to-circuit dielectric breakdown of at least 3 kV rms. *Indicates 1000 ohms per volt sensitivity, †200 ohms per volt sensitivity.

Stock No.	Model	Function	DC Range	Wt.	EACH
51 D 9470 T	1700*	Voltmeter	0 to 1500	6 lbs.	180.00
51 D 9471 T	1701	Ammeter	0 to 75	8 lbs.	190.00
51 D 9472 T	1702	Milliammeter	0 to 1500	6 lbs.	180.00
51 D 9473 T	1703	Microammeter	0 to 1500	6 lbs.	185.00
51 D 9474 T	1704†	Millivoltmeter	0 to 1500	6 lbs.	185.00

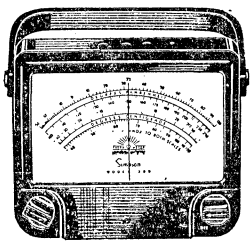
MODEL 1699 MULTI-RANGE PRECISION MILLIOHMMETER

Designed especially for accurate measurement of low resistance values. Checks contact resistance of contacts of relays, switches, and other circuit-breaking devices during inspection and production. Also makes resistance measurements of motor commutators, slip rings, coils (especially the larger sizes), automotive cables, connectors, and starting motor leads. Easy portability makes it ideal for use in the plant to test incoming cable or wire for quality control checks, or to determine wire or cable lengths. Can also be used in many other applications requiring accurate resistance measurement; for example, calibration of test instruments.

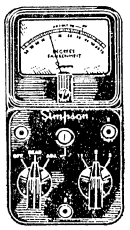
Sensitivity: 0.001 ohm (smallest scale division). **Accuracy:** ±1% for full scale on all ranges. **Range:** .05-1-.25-.5-1-5-10-50 ohms. **Readout:** 7" analog meter, single arc, 90° dial; mirrored, 100-division linear scale, knife-edge pointer. **Transistors:** two 2N2716. Complete with Kelvin-type clip test leads; instruction manual, batteries. Overall size: 11⅜x7⅜x3¼". 51 D 9469 T. Shpg. wt., 9 lbs.....175.00

Quality Test Equipment

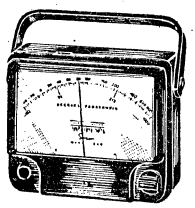
Simpson ACCURATE TEMPERATURE MEASURING INSTRUMENTS



MODEL 389-3L TEMPERATURE METER



MODEL 385-3L TEMPERATURE METER



MODEL 388-3L THERM-O-METER

MODEL 388-3L THERM-O-METER

Takes accurate readings from −50° to +1000°F on 7″ scale. Measures the temperature of practically anything. Can be used with gases, liquids and solids. Iron-constantan thermocouple. Compensation circuit corrects for room temperature. Has 7½-ft. probe (Type 0190). Provision for 3 probes. Permits readings in 3 different areas by rotating switch. Accuracy, ±1½ scale divisions. Size, 6x7 15/16x2 15/16″. With battery. Shpg. wt., 6 lbs.

51 D 9159.....80.00
51 D 9160. 0187 Surface-Temperature Probe. Wt., 1 lb.....10.75
51 D 9161. 0190 General-Purpose Probe. Shpg. wt., 1 lb.....6.50

MODEL 389-3L TEMPERATURE METER

Similar to 388-3L, except uses thermistor sensing element and has dual ranges for measuring temperatures between—50°F and +100°F, and between +100°F and +250°F. Accuracy, ±2°F. Employs thermistor principle. Shpg. wt., 6 lbs.,

51 D 9201.....75.00
51 D 5141. 0790 Surface-Temperature Probe. 1 lb.....7.50

THERMISTOR LEADS

Designed for use with Simpson Model 385-3L and Model 389-3L temperature testers.

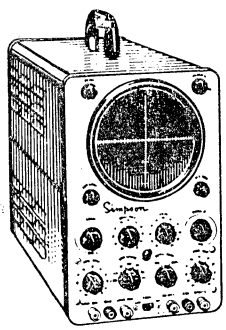
51 D 5136. 0010 15-Ft. Thermistor Lead. ½ lb..... 7.50
51 D 5137. 0216 30-Ft. Thermistor Lead. 1 lb..... 9.00
51 D 5138. 0415 50-Ft. Thermistor Lead. 1½ lbs.....10.00
51 D 5140. 0417 150-Ft. Thermistor Lead. 4½ lbs.....17.00

MODEL 385-3L TEMPERATURE METER

Provides accurate readings from −50° to +70°F. Reliable thermistor sensing element. Scale is calibrated in Fahrenheit and Centigrade. Reads up to 15 ft. away with lead supplied. Accuracy, ±1°F, center scale. Accommodates 3 leads. This permits 2 or 3 readings (for comparison) by rotating a switch. 5⅞x3x2½″. 2 lbs.

51 D 9207.....43.00
51 D 5135. 0789 Free Air Temperature Probe. 1 lb.....11.00

MODEL 466 5″ "HANDISCOPE"



Rugged oscilloscope for AM, FM, black-and-white TV servicing, plus a wide variety of industrial applications. Features push-pull amplifier; 1-V peak-to-peak calibrating voltage; Z-axis intensity modulation input. Horizontal deflection may be obtained from either internal sweep circuits or from external signal.

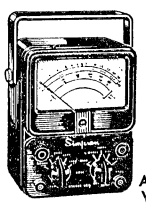
Response: Vertical, ±1 dB, 15 Hz to 100 kHz, 6 dB down at 250 kHz, usable to 1 MHz. Horizontal, ±1 dB, 15 Hz to 20 kHz, 6 dB down at 100 kHz. Maximum sensitivity: Vertical, .030 V rms/inch; horizontal, 0.7 V rms/inch. Input, 0.1 megohm. Sweep range, 15 Hz to 80 kHz. Maximum input, 400 volts. Sawtooth sweep range, 15 Hz to 80 kHz. Z-axis sensitivity, 20 V rms.

Convenient top-mounted carrying handle. Rugged metal case, 7⅞x12¼x16⅛″. With input cable, detailed operator's manual. 110-120 V, 50-60 Hz AC. Shpg. wt., 29 lbs.

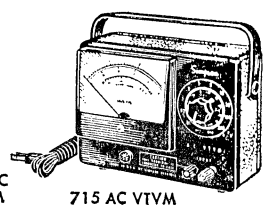
51 D 9643 U.....190.00

VACUUM TUBE VOLTMETERS

311-2 AC-DC VTVM



303 AC-DC VTVM



715 AC VTVM

311-2 AC-DC VTVM. High DC input impedance, 22-megs. Direct rms, p-p readout. Ranges: AC/DC V, 0-1.5-5-15-50-150-500-1500. Ohms: 0-1K-10K-100K; 0-1-10-100-1000 megs. AF V, 0-1.5-5-15-50-150-500-1500, ±5%, 30 Hz-110 kHz. P-P, 0-4-14-40-140-400-1400-4000 V. DC V, ±3% of full scale; AC V, ±5%. DC res., ±3° of linear arc. 4½″ meter. DC-AC-ohms probe. 7½x5⅝x4½″. 117 VAC. 8 lbs.

51 D 9587 U.....91.00
51 D 9208. 0732 High-V. Probe. Extends DC to 30 kV. Shpg. wt., 1 lb....16.00
51 D 9211. 0174 High-Frequency Probe. To 250 MHz. Shpg. wt., 1 lb....16.00

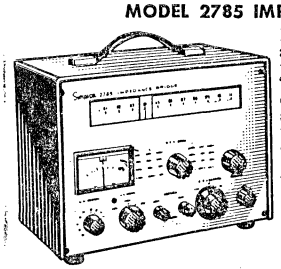
303 AC-DC VTVM. 5 AC/DC ranges, 0-1200 V, 3 AF ranges, 0-60 V 5 ohm ranges, 0-1000 megs; 5 dB ranges, —20 to +63. DC V, ±3% of full scale, AC V, ±5%. DC ohms, ±3° of linear arc. 4½″ dial. 7x5¼x3⅛″. Probes. 117 VAC.

51 D 9148. Shpg. wt., 6½ lbs....90.00
51 D 9152. Above, roll-top case..97.00
51 D 9149. Hi-V. Probe. To 30 kHz16.00
51 D 9150. RF Probe. Wt., 1 lb...10.75

715 AC VTVM. One-meg (min.) input at 1 kHz. 10 ranges, 0-300 VAC, rms. ±1 dB, 10 Hz-400 kHz. dB: —12 to +2. 1% multiplier for ±5% accuracy, full scale. 5½x7½x3″. Leads. 105-125 VAC.

51 D 9239. Shpg. wt., 5 lbs.....80.00

MODEL 2785 IMPEDANCE BRIDGE



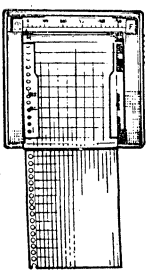
Precision multi-purpose bridge for accurate measurments of capacitance, inductance, resistance and "Q". Ideal for use in research and development labs, incoming inspection of components, production line testing and adjustment, classroom demonstrations. Long slide rule dial and sensitive galvonometer permit fast and easy measurements with high accuracy.

Built-in oscillator operates at standard 1 kHz test frequency. Frequencies from 50 Hz to 20 kHz may be used with external oscillator. Coverage: resistance, 0.05 ohms to 11 megohms. Accuracy, ±1.0%, ±2.5% on lowest and highest ranges. Inductance, 0.5 μH to 110 H. Accuracy, ±1.5%, ±2.5% on lowest and highest ranges. Capacitance, 5 pF to 1100 μF. Accuracy, ±1.0%, ±2.5% on highest range. Tan d and Q measurements: Q x 1, tan d x 0.01, tan d x 1. Accuracy, ±5% of full scale. Front panel controls for all tests.

Test voltages: DC on all resistance ranges, 1 kHz (with internal generator) for inductance and capacitance ranges. Operates on two long-life 9-volt batteries. Metal case, 11 13/16x8 5/8x6 1/16″. With batteries, test leads, detailed operator's manual.

51 D 9835 T. Shpg. wt., 12 lbs.....350.00

MODEL 2761 CHART RECORDER



Miniature temperature recorder for use in time and curve plotting of temperature cycles, ambient temperature records in laboratory tests, monitoring air temperatures in air conditioning systems, continuous temperature records in food plants, etc. Special motor-driven takeup reel allows unattended operation for up to 32 days (768 hours) at 20 mm per hour chart speed. Also records at 120 mm per hour. Has accurate self-contained Wheatstone bridge measuring circuit; built-in zener stabilized power supply for outstanding operating stability and long-term dependability.

Recording accuracy is within ±1.5% of temperature segment covered. Records on pressure-sensitive paper, needs no ink. Also has sensitive edgewise meter for instant visual readout. Snap-off front window permits easy replacement of chart paper. Switch-selected recording speeds—speed can be changed without removing meter or going behind panel. Requires only 3.58″ square panel cut-out. Overall depth, 9.10″. Synchronous, self-starting motor.

Range selector switch on rear panel selects —50 to +50° F; +50 to +150° F; or +150 to +250° F. With 15-ft. thermistor lead. For 115 V, 60 Hz AC. Order chart paper below. Shpg. wt., 4 lbs.

51 D 9836 T.....190.00
51 D 9843. 23237 Chart Paper. 2 lbs.....Box of 10 Rolls 18.00

Strip-Chart Recorders

MULTICORDER CHART RECORDERS

Simpson

MODEL 605 MULTICORDER

- Provides Permanent, Inkless Recording of Both Range and Value
- High-Torque Movement
- Shockproof, Taut-Band Suspension
- 27 AC and DC Ranges
- 3 Chart Speeds—1, 3 and 12 In./Hour

Provides record on pressure-sensitive paper. Chart Speed: 1/3/12 in./hr. with impressions every 2 seconds; 30/60/90 in./hr. with optional gear unit. Accuracy: indication, ±1.5%; recording, ±2.5%. Sensitivity: 666 ohms/volt. Temperature influence: 1% of true value max. for 10° change. Frequency influence: flat, 15-10,000 Hz; ±2.5% 10 to 20 kHz. Ranges: DC: 0-12-30-60 mV; 0-3-15-60-300-600 V; 0-0.6-1.5-3-6-30 mA; 0-.15-1.2-6 amps. AC: 0-6-30-150-300-600 V; 0-3-15-60 mA; 0-0.3-1.2-6 amps. 9¾x4¾x4″. 115 V, 60 Hz AC. With test leads, two rolls of chart paper. Shpg. wt., 5½ lbs.

51 D 9844 T.....215.00

Type 0682 Gear Unit. 30/60/90 inch/hour.
51 D 9845. Wt., 5 oz.....30.00

Type 02611 Ever-Ready Vinyl Carrying Case.
51 D 9846. Wt., 2 lbs.....27.00

Type 02614 Chart Paper. 2.3″x50′.
51 D 9847. Wt., 2 oz.....Roll 2.50

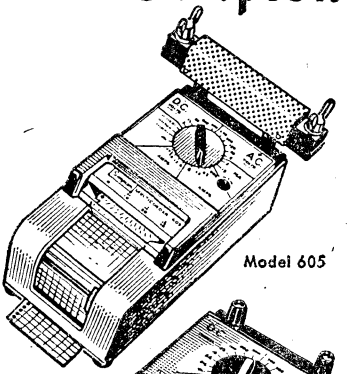
Package of 10 Rolls Paper. 2 lbs.....19.50

Type 06529 DC Shunt. 120-300-600 amps; 0.5%.
51 D 9888. Wt., 2 lbs.....20.00

Type 06531 DC Shunt. 12-30-60 amps; 0.5%.
51 D 9889. Wt., 1 lb.....15.00

Type 02461 AC Clip-On Current Transformer. 30-120-600 amps. Turn ratio, 2000:1.
51 D 9890. Wt., 2 lbs.....25.55

Type 02462 AC Clip-On Current Transformer. 30-150-600 amps. Turn ratio, 10,000:1.
51 D 9891. Wt., 2 lbs.....40.70



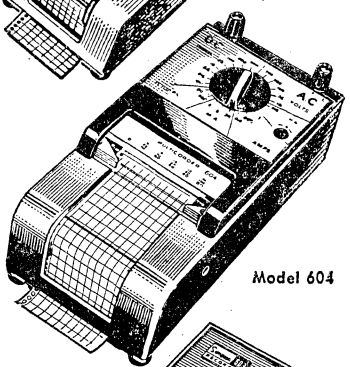
Model 605

MODEL 604 VOLT-AMP-MILLIAMP-MICROAMP RECORDER

Gives permanent record of range and measured value, without ink, on pressure-sensitive paper. High torque, shock resistant taut-band movement. Chart speed: 1/3/12 in./hr. with impressions every 2 seconds. Chart paper: 2.3″x50′. Sensitivity: 20,000 ohms/volt DC; 5000 ohms/volt AC. Accuracy: recording, ±2.5%; indication, ±1.5% (45-65 Hz sine wave on AC). Temp. influence 1% of true value for 10°C change. Frequency response, flat from 15 to 10,000 Hz; ±2.5% 10K-20K Hz. Ranges: DC, 0-0.1, 0.5, 2.5, 10, 25, 100, 250, 500 V.; 0-50-250 μA; 0-1, 5, 25 mA; 0-0.1, 0.25, 1 amp. AC, 0-0.2 mA; 0-10, 25, 100, 250, 500 V. 8½x9¼x17⅞″. Self-starting, synchronous motor for 115 V, 60 Hz AC. 6 lbs.

51 D 9624 U.....200.00

Type 0682 VOM Special Gear Unit. Above, with 30/60/90 in./hr. chart speed. Wt., 4 oz.
51 D 9862.....30.00
51 D 9863. Carrying Case. 1½ lbs....27.00
51 D 9615. Chart Paper. Wt., 2 lbs. in box of 10 rolls.....19.50

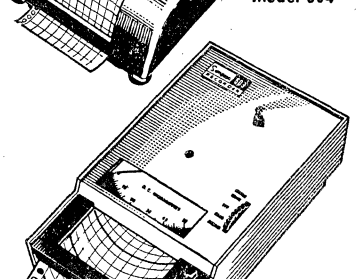


Model 604

SERIES 603 FOUR-SPEED CHART RECORDERS

Four chart speeds—1½, 6, 12 or 18 in. per hour. Accurate taut-band meter movement with pointer visible at all times. Easy access swing-away cover locks in open position. 2²⁵⁄₃₂x4¾x7½″. Self-starting, synchronous motor for 115 V, 60 Hz AC.

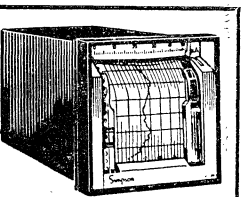
0-50 DC Microammeter. Wt., 2½ lbs.
51 D 9850.....107.00
0-100 DC Microammeter. Wt., 2½ lbs.
51 D 9851.....102.00
0-250 DC Microammeter. Wt., 2½ lbs.
51 D 9852.....98.00
0-15 DC Voltmeter. Wt., 2½ lbs.
51 D 9854.....97.00
0-150 DC Voltmeter. Wt., 2½ lbs.
51 D 9855.....96.00
0-1 DC Milliammeter. Wt., 2½ lbs.
51 D 9853.....90.00
0-5 AC Voltmeter. Wt., 2½ lbs.
51 D 9856.....102.00
0-150 AC Voltmeter. Wt., 2½ lbs.
51 D 9857.....102.00
0-300 AC Voltmeter. Wt., 2½ lbs.
51 D 9858.....104.00
51 D 9860. Takeup Reel. Wt., 4 oz....16.00
51 D 9859. Carrying Case. 1½ lbs....21.40
Chart Paper. Wt., 1 lb.
51 D 9861.....Box of 6 Rolls 13.55



Model 603

SIMPSON MINIATURE STRIP-CHART RECORDERS

- Easy Panel Mounting In Only 3¾x3¾″ Panel Space
- Snap-Off Window for Easy Access
- Provides Inkless Recording On Pressure-Sensitive Paper
- Taut-Band Meter Movement



MODEL 2750 LOW-SPEED RECORDERS

Switch selection of 20 mm or 120 mm/hour speeds; optional gear trains below for additional speeds. Self-starting, synchronous motor. Accuracy, ±1.5% (10-20 kHz AC, ±2.5%) of full scale. Edgewise meter gives instant visual readout. Requires 3.6x3.6″ panel cutout. For 120 V, 60 Hz AC. Shpg. wt., 4 lbs.

51 D 9869 T. 0-10 DC μA.....167.00
51 D 9870 T. 0-50 DC μA.....153.00
51 D 9871. 0-100 DC μA.....147.50
51 D 9872. 0-500 DC μA.....142.00
51 D 9873. 0-1 DC mA.....140.00
51 D 9874. 0-50 DC mV.....142.00
51 D 9876. 0-150 AC Volts.....148.00

2755 10-CHANNEL RECORDER

Rugged event recorder simultaneously records on/off status of ten separate sources on inkless, pressure-sensitive paper. For use with any function that can be converted to an electrical value. Chart indicates precisely when an event occurs and duration of that event. Motor-driven operation permits continuous unattended operation for up to one month. Snap-off front window for easy access, replacement of chart paper. Two speeds, 20 mm and 120 mm/hour; optional gear trains below. Mounts in 3.58″ square panel hole. Isolated clamp-type input terminals. With 2 rolls paper, additional paper below. 120 VAC.

51 D 9868 T. Shpg. wt., 4 lbs.....175.00

ACCESSORIES FOR MODELS 2750 AND 2755 CHART RECORDERS

SPECIAL GEAR UNITS. For model 2750 or 2755. Av. wt., 8 oz.
51 D 9877. 22301. 30/180 mm/hour.....7.50
51 D 9878. 22302. 60/360 mm/hour.....7.50
51 D 9879. 22303. 100/600 mm/hour.....7.50

CHART PAPER. For Model 2755. Pkg. of 10 rolls. Wt., 2 lbs.
51 D 9839. 22380. 10-channel marking; 20 mm/hour.....18.00
51 D 9840. 22381. 10-channel marking; 30 mm/hour.....18.00
51 D 9841. 22382. 10-channel marking; 60 mm/hour.....18.00
51 D 9842. 22383. 10-channel marking; 100 mm/hour....18.00

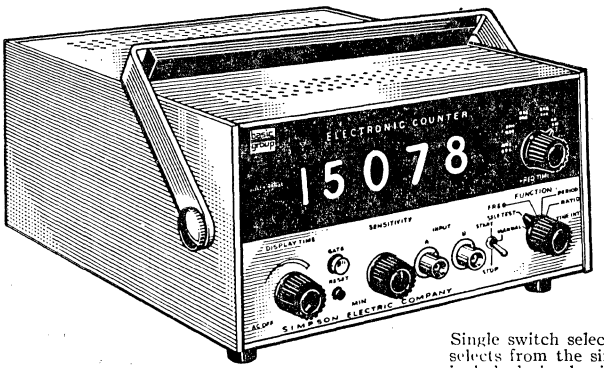
CHART PAPER. For Model 2750. Pkg. of 10 rolls. Wt., 2 lbs.
51 D 9880. 22310. 30 div.; 20 mm/hr.....18.00
51 D 9881. 22311. 50 div.; 20 mm/hr.....18.00
51 D 9882. 22312. 30 div.; 30 mm/hr.....18.00
51 D 9883. 22313. 50 div.; 30 mm/hr.....18.00
51 D 9884. 22314. 30 div.; 60 mm/hr.....18.00
51 D 9885. 22315. 50 div.; 60 mm/hr.....18.00
51 D 9886. 22316. 30 div.; 100 mm/hr.....18.00
51 D 9887. 22317. 50 div.; 100 mm/hr.....18.00

Digital Test Equipment

Simpson

MODEL 2725 FIVE-DIGIT FREQUENCY COUNTER—DIRECT READOUTS TO 29 MHz

- Solid-State, Using Newest Integrated Circuits for Reliability
- Crystal-Controlled Internal Clock for Accuracy and Stability
- Automatic Overrange Permits Resolution Up To Eight Digits
- Baffle and Filter Minimize Reflections for Effective Display



General-purpose five-digit electronic counter is a real help in laboratories, production, servicing, and digital systems for industrial control. Provides numerical display of average frequencies from 5 Hz to 20 MHz in 6 ranges. Also measures time intervals, period, and frequency ratio; totalizes pulses over a standard time range. Features automatic overrange capability allowing as much as eight-digit resolution in frequency measurements; overrange indication is separate from readout.

Solid-state design with monolithic integrated circuits provides the utmost in accuracy, stability and reliable performance. Front panel switch selects six time bases from 0.1 msec to 10 seconds, precisely controlled by internal crystal-controlled clock. Display time is adjustable from approximately 2 displays per second to "hold," where a reading can be held indefinitely. All functions are controlled at front panel, including manual start/stop count control and self-testing circuitry.

Single switch selects all functions; no plug-in adapters needed. A second switch selects from the six time bases/frequency ranges. The direct frequency readouts include decimal point for easy reading without interpolation. Readouts are cold-gas glow tubes for outstanding long-term performance, with 200,000-hour rated life. Accuracy is within ±0.01%, ±1 digit, over temperature range of —15° C to +55° C. Complete specifications shown at left. Top-quality components are used throughout to assure accuracy and reliability. Except for the power transformer and panel controls, all parts are mounted on a single PC board for easy access to test points. Special baffle and filter arrangement minimizes reflections from both external light sources and internal tube glow for most effective digital display. Heavy-duty metal case, 4x8¼x11". For 115 or 230 V, 50-60 Hz AC; 17 watts. Can be used with Rack Mount Kits, below.

51 D 9176 U. Shpg. wt., 8 lbs.....525.00

FREQUENCY COUNTER SPECIFICATIONS

Frequency Range: 5 Hz to 20 MHz in 6 ranges. **Period Range:** 300 μsec to 0.2 second. **Frequency Ratio Range:** Model 2725, 1 to 1.99999×10^5; Model 2724, 1 to 1.9999×10^4. **Time Interval Range:** Model 2725, 300 μsec to 1.99999×10^5 second; Model 2724, 300 μsec to 1.9999×10^4 second. **Totalization Range:** Model 2725, 0 to 1.99999×10^5 counts; Model 2724, 0 to 1.9999×10^4 counts. **Accuracy:** ±0.01%, ±1 digit. **Temperature Range:** +15° C to +55° C. **Number of Full-Time Digits:** Model 2725, five; Model 2724, four. **Time Bases:** 0.0001, 0.001, 0.01, 0.1, 1.0 and 10.0 seconds. **Display Time:** Variable, 0.5 seconds to "hold." **Input Sensitivity:** Wideband Channel A, 0.1 V rms minimum from 30 Hz to 20 MHz; 0.5 V rms minimum from 5 Hz to 30 Hz. Narrowband Channel B, 0.1 V rms minimum from 200 Hz to 1 MHz; 0.5 V rms minimum from 5 Hz to 200 Hz. **Input Impedance:** Channel A, 1 meg shunted by 30 pF; Channel B, 10K ohms shunted by 30 pF. **Maximum Input Voltage:** 250 V rms.

MODEL 2724 FOUR-DIGIT FREQUENCY COUNTER

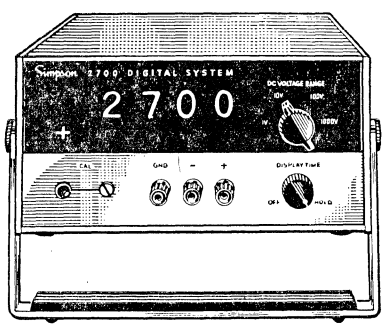
Same as above, but four-digit display. Maximum Readings: Frequency Ratio, 1 to 1.9999×10^4; Time Interval, 300 μsec to 1.9999×10^4; Totalization, 0 to 1.9999×10^4. Complete specifications shown at left.

51 D 9175 U. Shpg. wt., 8 lbs.....450.00

MODEL 2700 FOUR-DIGIT VOLTMETER WITH UP TO 110% OVERRANGE

- Four DC Ranges for Precise Measurements from .0001 to 999.9 Volts
- Pushbutton on Front Panel for Convenient, Accurate Calibration Checks
- Change in Indication Less Than .05° for 20° C Change in Temperature
- Sampling Rate Continuously Variable from 5 Readings Per Second to "Hold"

Digital Voltmeter



Solid-state DC digital voltmeter offers four-digit readout with ±0.05% (±1 digit) accuracy over a temperature range of +20° to +30° C. Has fully automatic polarity selection and indication; linear to 110% overrange. Convenient pushbutton front panel calibration check. Ranges: DC Volts; 000.1 to 999.9; 00.01 to 99. 99; 0.001 to 9.999; .0001 to .9999. Response Time: 5 seconds maximum, to reach rated accuracy after 0 to full range step change. Sampling Rate: variable from 5 readings per second to "hold." Input: 10.2 megohms on all ranges. Resolution; 100 μV on 1.000-volt range. Stable FET input. Virtually unaffected by temperature: change in indication is less than .05% for 20° C change in temperature. Cold gas glow readout tubes have 200,000-hour life. Heavy-duty metal case, 4x8¼x11". For 115/230 V, 50-60 Hz AC.

51 D 9177 U. Shpg. wt., 8 lbs.....615.00

MODEL 2700-01 RESISTANCE MODULE. Adds resistance ranges to Model 2700 above. Ranges: 1K, 10K and 100K ohms at ±0.1% accuracy; 10 megohms at ±1% accuracy. Plugs easily into Model 2700; ranges visible from front of panel.

51 D 9236. Shpg. wt., 1 lb.....100.00

RACK MOUNTING KIT. For Model 2700, 2725 or 2724. Standard 5¼x19" panel.

51 D 9237. Shpg. wt., 1 lb.....20.00

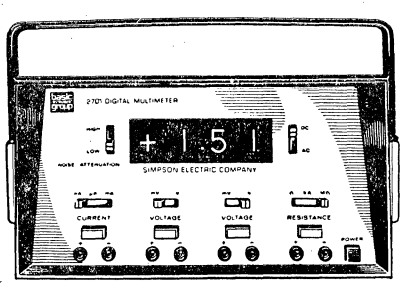
2-UNIT RACK MOUNTING KIT. For two model 2700, 2725 or 2724 units. 5¼x19".

51 D 9238. Shpg. wt., 1½ lb.....25.00

MODEL 2701 DIGITAL MULTIMETER

- Eliminates Scale Interpolation Errors for Improved Accuracy and Precision
- Wider Range Selection Than Conventional VOM's, with Input Impedance of a VTVM
- Three-Digit Readout, With Polarity Sign and Automatic Switching Decimal Point
- Has 6 Ranges AC/DC Volts; 9 Ranges AC/DC Current; 8 Ranges Resistance

Digital Multimeter



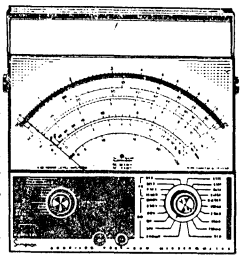
Versatile new digital multimeter provides accurate numerical displays of voltage, current and resistance. Features ultra-convenient operation—simply set the magnitude switch, then press the button—reading appears as a three-digit number complete with decimal point and polarity sign. Decimal point automatically switches over three decade ranges, eliminating the possibility of scale interpolation error. Offers wider selection of ranges than conventional VOM's, yet has the input impedance of a VTVM. AC, DC Volts, 0.01-9.99, 10.0-99.9, 100-999 mV; 1.00-9.99, 10.0-99.9; 100-600 volts. AC, DC Current: 100-999 nA; 1.00-9.99, 10.0-9.99, 100-999 μA; 1.00-9.99, 10.0-99.9, 100-999 mA. Resistance: 10.0-99.9, 100-999 ohms; 1.00-9.99, 10.0-99.9, 100-999 K ohms; 1.00-9.99, 10.0-99.9, 100-999. megohms. Accuracy: ±1.5% of reading, ±0.2% full range. Temperature range: —10° to +35° C. Solid-state with integrated circuits. 100,000 hour cold-gas glow readout tubes. Metal case, 5½x10x10". 105-130 V, 60 Hz AC.

51 D 9178 U. Shpg. wt., 14 lbs.....835.00

Depend on Allied for the Latest in Digital Equipment

Simpson, Hathaway and Triplett Test Equipment

SIMPSON ACCU-LOG MODEL 202 VOM



- ±2% DC and ±3% AC Accuracy, Anywhere on the Scale
- 20 Overlapping Ranges
- Rugged Taut-Band Suspension

Precision VOM gives consistent high accuracy, anywhere on the scale, as a percentage of the actual reading. The special quasi-logarithmic scale provides percent-of-reading accuracy of ±2% DC and ±3% AC at every point on the readout scale, yet permits easy zero adjustment with linear portion at the low end. Two-way overload protection, using both varistor diodes and fuse.

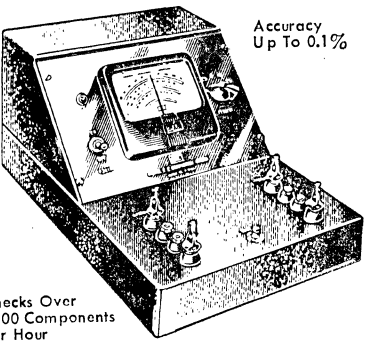
Has 20 overlapping ranges for convenient operation, including two low-power ohms ranges. Rugged taut-band suspension movement is shock resistant and self-shielding, cannot develop error-causing friction. Mirror scale for easy reading. External access to battery compartment. **Sensitivity:** 20,000 ohms/volt DC; 5000 ohms/volt AC; maximum DC current insertion drop, 0.3 amp.

RANGES: **DC Volts:** 30-330 mV, 0.1-1.1 V, 1-11 V, 10-110 V, 30-330 V, and 100-1100 V. **AC Volts:** 1-11 V, 10-110 V, 30-330 V, 100-1100 V. **DC Current:** 10-110 μA, 0.1-1.1 mA, 1-11 mA, 10-110 mA; 0.1-1.1 amps. **Resistance:** Rx1 (4 ohms mid-scale); Rx10 (40 ohms mid-scale); Rx1000 (7000 ohms mid-scale); Rx10K (70K ohms mid-scale); Rx100K (700K ohms mid-scale). Low power resistance ranges rated 2.7 mW for Rx1, 0.27 mW for Rx10. Decibels: zero to —22 dB. Size, 6¾x7¾x3¾". Includes batteries. Shpg. wt., 5 lbs.

51 D 9156.....100.00

HATHAWAY LAB-QUALITY TEST BRIDGE

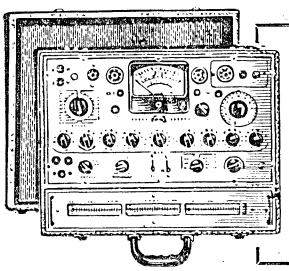
E-2 COMPARISON BRIDGE



For speedy and accurate value measuring, matching and rejection of resistors, capacitors and inductors. Extremely effective in labs and on assembly lines. Ease of operation permits even inexperienced, unskilled operators to obtain 0.1% accuracy (on the 1% range). Particularly valuable for "go, no-go" on-the-spot component matching, and precision matching of resistors and capacitors. Checks over 1000 components/hour. Cream-colored enameled case. **SPECIFICATIONS: Comparison Range:** Resistance: 1 ohm to 5 megohms. Capacitance: 500 pF to 2000 μF. Inductance: 3 mH to 10,000 henrys. **Accuracy:** 1% Range, ±0.1%; 2.5% Range, ±0.25%; 5% Range, ±0.5%; 10% Range, ±1.0%; 25% Range, ±2.5%. Five ranges of full scale meter deflection: 1%, 2.5%, 5%, 10% and 25% (eye resolution to 1 part in 10,000). **Bridge Input:** 6.3 V at 50-400 Hz. **Power Rating:** 20 watts (80-130 V at 50-400 Hz). Size, 10x14x7".

51 D 5190 U. Shpg. wt., 15¾ lbs.....225.00

TRIPLETT TUBE AND TRANSISTOR TESTERS AND ANALYZERS



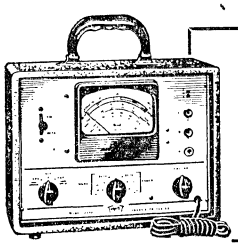
MODEL 3414 TUBE TESTER

- Fast, Easy To Use, GO-NO-GO Testing
- Input Filament Continuity Test
- Wide Filament Range Prevents Obsolescence

Modified plate conductance tester, correlated with Gm, for fast, accurate checking of all receiving tubes. All switch settings made before tube warms up—rejects burned-out tubes instantly. Filament voltages from 0.65 to 117 volts in 23 steps. Includes neon indicator shorts test, variable leakage test; quick-change roll chart, three-color 4" meter with Good-?-Bad scale. Lever switching for complete control of each tube element. Size with cover, 11½x15⅞x6½". Counter/portable case of leatherette covered wood. For 110-120 volts, 50-60 Hz AC. Shpg. wt., 16½ lbs.

51 D 9645 X.....132.00

51 D 9111, T-2247-BV CRT Adapter. For 3414 or 3444 testers. Tests TV CRTs while in set. Shpg. wt., 1 lb.....9.00

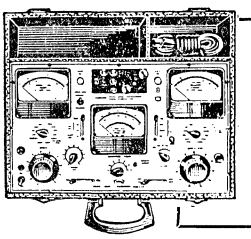


MODEL 2590 TRANSISTOR TESTER

- Tests Beta, I_{CBO}, I_{CEO} of Power and Signal Transistors
- Tests Under Simulated Operating Conditions
- Straightforward Operation—No Roll Chart Needed

Checks all transistors under simulated operating conditions. Tests Beta amplification, I_{CBO}, and I_{CEO}, of both power and signal transistors. Checks transistors for shorts and leakage, diodes for leakage and forward current. Easy to operate—no roll chart or special data required, always up to date. Transistor socket plus external leads permit use with any basing arrangement. Calibrate adjustment control adjusts for full scale calibration after transistor has been inserted. Five scales: 4 for I_{CEO} and I_{CBO} of power and signal transistors; plus 5-100 Beta range and Good-?-Bad scale. Gray leatherette covered case, 8⅝x11⅝x5⅛"; recessed panel. For 105-125 V, 50 60 Hz AC. Shpg. wt., 9 lbs.

51 D 9618.....71.00

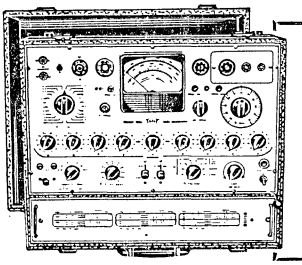


MODEL 3490A—TYPE 2 TRANSISTOR ANALYZER

- Makes H Parameter Measurements
- Ideal for Schools and Labs
- High Current and High Voltage AC and DC Beta Measurements
- Reads Leakage Current In Nanoampere Region

The ultimate in complete transistor analysis. Tests DC Beta, AC Beta at 1 kHz, leakage (I_{CO}, I_{EO}, I_{CEO}), Alpha, reach-through voltage, saturation voltage, floating potential. Features include: 3 independent power supplies; collector current to 30 amps; input current to 3 amps; separate 4½" input and collector meters. Also tests diodes, SCR, etc. Input current (emitter or base): 0-100-300 μA, 0-1-3-10-30 mA, 0-.1-.3-1-3 amps. Collector current: 0-300 μA, 0-1-3-10-30 mA, 0-.1-.3-1-3-10-30 amps. I_{CEO}, I_{CO} (I_{CBO}): 0-6-60-600 μA, 0-6 mA. Collector Voltage: 0-1.2-3-6-12-30-60-120. Emitter or Base Voltage: 0-1.2-12. Tetrode: 0-10 V. Size, 18⅜x15⅞x8". For 110-120 V, 50-60 Hz AC. Wt., 30 lbs.

51 D 9786 U.....441.00



MODEL 3444A—TYPE 1 TUBE ANALYZER

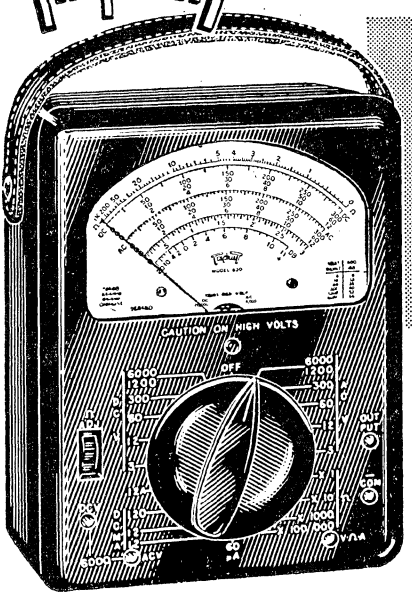
- Measures Characteristics at Variable Currents, Voltages
- Snap-In Roll Chart in Separate Compartment
- Self-Checking Gm Circuit Reads Directly in Micromhos

True dynamic mutual conductance tube analyzer quickly and accurately solves the most perplexing tube problems. The only tester under $1000 that measures characteristics at known readable potentials and is simple and fast to operate. Measures true Gm without extra compensating factors. Checks plate current cut-off; checks gas under operating conditions; checks rectifiers under load; checks thyratron firing voltage, grid current; checks dual-section tubes with only one lever movement; checks shorts and leakage from 0-10 megs. Recessed socket savers are easily removed. Leatherette covered wood case, 15⅜x18⅜x7¾". Removable cover. For 110-120 V, 50-60 Hz AC. Shpg. wt., 30 lbs.

51 D 9787 U.....470.00

See Pages 448 through 451 for Additional Triplett Test Equipment

Portable VOM's and Accessories



MODEL 630 VOM

- Single Selector Minimizes Chance of Incorrect Settings and Burnouts
- 5000 Ohms per Volt AC Sensitivity and 20,000 Ohms per Volt DC
- 4 Resistance Ranges from 0.1 Ohm to 100 Megs.

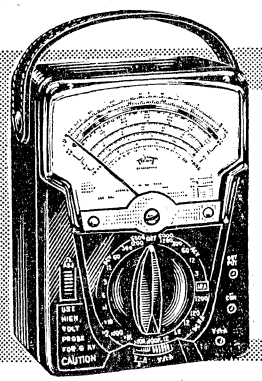
Popular streamlined tester with long meter scales for easy reading. Features 20,000 DC, 5000 AC ohms/volt sensitivity. Single 20-position switch selects both circuit and range—minimizes chance of incorrect settings and burnouts. Fuse-protected ohmmeter circuit prevents burnout. Spring-backed instrument jewels for extra ruggedness and accuracy.

DC accuracy is ±2% on all ranges. AC response, 5 Hz to 50 kHz. Ranges: DC and AC volts; 0-3-12-60-300-1200-6000; DC current, 0-60 μA, 0-1.2-12-120 mA, 0-12 amps. Resistance, 0-1000-10,000 ohms and 0-1-100 megs. dB, —20 to +77 in 6 ranges; output volts, 0-3-13-60-300-1200. Jack with condenser in series with AC ranges. Sizes, 7½x5½x3⅞". Supplied complete with batteries, alligator clips, and test leads. Shpg. wt., 2 lbs.

51 D 9118.....**61.00**

MODEL 630A-2 VOM. As above, but with ½% precision multiplier resistors for ±1½% accuracy on DC readings; ±3% accuracy on AC readings. 4½" mirrored scale. With leads, clips, and batteries. Shpg. wt., 5 lbs.

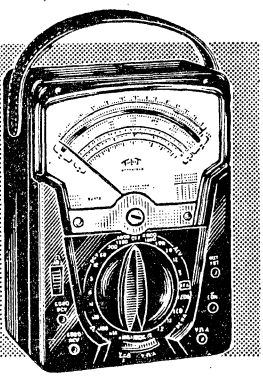
51 D 9121.....**71.00**



200,000 Ohms/Volt DC Sensitivity

5-Microamp Suspension Meter

62 Ranges



MODEL 630NS PRECISION VOM

- 200,000 Ohms/Volt DC Sensitivity
- Rugged Construction with High Sensitivity and Repeatability
- No Rolling Friction in Movement
- Temperature/Freq. Compensated
- 62 Ranges, Usable to 100 kHz

Suspension meter movement has no pivots, bearings, hairsprings, etc. Extremely rugged. Special precision resistors are rigidly mounted. 20,000 ohms per volt for greater sensitivity on high resistance circuits. Input impedance is higher than on most VTVM's at 55 volts, DC and above. Accuracy is ±1½% DC, and ±3% AC.

Temperature compensated to 100 kHz. 20,000 ohms/volt AC sensitivity. Ranges: DC volts: 0-0.6-3-12-60-300-1200 at 100K ohms/volt. 0-0.3-1.5-6-30-150-600 at 200K ohms/volt, 0-0.150 at 60 μA. AC volts; 0-3-12-60-300-1200 at 10K ohms/volt: 0-1.5-6-30-150-600 at 20K ohms/volt. dB, —20 to +63 in 10 ranges. DC current: 0-5-60-120-600 μA, and 0-1.2-6-12-60-120-600-1200 mA, plus 0-6-12 amps. Ohms: 0-1000-10K-100K-1 meg-10 meg-100 meg. (4.4-44-440, etc. at center scale). Shipped complete with leads, clips, and batteries. 7½x5½x3⅞". 5 lbs.

51 D 9691.....**110.00**

MODEL 630NA DELUXE VOM

- Single Selector Switch
- 70 Ranges • 1½% DC Accuracy
- Handy Mirror Scale and Diode Overload Protection
- Compensated for Temperature and Frequency Response

Single selector switch reduces chances of error in setting. Temperature and frequency compensation, usable with frequencies through 500 kHz. 5½" easy-to-read mirror scale with unbreakable window. Special diode protected meter, and fuse protection in ohmmeter circuit prevents overloading and burnouts. Rugged new suspension meter movement.

Accuracy: ±1½% DC, ±3% AC. Ranges: DC volts: 7 ranges to 6000 (10K ohms/volt); 7 ranges to 3000 (20K ohms/volt); 1 range to 0.12 (60 μA). AC volts: 6 ranges to 6000 (5000 ohms/volt); 6 ranges to 3000 (10K ohms/volt). dB, —20 to +77 in 12 ranges. DC μamps, 1 range to 120 (240 mV); 2 ranges to 600 (120 mV). DC mA: 4 ranges to 1200 (240 mV); 3 ranges to 600 (120 mV). DC amps, 1 range to 12 (240 mV); 1 range to 6 (120 mV). Ohms, 3 ranges to 100K, 3 ranges to 100 megs. Leads, clips, batteries. 5 lbs.

51 D 9110.....**93.00**

VOM ACCESSORIES

PROBES. Fully insulated 11¾" probe with 48" leads. *Indicates use with 630, 630A-2, 631. †Use with 630-PL, 630-APL, 630-L, 630-PLK. ‡for 631 only. Wt., 4 lbs.

Stock No.	Type	DC Volts	EACH
51 D 9112	*T-79-70	0-30,000	17.90
51 D 9215	*T-79-71	0-30,000	17.90
51 D 9258	†T-79-83	0-10,000	17.90
51 D 9259	†T-79-130	0-25,000	17.90
51 D 9260	‡T-79-145	RF Probe	9.50

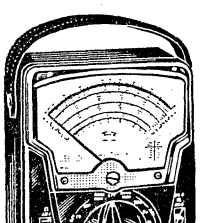
Type 611 Leads. For Model 10 AC-Ammeter Adapter (page 450) when used with 630 Series (or with any VOM having a 3 volt AC scale at 5,000 ohms per volt). Long lead attachment simplifies readings.

51 D 9256. Shpg. wt., 10 oz.....**3.20**

CASES AND STAND. *Black cowhide case. †Black leather case. Shpg. wt., 1½ lbs. Mfr's type T255A35 is a stand. Average shpg. wt., 3 lbs.

Stock No.	Mfr's Type	For Testers	EACH
51 D 9119	*639-N	630 Series	12.60
51 D 9116	*639-P	630 Series	17.90
51 D 5280	†669-OS	666R	9.00
51 D 9120	T255A35	630 Series	2.10

MODEL 630-L VOLT-OHM-MILLIAMMETER



- Two Low-Power Ohm Ranges (x1 and x10) with 140-mV Ohmmeter Voltage
- Single Selector Switch Ensures Correct Range Settings, Eliminates Damage
- Exclusive Shielded "Bar-Ring" Movement
- ±2% Accuracy on DC, ±3% on AC
- 20,000 Ohms/Volt DC Sensitivity and 5000 Ohms/Volt AC Sensitivity

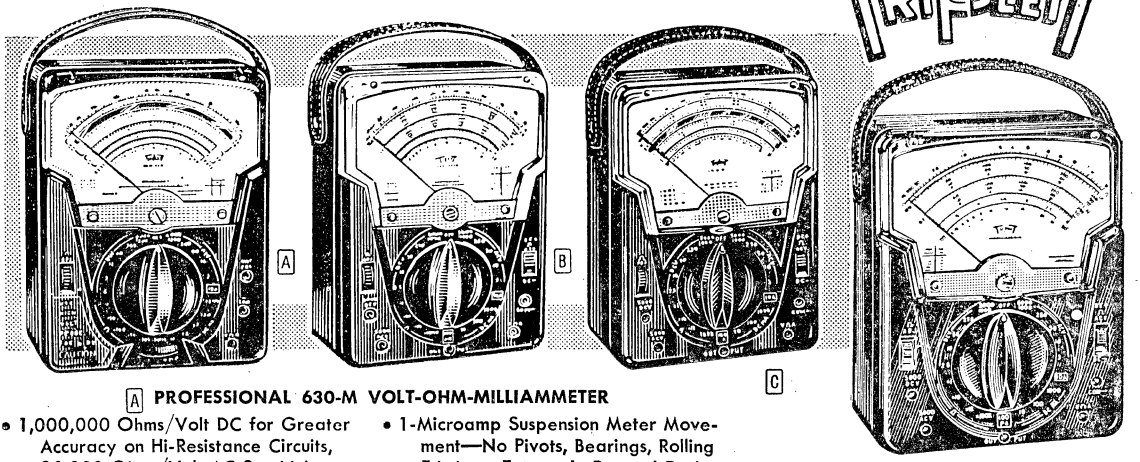
Low milliwatt ohmmeter circuit (only 140 mV on the x1 and x10 ranges)—will not damage semiconductor circuits. Single switch minimizes chance of incorrect settings; mercury battery reduces rezeroing. 5½", 2-color meter scale. Spring-backed jewels for extra ruggedness. Usable up to 500 kHz. Accuracy ±2% on DC range, ±3% on AC. Exclusive shielded "Bar-Ring" movement. Sensitivity: 20K ohms per volt DC; 5000 ohms per volt AC. Ranges: DC volts, 0-2.5-10-50-250-1000-5000. AC volts, 0-3-10-50-250-1000-5000. Decibels, —20 to +75 in 6 ranges. DC Current, 0-100 μA; 0-10-100-1000 mA; 0-10 amps. Resistance, 0-1000-10K ohms (13-130 at center scale); 0-1-100 megohms (4400-440K at center scale). AC output volts, 0-3-10-50-250-1000; jack with capacitor in series with AC ranges. Black molded case, 7½x5½x3¹¹⁄₃₂". Meter comes complete with test leads, clips and batteries. Shpg. wt., 5 lbs.

51 D 9692.....**66.00**

Allied Is Your Headquarters for the Finest In Test Equipment

Portable VOM and VTVM Testers

TRIPLETT



A PROFESSIONAL 630-M VOLT-OHM-MILLIAMMETER

- 1,000,000 Ohms/Volt DC for Greater Accuracy on Hi-Resistance Circuits, 20,000 Ohms/Volt AC Sensitivity
- 1-Microamp Suspension Meter Movement—No Pivots, Bearings, Rolling Friction—Extremely Rugged Design
- 61 Ranges, Usable with Frequencies Through 100 kHz; Temperature Compensated; 1½% DC Accuracy; 3% AC Accuracy When Used in Horizontal Position

Combines the high input impedance of a VTVM, with the convenience of a VOM. Sensitivity: 1,000,000 ohms/volt DC; 20,000 ohms/volt AC. Special diode-protected 1-μA meter movement. Large, 5½" scale. Reads low as 20 nanoamperes. Accuracy: DC, ±1½%; AC, ±3%. 61 ranges, for use with frequencies to 100 kHz. Component mounted on glass epoxy circuit board. DC volts: 0-0.6-12-60-300 at 500,000 ohms/volt; 0-0.3-1.5-6-30-150 at 1,000,000 ohms/volt; 0-1200 at 125,000 ohms/volt; 0-600 at 250,000 ohms/volt. ACV. 0-3-12-60-300-1200 at 10,000 ohms/volt; 0-1.5-6-30-150-600 at 20,000 ohms/volt DC current: 0-1-60-120-600 μA; 0-1.2-6-12-60-120-600-1200 mA; 0-6-12 amps. Resistance: 0-1K-10K-100K ohms; 0-1-10-100 megohms, dB: —20 to +63 in 10 ranges. 7x5½x3 11/32". With leads and strap handle. Shpg. wt., 5 lbs.

51 D 9230 T.....220.00

B MODEL 630-PL TYPE 2 VOLT-OHM-MILLIAMMETER

- Meter Movement Diode-Protected Against Instantaneous Overloads
- One Selector Switch Minimizes Chance of Incorrect Settings and Burnouts
- Four Resistance Measuring Ranges, From 0.1 Ohm to 100 Megohms

Big 5½" meter with instant-vision, wide-spread scales, spring-backed jewels, and polarity reversing switch. Frequency response to 500 kHz. Fuse gives extra protection to ohmmeter circuit. Sensitivity: 20,000 ohms/volt DC; 5000 ohms/volt AC. Accuracy: ±2% DC and ±3% AC. DC volts: 0-2.5-10-50-250-1000-5000 at 20,000 ohms/volt; 0-0.25 at 100 μA. AC volts: 0-3-10-50-250-1000-5000 at 5000 ohms/volt. DC current: 0-100 μA; 0-10-100-1000 mA; 0-10 amps. Resistance: 0-1K-10K ohms; 0-1-100 megs. dB: —20 to +75 in 6 ranges. Output volts: 0-3-10-50-250-1000 at 5000 ohms/volt. Molded black case, 7½x5½x 3 11/32". Complete with leads, alligator clips, rubber feet, batteries, instr.

51 D 9229. Shpg. wt., 5 lbs.....61.00

C MODEL 630-APL TYPE 3 LABORATORY-TYPE VOM

- Extra-Rugged 5½" Suspension Meter with 4½" Mirror Scale
- Diode-Protected Meter Movement
- ±1½% DC, ±3% AC Accuracy

Lab type VOM has all features of Model 630-PL Type 2 above, plus ½% precision resistors for even greater accuracy. 5½" meter with 4½" mirror scale. Movement is diode-protected against instantaneous overloads. Sensitivity: 29,000 ohms/volt DC, 5000 ohms/volt AC. Accuracy: ±1½% DC, ±3% AC. Ranges same as 630-PL Type 2. With leads, clips, batteries.

51 D 9690. Shpg. wt., 5 lbs.....71.00

630-PLK TYPE 3 VOM

- Burnoutproof Circuit
- Single Selector Switch
- Polarity Reversing Switch

It's virtually burnoutproof. Transistorized switching circuit protects meter movement and all components from overload damage. Sensitivity: 20,000 ohms/volt DC, 5000 ohms/volt AC. Accuracy: ±2% on DC, ±3% on AC. DC volts: 0-2.5-10-50-250-1000-5000 (20,000 ohms/volt). AC volts: 0-3-10-50-250-1000-5000 (5000 ohms/volt) dB: —20 to +75 in 7 ranges. DC current: 0-100 μA (250 mV); 0-10-100-1000 mA (250 mV); 0-10 amps (250 mV). Ohms: 0-1000-10,000 (4.4-44 at center scale); 0-1-100 megs (4400-440K at center scale). Output volts: 0-3-10-50-250-1000 (5000 ohms/volt). 7½x5½x3 11/32". Complete with 50" test leads, removable alligator clips, and batteries. Shpg. wt., 5 lbs.

51 D 5299.....93.00

630-APLK LAB-TYPE VOM

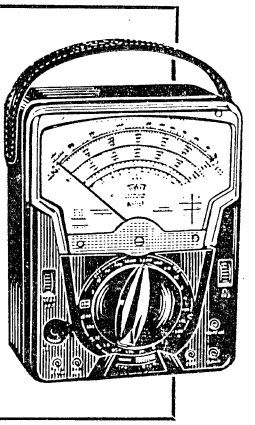
- Complete Overload Protection
- Polarity Reversing Switch
- Suspension Meter Movement
- Single Selector Switch

Same fine features, sensitivity, and overload protection as the 630-PLK Type 3, with ½% resistors for greater accuracy, and 4½" mirror scale. Accuracy is ±1½% DC, ±3% AC. With leads, alligator clips, batteries. 5 lbs.

51 D 9693.....105.00

MODEL 631 BATTERY-POWERED VTVM-VOM . . TWO TESTERS IN ONE

- One Selector Switch For Entire Unit
- Complete VOM in Combination With Battery-Operated VTVM
- 11-Megohm Input Impedance to VTVM

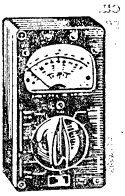


Single switch selector for VTVM or VOM operation. Has large, easy-to-read 5½" meter with unbreakable face, and spring-backed jewels for ruggedness. Accuracy: VOM, ±3% DC, ±4% AC; VTVM, ±4%. VTVM. DC volts: 0-1.2-6-30-120 (11 megs input impedance). VOM. DC volts: 0-3-12-60-300-1200 (20,000 ohms/volt). AC and audio volts: 0-3-12-60-300-1200 (5000 ohms/volt). DC current: 0-60 μA; 0-1.2-12-120-1200 mA; 0-12 amps. dB: —20 to +63. Ohms: 0-1500-15K; 0-1.5-150 megs. Size, 7½x5½x 3 11/32". Supplied complete with test leads, alligator clips, rubber feet, batteries and instructions. Probes on facing page. Shpg. wt., 5 lbs.

51 D 9113.....82.00

MODEL 666R POCKET VOM

- One Selector Switch
- Three Resistance Ranges to 3 Megohms
- Five AC and DC Voltage Ranges to 5000 Volts
- Convenient Hand Size
- Jacks at Top of Panel

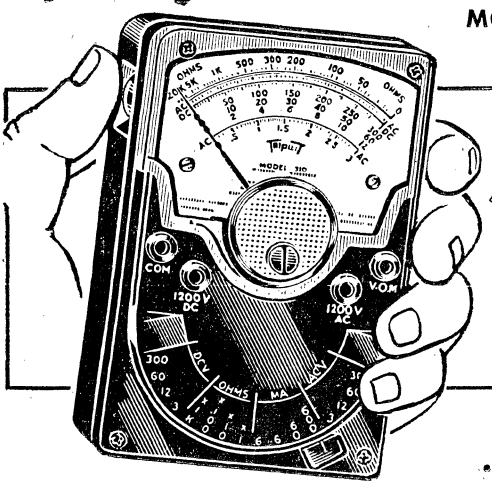


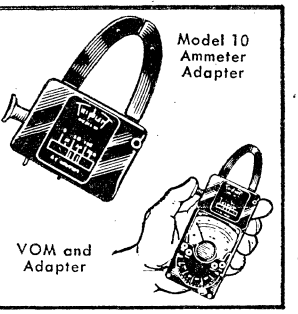
Handy tester for pocket or tool kit has single, recessed selector switch. AC rectifier is precalibrated for easy replacement. Accuracy: ±3% DC; ±4% AC. AC/DC Sensitivity: 1000 ohms/volt. Ranges: DC and AC volts: 0-10-50-250-1000-5000. DC current: 0-10-100 mA; 0.1 amps. Ohms: 0-3000-300,000; 0-3 megs. Output volts: 0-10-50-250-1000. Size, 5 7/8x3 1/16x2 9/16". With test leads, alligator clips and batteries. Shpg. wt., 3 lbs.

51 D 9114.....44.00

Popular Test Equipment

MODEL 310...FOR YEARS, THE WORLD'S MOST POPULAR MINIATURE VOM





MODEL 310 MINIATURE VOM

- 20,000 Ohms/VDC, 5000 Ohms/VAC
- Shirt-Pocket Size
- Ammeter Provision

Miniature VOM is self-shielded, has spring-backed jewels for ruggedness. High-torque, bar-ring movement. Test prod fits into top for use as common probe, leaving one hand free. Accuracy: ±3% DC, ±4% AC. DC volts: 0-3-12-60-300-1200 (20,000 ohms/volt). AC volts: 0-3-12-60-300-1200 (5000 ohms/volt). Ohms: 0-20,000-200,000; 0-2-20 megs. DC current: 0-600 μA; 0-6-60-600 mA. Molded black case, 4¼x2¾x1⅝". Unbreakable plastic meter window. With test leads, battery, and instruction manual. See Model 10 clamp-on AC ammeter adapter, right. Shpg. wt., 2 lbs.

51 D 9667.....44.00

MODEL 369 LEATHER CASE

Handsome black cowhide leather carrying case for 310, 310-C and 310 FET meters. Trouser belt slips through loop on back of case for out-of-the-way carrying. Shpg. wt., 1 lb.

51 D 9146.....4.20

MODEL 379 LEATHER CASE

For 310 and Model 10 clamp-on ammeter combination. Has pocket for Model 101 line separator. Black leather, with strap. Shpg. wt., 1 lb.

51 D 9195.....8.00

REPLACEMENT LEADS

Type 79-153. For 310 and 310-C.

51 D 9128. Shpg. wt., 10 oz.....3.20

Type 311 Lead. Allows separate use of Model 10 AC-Ammeter with Series 310 test equipment.

51 D 9235. Shpg. wt., 10 oz.....3.20

MODEL 310-C TYPE 2 MINIATURE VOM

- Enclosed Lever Range Switch
- Reversing Switch for DC Use

Similar to Model 310, but with 600-volt ranges instead of 1200. Hand-size, with provision for attaching Model 10C clamp-on AC-ammeter, below. Single, fully enclosed lever range switch plus DC polarity reversing switch. Sensitivity: 15,000 ohms/volt on AC; 20,000 ohms/volt DC. Accuracy: ±3% DC, ±4% AC. DC volts: 0-3-12-60-300-600 (20,000 ohms/volt). AC volts: 0-3-12-60-300-600 (15,000 ohms/volt). Ohms: 0-20K-200K. 0-2-20 megs. DC current: 0-600 μA; 0-6-60-600 mA. 4¼x2¾x1⅝". With leads, battery. Wt., 2 lbs.

51 D 5096.....56.00

AMMETER ADAPTER

Plugs into Model 310 or 310-FET to make a clamp-on AC ammeter. Can be used with any VOM with a 3-V AC scale at 5000 ohms/volt. Checks all line loads without breaking circuit or interrupting work. Six AC ranges: 0-6-12-30-60-120-300 amps. Clips around single wire for direct reading. 4¼x1¼x3¼". (See leads on page 000). Shpg. wt., 1 lb.

51 D 9231.....20.00

51 D 5098, Model 10-C. As above, but for Model 310-C VOM. 1 lb.....20.00

MODEL 101 LINE SEPARATOR

Plugs into AC outlet to divide two-conductor cord. Increases Model 10 sensitivity 10X and 20X, 0.3 to 30 amps, AC in 9 ranges. Shpg. wt., 1 lb.

51 D 9232.....8.00

MODEL 100 VOM-AND-AC-AMMETER OUTFIT

- 310 VOM with Model 10 Ammeter
- Includes Carrying Case

Save $5.20 on this packaged miniature VOM outfit. Cost of items purchased separately is $83.20. Outfit consists of: Model 310 pocket-size VOM; Model 10 clamp-on AC Ammeter Adapter; Model 101 Line Separator; Model 379 Leather Carrying Case; Model 311 Lead Attachment for separating VOM and Adapter. VOM has 20,000 ohms/volt DC sensitivity, 5000 ohms/volt AC sensitivity. ±3% DC accuracy, ±4% AC. Shielded, with high-torque movement. AC and DC voltage ranges to 1200 volts in five ranges; current to 600 mA in four ranges; ohms to 20 megs in four ranges.

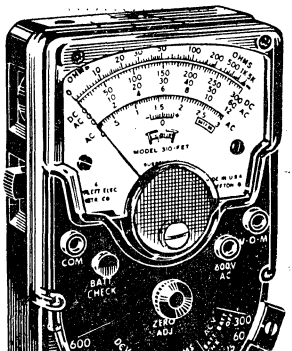
Clamp-on adapter converts 310 to ammeter. Reads current in 6 steps. 101 separator increases ammeter sensitivity. Case holds 310 and 10 with pocket for 101 Line Separator. Description at left. Shpg. wt., 7 lbs.

51 D 5095.....78.00

MODEL 100-C OUTFIT

Same as above outfit, but with Model 310-C VOM. Has 15,000 ohms/volt AC sensitivity, 20,000 ohms/volt DC. AC and DC voltage ranges to 600 volts. Polarity reversing switch. Includes Model 10-C clamp-on AC Ammeter Adapter; Model 101 Line Separator; Model 379 Leather Carrying Case; Model 311 Lead Attachment for separating VOM and Adapter. Full descriptions at left. Shpg. wt., 7 lbs.

51 D 5097.....88.00



MODEL 310-FET SOLID-STATE VOM

- All FET Solid-State with 10-Megohm Input Resistance, Battery Operation
- 300-mV DC Full-Scale Sensitivity for Transistor Bias Measurements to 5000 Megohms
- Handsize with Single Selector Switch
- Takes Optional AC Clamp-on Ammeter

Handsize FET VOM is compact, yet gives a full range of operating features and an input impedance that equals that of many large line cord operated VTVM's. Transistorized amplifier uses field effect transistor circuit to provide high input impedance and greater stability on all DC ranges. Accurately reads resistance up to 1 megohm; AC and DC volts to 600 V.

Designed for convenience of use, with all controls and jacks easily accessible on the face of the unit. Single selector switch for all functions and ranges minimizes chance of incorrect setting and possible burnout. Large, easy-to-read meter has suspension meter movement to eliminate pivots, bearings, hairsprings and rolling friction for top sensitivity and better repeatability. Meter also features uncluttered scale and excellent range overlap for accurate readings. Shatterproof plastic meter window.

Ten megohms/volt input impedance on DC gives maximum accuracy in measuring in high resistance circuits. Has 300 mV DC full-scale sensitivity for transistor bias measurement. Ohms to 5000 megohms. Provision for plugging in AC clamp-on adapter to check line loads instantly without opening the circuit. DC volts: .3-1.2-6-30-120-600V, ±3% full scale accuracy. AC volts: 3-12-60-300-600V at 5000 ohms/volt, ±4% accuracy. Resistance: 1-100-10K-1 meg with 50-ohm center scale. DC miliamps: .12-1.2-mA. Diode overload protection.

Powered by batteries, has built-in battery check provision. Molded black plastic case measures 4¼x2¾x1⅝". With test leads, alligator clips, battery. Shpg. wt., 2 lbs.

51 D 5099.....70.00

Leather Case. For 310, 310C, 310 FET. Wt., 1 lb.

51 D 5094.....10.00

Allied Maintains the World's Largest Stock of Test Equipment

Portable Test Equipment

MODEL 600 TVO SOLID-STATE VOLT-OHMMETER

- VTVM Performance—VOM Portability
- Field-Effect Transistors for Stability
- High Input Impedance—11 Megohms
- One-Probe Operation
- Single Selector Switch
- DC Polarity Reversing

Boasts portability of a VOM with the high put impedance of a VTVM. Designed for use by service technicians, instrument and electronic process control engineers, test lab and computer technicians, quality control personnel. Engineered for easy operation, with uncluttered scale and excellent range overlap for accurate readings on the five-inch meter.

Accuracy, ±3% of full scale. Uses special field-effect transistor circuit for high input impedance and greater stability. Input impedance: 11 megohms, except on 0.4 and 0.8 volts, 2.75 and 3.5 megohms respectively; AC volts, 0.75 megohm, minimum. Frequency range, 15 Hz to 2 MHz. The 50 μA meter movement has Bar-Ring self-shielded rugged magnet construction.

Ranges: DC volts, 0-.4-.8-1.6-4-8-16-40-160-400-1600; AC volts, 0-4-8-16-40-160-400-800; Ohms, 0-1,000-10,000-100,000-1 meg-10 megs-100 megs (10 ohms center scale at X1 range). Has DC polarity reversing switch. Powered by one "D," two "AA" and one 9-volt transistor battery. Typical battery life, 4000 hours. Includes battery test provision. Brushed aluminum front panel with etched black range markings. Molded black case, 3 3/16x5 1/8x6 1/2". Rigid aluminum handle serves as stand, supporting tester at 25° angle. With batteries and test leads. Shpg. wt., 4 lbs.

51 D 9107.....82.00

RF PROBE T79-264. For frequencies to 250 MHz.

51 D 9129. Wt., 4 lbs.....9.00

LEATHER CARRYING CASE. Shpg. wt., 1½ lbs.

51 D 9108.....14.70

MODEL 601 SOLID-STATE PUSHBUTTON VOM

- 14 Ohmmeter Ranges with 7 Low-Power Ranges at 75 mV for Solid-State Circuits
- Voltage Ranges from 10 mV AC and 100 mV DC, plus Current Ranges from 10 μA

Field-Effect-Transistor circuit offers high input impedance (11 megohms) on all AC and DC ranges, plus improved stability over battery life and temperature ranges. Has low power ohms switch for measurement of integrated circuits without damage. Push-button switches select function; single rotary switch selects from 52 ranges. The model 601 measures such parameters as DC voltage, AC rms voltage, resistance, AC/DC current, decibels on 10 ranges, and the condition of its own batteries. Accuracy: ±2% on DC ranges, ±3% on AC. Frequency response on AC, 50 Hz to 50 kHz. Simplified color-coded dial insures fast measurements, with AC and DC ranges using the same arc. 5" meter has a 4.125" scale length with uncluttered scale and excellent range overlap for accurate readings. Ranges: DC volts: 0-.1-.3-1-3-10-30-100-300-1000. AC volts: 0-.01-.03-.1-.3-1-3-10-30-100-300-1000. Ohms: 0-1-10-100-1000-10K-100K; 0-1 meg. 10 ohm center scale. AC and DC current: 0-10-100-1000-10,000 μA. Decibels: —40 to +60 dB. High-impact molded case with brushed aluminum front panel, carrying handle/supporting stand for convenient portability. 3 3/16x5 1/8x6 1/2". With batteries and pencil-thin probe. Shpg. wt., 5 lbs.

51 D 9109T.....150.00

MODEL 800 TYPE 2 LABORATORY VOM

- 8" Suspension Meter with 6.95" Mirror Scale
- 70 Ranges plus Polarity Reversing Switch
- 1½% DC, 3% AC Accuracy
- Diode Overload Protection

Portable VOM has the versatility of a complete electronic measuring laboratory. Designed to meet the present and advanced circuit measurement requirements of circuit designers, service and lab technicians, instrument evaluation, production quality control, industrial processing, etc. 8" suspension mirror with 6.95" mirror scale gives greater readability plus diode overload protection. Two rotary switches select 70 ranges with DC polarity reversing switch and fused ohmmeter circuit. ±3% AC accuracy to 1200 volts; usable with frequencies to 100 kHz. DC accuracy ±1½% with temperature and frequency compensation. Ranges: DC volts, 0-0.6-3-12-60-300-1200-6000 at 10,000 ohms/volt, 0-0.3-1.5-6-30-150-600-3000 at 20,000 ohms/volt. 0-.120 at 60 μA. AC voltage ranges: 0-3-12-60-300-1200-6000 at 5000 ohms/volt, 0-1.5-6-30-150-600-3000 at 10,000 ohms/volt. Decibels: —20 to +70 in 10 ranges. DC microamperes: 0-60-600 at 120 MV, 0-1.2-12-120-1200 at 240 MV. DC amperes: 0-6 at 120 MV, 0-12 at 240 MV. Ohm ranges: 0-1K-10K-100K, 1 meg, 10 meg, 100 meg. Heavy molded black case, 7½x6¼x3⅞", with insulated movable handle which can be used for stand. With leads, battery.

51 D 9071. Shpg. wt., 7 lbs.....110.00

MODEL 850 VTVM

- High Stability—12AU7 Cathode Circuit
- 0-5-Volt DC Range for Transistor Circuits
- Easy-to-Read 7" Scale
- Built-In Burnout Protection

Extremely versatile VTVM combines superior voltage measuring capability with 115-volt operation. Ideal for benchwork in the electronics workshop, quality control stations, R&D laboratory work, etc. Provides seven peak-to-peak voltage ranges, eight DC voltage ranges, seven AC rms volts ranges, seven resistance ranges, plus a frequency range from 15 Hz to 3 MHz to provide a wide-range measurement capability.

Wide 7" meter has easy-to-read scale, electrical protection to prevent burnout and 12AU7 cathode circuit to produce top stability. Separate scale on meter for peak-to-peak readings. Spring-backed jewels for added ruggedness. Single-unit probe has built-in switch for AC/DC/Ohms. 11 megohm input resistance on all DC voltage ranges. Accuracy ±3% on AC and DC. Ohms accurate within ±3% full scale based on DC scale. DC voltage ranges: 0-.5-1.5-5-15-50-150-500-1500. AC rms voltage ranges: 0-1.5-5-15-50-150-500-1500. Peak-to-peak voltage ranges: 0-4-14-40-140-400-1400-4000. Resistance ranges: 0-1000-10,000-100,000-1 meg-10 megs-100 megs-1000 megs. Frequency range 15 Hz to 3 MHz (up to 250 MHz with auxiliary diode probe listed below). Input resistance: 11 megohms on DC volts, AC volts minimum of .83 megohms.

Molded black case 7⅝x6 7/16x3¾". Carrying handle also supports tester at 25° angle for easy reading. With test leads and battery. For 115 VAC. Wt., 7 lbs.

51 D 9257.....93.00

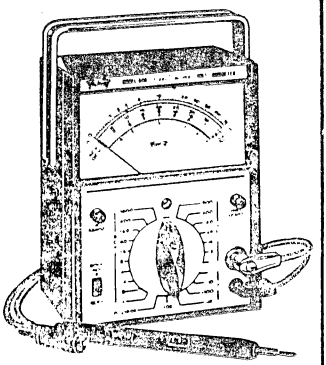
T-79-196 Probe. For VDC to 50 KV.

51 D 9193. Wt., 4 lbs.....25.20

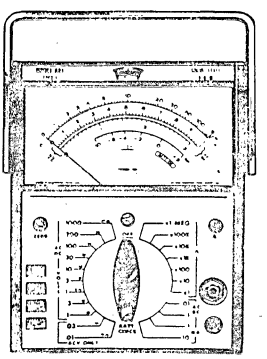
T-79-215 RF Probe. For up to 20 volts with frequencies to 250 MHz.

51 D 9261. Wt., 1 lb.....9.00

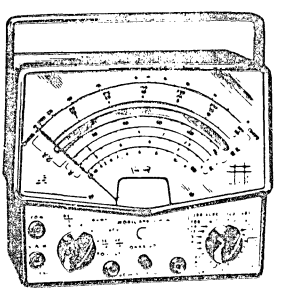
TRIPLETT



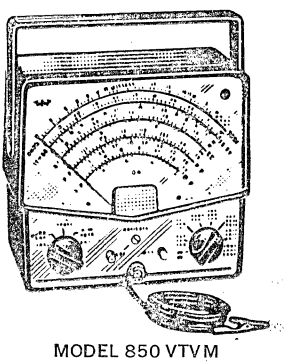
MODEL 600 TVO



MODEL 601 TYPE 1 TVO

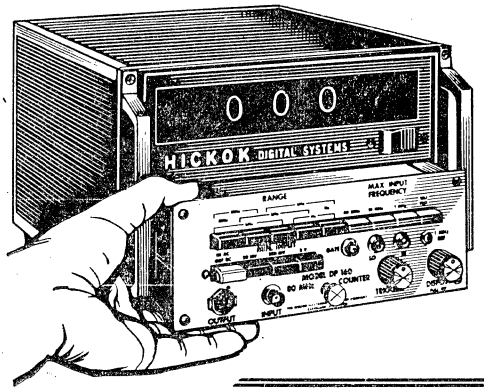


MODEL 800 TYPE 2 VOM



MODEL 850 VTVM

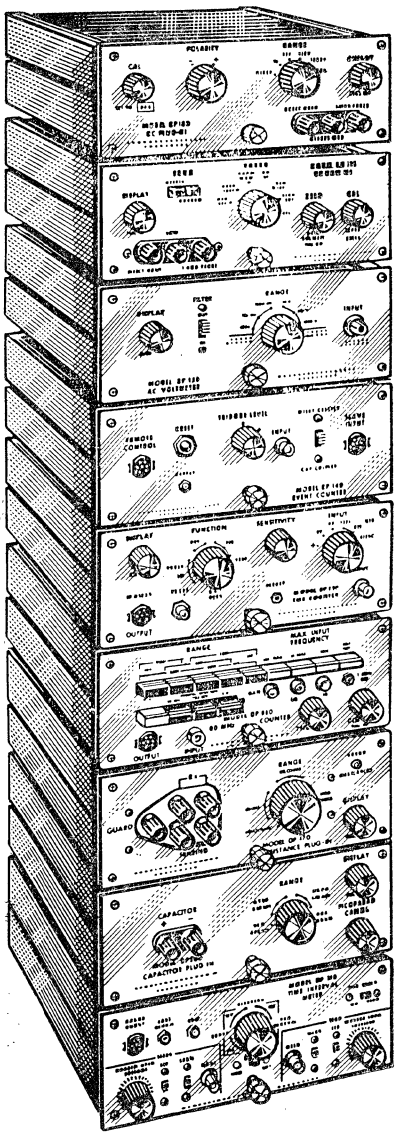
HICKOK Digital Display Test Equipment



DMS 3200A AND DMS 3200P MAIN FRAMES

DMS 3200A MAIN FRAME. Provides a bright "nixie"-type 3-digit display for maximum accuracy and speed in measuring. Fully electronic, with integrated circuits and discrete transistors for all solid-state circuitry. Self-contained power supply provides all operating voltages for mainframe and plug-in units. Counter has response of 5 MHz for ultra-reliable count and readout of input pulse trains. All critical voltages are zener controlled for precise operation. Die-cast front and rear panels, with heavy-duty extruded aluminum side panels. Flip-down stand, front-panel carrying handles. Removable top and bottom. 9⅝x6⅞x12⅞". For 115/230 V, 46-400 Hz AC.
51 D 5675 U. Shpg. wt., 10 lbs. 375.00

DMS 3200P MAIN FRAME. Provides fully electronic 3-digit display using bright "nixie"-type display tubes. Offers same fine features as DMS3200A main frame above, plus non-blinking display through the use of buffer-storage circuitry and printer output. Rear panel switch selects either buffered or non-buffered display mode. Printer output provides 10-line decimal data on rear-panel connector; shows decimal location, polarity, wrong polarity indication, over-range indication and print-command data. Outputs fully buffered. Die-cast front and rear panels, removable top and bottom sections, flip-down stand. 9⅝x6⅞x12⅞". Shpg. wt., 10 lbs.
51 D 5676 U. 465.00



DP 100 DC Voltmeter Module

DP 110 Micro-voltmeter

DP 130 AC Voltmeter

DP 140 Event Counter

DP 150A 1-MHz Counter

DP 160 1 MHz Counter

DP 170 Ohmmeter

DP 200 Capacity Meter

DP 210 Time Interval Meter

DP 100 DC VOLTMETER. Plugs into any DMS main frame—provides digital display of DC voltages from 0.1 millivolt to 1000 volts, with accuracies of ±0.1% of reading and ±1 digit. Normal operating temperature range, +15°C to +35°C. No loss in accuracy for up to 60% over range. Temperature-compensated zener reference voltage and high feedback design combine to provide long-term accuracy. Fully transistorized with silicon transistors and diodes used throughout, plus integrated circuits in the main frame. Five ranges: 0.00 to 99.9 millivolts; .000 to .999 volts; 0.00 to 9.99 volts; 00.0 to 99.9 volts; 000.0 to 999 volts. Excellent AC rejection for accurate measurements and rapid 100-millisecond reading time. Photo chopper stabilization assures no drift and zero offset. Manual range selection with automatic decimal location and over range indication. Input impedance is 10 megohms in all ranges. Response time, 1 second. Ruggedly built with heavy-duty aluminum panels, extruded aluminum side sections. Overall size: 3x8¼x10⅛" Shpg. wt., 3¼ lbs.
51 D 5677 T. 175.00

DP 110 DC MICROVOLTMETER. Provides digital display of DC voltage measurements from 1 microvolt to 1000 volts when used with any DMS main frame. Pushbutton permits expanding scale for four-digit resolution on any voltage measurement being made, providing an effective overrange capability of 1300%. Accuracy over a temperature range of +20°C to +30°C, ±0.05% of reading, ±1 digit. Ranges: 0.00 to 9.99 millivolts, 00.0 to 99.9 millivolts, 000. to 999. millivolts. 0.00 to 9.99 volts, 00.0 to 99.9 volts, 000 to 999 volts, plus expanded scales for coverage from 0.000 millivolts to 999.9 volts. AC rejection: 40 dB at 40 Hz, 70 dB at 120 Hz. Overload protected to ±1000 volts on two lower scales, ±1500 volts on all other ranges. Zero offset adjustment compensates for offsets in test setups for top accuracy on microvolt measurements. Floating input has 10,000 megohm isolation between input ground and chassis or power line ground. Input impedance is 10 megohms on all ranges. Photo-chopper stabilization. Zener reference voltage. 3x 8¼x10⅛". Shpg. wt., 4¾ lbs.
51 D 5636 T. 475.00

DP 130 AC VOLTMETER. Plugs into any DMS main frame to provide digital readout of AC voltages from 10 microvolts to 1000 volts in six ranges. Has accuracy spec. of ±0.1% of reading, ±1 digit over frequency range of 22 Hz to 100 kHz, with slight reduction up to 1 MHz. Ranges: 0.00 to 9.99 mV (10 μV resolution), 00.0 to 99.9 mV (100 μV resolution), 000 to 999 mV (1 mV resolution), 0.00 to 9.99 V (10 mV resolution), 00.0 to 99.9 V (100 mV resolution), 000-999 V (1 V resolution). Input impedance of 1000 megohms shunted by 20 picofarads (25 picofarads on lower three ranges) minimizes loading errors. Input protected for overloads up to 1500 V peak. Though designed to provide RMS readings on AC sine signals, also gives RMS of triangular and square wave forms when specified correction factors are applied. Front panel switch permits selection of internal filter to reduce noise errors. Heavy-duty construction with aluminum front, sides. 3x8¼x10⅛". Shpg. wt., 5 lbs.
51 D 5637 T. 395.00

DP 140 EVENT COUNTER AND SLAVE. Provides straight counting of incoming pulses when used singly with either main frame above. Additional combination of main frames and plug-in modules can be added for cascade operation with readouts of 6, 9, 12, etc. digits. Permits totalized count display of events in production counting applications, or any other application where a series of random events can be converted to pulses. Count can be started, stopped and reset, or started and stopped without reset, by remote control. AC or DC input coupling with 100 mV sensitivity. Input impedance, 1 megohm shunted by 10 picofarads. When driven by a main frame/DP150A or main frame/DP160 the units in cascade provide simultaneous 6-digit frequency readout. Trigger level control for sensitivity adjustment. Schmitt trigger utility output (.4 V P-P). Counting rate to 1 million counts per second. Overload protected to 400 volts. Infinite over-range capability. Ambient temperature range: +10°C to +45°C. 3x8¼x10⅛". Shpg. wt., 2¾ lbs.
51 D 5678 ..... 100.00

SEE PAGE 454 FOR DIGITAL MEASURING SYSTEM ACCESSORIES

Digital Measuring Systems

DMS 3200 ACCESSORY PLUG-INS

DP 150A 1 MHZ COUNTER PLUG-IN. Provides digital readout of both frequency and period measurements when used with any DMS main frame shown. Measures sinewaves and squarewaves, pulses, or other complex waveforms with frequencies of 00.1 Hz up to 1.0 MHz and periods of 0.1 millisecond to 999 seconds. Overrange capability permits normal 3-digit display of main frame to provide up to 7-digit resolution with an accuracy of ±0.0005% of reading ±1 digit. Also features provision for event totalizing and manual reset to permit use in production counting applications. High sensitivity of 10 millivolts (rms) permits use with extremely low input signal levels.

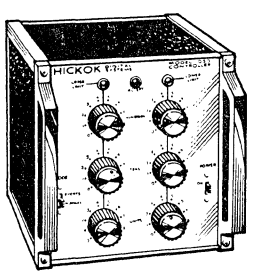
Frequency ranges: 00.0 to 99.9 Hz, 000 to 999 Hz, 0.00 to 9.99 kHz, 00.0 to 99.9 kHz, 000 to 999 kHz. Period measurement ranges: 00.0 to 99.9 milliseconds, 000 to 999 milliseconds, 0.00 to 9.99 seconds, 00.0 to 99.9 seconds, 000 to 999 seconds. Gate times: 1 millisecond to 10 seconds in five decades. Built-in internal checks at 1 Hz, 1 kHz and 100 kHz, plus isolated output from Schmitt trigger for use as utility pulse output for oscilloscope trigger, time mark generator, etc. Continuously variable front-of-panel sensitivity control. Low-frequency noise rejection. 1 megohm shunted by 24 picofarads input impedance. 3x8¼x10⅛".
51 D 5679 T. Shpg. wt., 3½ lbs.....230.00

DP 160 80 MHZ COUNTER PLUG-IN. Provides digital display of signal frequencies from 0.1 Hz to 80 MHz when used with any DMS main frame (100 MHz when used with DMS3200A or DMS3200P. Overrange permits normally 3-digit main frame display to provide 7-digit resolution with ±0.00005% of reading, ±1 digit accuracy. 20 mV sensitivity permits measuring high frequency low level signals with maximum accuracy. Input impedance: 1 megohm shunted by 25 picofarads. Front panel input signal attenuator minimizes possibility of overloads, with either AC or DC coupling controlled by panel selector switch. Front panel switch also controls extension of resolution capability when measuring lower frequency inputs.

Ranges: 00.0 to 99.9 Hz, 000 to 999 Hz, 0.00 to 9.99 kHz 00.0 to 99.9 kHz. 000 to 999 kHz (1 MHz position); 000 to 999 Hz, 0.00 to 9.99 kHz. 00.0 to 99.9 kHz, 000 to 999 kHz, 0.00 to 9.99 MHz (10 MHz position); 0.00 to 9.99 kHz 00.0 to 99.9 kHz, 000 to 999 kHz, 0.00 to 9.99 MHz, 00.0 to 80 MHz (2 MHz position). Built-in self test provisions and front panel indicator lamps simplify Schmitt trigger level adjustment. Design includes low-drift crystal, metal film resistors, and temperature compensation to insure maximum time-base reliablity. Internal count circuitry check. 1 MHz time base output. 3x8¼x10⅛". Shpg. wt., 3½ lbs.
51 D 5638 T.....395.00

DP 170 OHMMETER PLUG-IN. When used with any DMS main frame this model provides digital display of resistance measurements from .001 ohm (1 milliohm) to 1000 megohms, with accuracy of ±0.1% of reading ±1 digit. Measurement system incorporates true Wheatstone bridge with internal electronic null-out and resultant resistance value display. Front panel "null" indicator shows when automatic bridge balance is complete. Null time nominally 1 second. Features four terminals to prevent lead resistance from causing inaccuracies in low resistance measurements. Guard terminal prevents spurious leakage in components under test to affect accuracies on high resistance ranges.

Resistance ranges: 000 to 999 milliohms (±0.2% accuracy), 0.00 to 9.99 ohms (±0.1%), 00.0 to 99.9 ohms (±0.1%), 000 to 999 ohms (±0.1%), 0.00 to 9.99 K (±0.1%), 00.0 to 99.9 K (±0.1%), 000 to 999 K (±0.1%), 0.00 to 9.99 meg (±0.1%), 00.0 to 99.9 meg (±0.2%), 000 to 999 meg (±0.5%). No loss in accuracy up to 100% overrange on all ranges. Response time (open circuit to full scale) for balance condition of Wheatstone bridge: 1 second for first eight ranges, 4 seconds for 99.9 megohm range, 30 seconds for 999 megohm range. Temperature operating range: 10°C to 50°C. Aluminum front and side panels. 3x8¼x10⅛". Shpg. wt., 3½ lbs.
51 D 5680 T.....275.00



1050 DIGIT SET-POINT CONTROLLER

- Starts and/or Stops Any Peripheral Function
- Indicator Lamps Show "Accept" Band

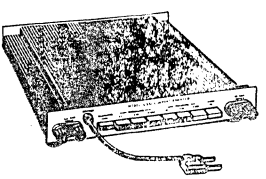
Provides start and/or stop of any peripheral function when used with DMS 3200P Digital Measuring System. Upper and lower set-point controls provide absolute values for activating external control circuitry. Has 1-MHz response as 3-digit controller, 100 kHz with 2 units used as 6-digit controller. Data input: parallel entry, 10-line decimal, positive logic. Source requirement: 1 volt at 200 μA. Control outputs from relay contacts at 1.5 amps. For 115/230 volts, 47 to 400 Hz, 2 watts. Size, 6⅞x6½x7¾". Cables on page 456.
51 D 5641 T. Shpg. wt., 6¼ lbs.....295.00

DP 200 CAPACITY METER. Provides digital display of capacity measurements from 1 picofarad to 10,000 microfarads when used with any DMS main frame. Capacity is accurately measured by the bridge comparing stored charge of the unknown capacitor with internal standard capacitor. Low DC potential test signal eliminates external polarizing voltage for measurement of electrolytics. Features balanced test lead capacity for extremely low capacity measurement accuracy. Special design permits simple application, with no manual balancing or nulling operations necessary for capacitance measurements. Further accuracy is provided by design features that virtually eliminate the effects of the Q of capacitor under test.

Ranges: 000 to 999 picofarads (±0.1% accuracy), 0.00 to 9.99 nanofarads (±0.1%), 00.0 to 99.9 nanofarads (±0.1%), 000 to 999 nanofarads (±0.1%), 0.00 to 9.99 microfarads (±0.1%), 00.0 to 99.9 microfarads (±0.1%), 000 to 999 microfarads (±0.1%), 0.00 to 9.99 millifarads (±0.9%). No loss in accuracy up to 40% overrange on lower six ranges, top two ranges overrange capability 2%. Test voltages applied: millifarad range, +1V; all other ranges, +2 V. Response time (open circuit to full scale) for balance condition: 1 picofarad to 99.9 nanofarad range, 1 sec.; 999 nanofarad to 999 microfarad range, 2 sec., 9.99 millifarad range, 2 sec. 3x8¼x10⅛".
51 D 5681 T. Shpg. wt., 3½ lbs.....275.00

DP 210 TIME INTERVAL METER. Provides time interval or period measurements from 10 microseconds to 999 seconds when used with any DMS main frame. This deluxe meter offers separate start and stop inputs with independent trigger level adjustments, attenuation and slope choice. Front panel switch permits time interval measurement of "one-shot" or repetitive phenomenon or period measurement of repetitive signals. Also provides for 8-digit resolution on normally 3-digit main frame. Precision crystal with low drift characteristic assures short and long term clock accuracy. Input impedance of 1 megohm and sensitivity of 20 millivolts provides top accuracy for low level inputs.

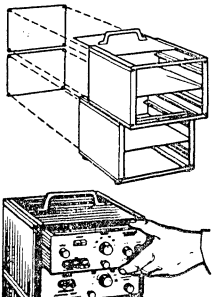
Ranges: 0.00 to 9.99 milliseconds, 00.0 to 99.9 milliseconds, 000 to 999 milliseconds, 0.00 to 9.99 seconds, 00.0 to 99.9 seconds, 000 to 999 seconds. Front-panel trigger level controls permit selection of trigger point on any input wave shape, while selectable slope permits triggering on positive or negative wave fronts. Both inputs DC coupled. "Gate Output" permits visual alignment of trigger point when used with oscilloscope. Channel isolation: —40 dB minimum with sensitivity set at maximum on undriven channel. May be used with standard 10:1 oscilloscope probe to extend input level range. 3x8¼x10⅛". Shpg. wt., 3 lbs.
51 D 5639 T.....230.00



D310 CURRENT METER ADAPTER

- Measures DC Current from 0.1 Nanoamp to 10 amps
- 8 Digital Display Ranges

Permits digital display of DC currents when used with DMS Main Frame and DP 110 Microvoltmeter Plug-In Module, facing page. Measures current from 0.1 nanoamp to 10 amps in eight ranges. Using self-expanding feature of DP 110, provides 4-digit resolution (0.01% FS). Accuracy: ±0.15% of reading, ±1 digit (on expanded position. ±0.2%, ±2 digits). Mounts beneath DMS Main Frame and interconnects with DP 110 Microvoltmeter Plug-In Module. Very compact in size, only 1⅝x9⅝x11½". Leads on page 454.
51 D 5640. Shpg. wt., 3 lbs.....90.00



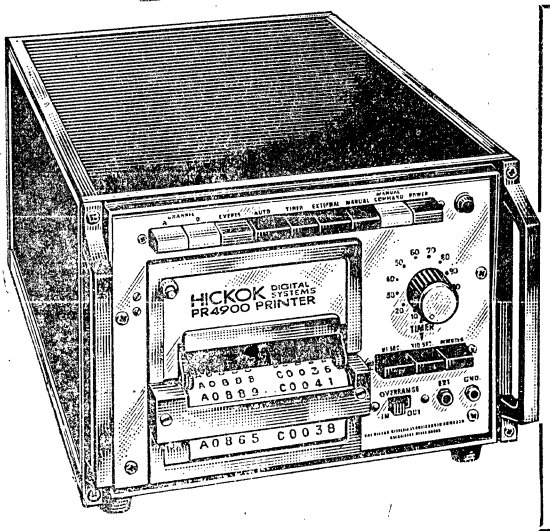
MODEL C80, C81 STORAGE UNITS FOR PLUG-INS

- Protects Plug-Ins During Transit
- Holds up to 6 Units

C80 and C81 units provide combination storage rack and carrying case for DMS 3200 System plug-ins. Type C80 has rugged extruded side panels, rubber feet, top plate with carrying handle, and room for two plug-ins. Type C81 provides two plug-in storage add-on to C80 base unit. Cases dovetail to give single-unit ruggedness and appearance. Two Type C81 storage racks may be assembled to one C80 for 6 plug-in capacity. 10½x6½x 9⅜". C80, 5½ lbs. C81, 4¾ lbs.
51 D 5111. Type C80.....42.50
51 D 5112. Type C81.....34.50

SEE PAGE 454 FOR DIGITAL MEASURING SYSTEM ACCESSORIES

HICKOK High-Reliability Test Equipment



PR 4900 SERIES DIGITAL PRINTERS

- Print Up to 10 Columns of Digital Information
- Operate from One or Two Independent Sources
- Electrically Compatible with DMS3200 System

Provide clear, concise print-out of up to 10 columns (4 digit columns, 1 code column per channel) of digital data from one or two independent systems. Can be used with DMS3200P Main Frame or any other device providing 10-line decimal or BCD coded data outputs. Rugged solid-state construction with integrated circuits used throughout for maximum reliability.

Front panel switch preselects single input or independent sources. Print commands may be selected as external, manual, automatic, or at time intervals, calibrated from 10 seconds to 120 minutes in 36 steps. Max. print rate, one line per second. Uses standard 10-line decimal coding, however BCD 1248 or 1224 codes may also be used with adapters below. Prints on pressure sensitive paper or standard adding machine paper and ink. Data input: parallel entry, positive logic. "0" state must be less than +0.4 V, greater than —0.4 V. "1" state must be greater than +0.9 V, less than +4.0 V. Print command activated on positive-going portion of +2.0 or +4.0 V pulse.

Printing mechanism slides out of front panel for easy paper and ink changing. Plug-in circuit board construction for simplified expansion or maintenance. Slip-off top; sturdy carrying handles. 9⅝x6⅞x14⅜". Styling matches DMS3200P Main Frame. 115 or 230 V, 50-60 Hz AC. Accessories below. Wt., 22 lbs.

MODEL 4900 DIGITAL PRINTERS

PR 4900-04. SINGLE-CHANNEL INPUT, 4-COLUMN PRINTER. Prints 3 columns digital data, one column code data (polarity, wrong polarity, over-range and decimal point location). Ten-line decimal input to digit columns, special code input to code column. Order ink cartridge, paper below. Shpg. wt., 22 lbs.
51 D 5686 U.....760.00

PR 4900-05. SINGLE-CHANNEL INPUT, 5-COLUMN PRINTER. Same as above, but prints 4 columns digital data, 1 column code data. Additional digit column provides print-out of "overspill" fourth digit when used with Hickok DMS measuring system. 22 lbs.
51 D 5687 U.....870.00

PR 4900-44 DUAL CHANNEL INPUT, DUAL 4-COLUMN PRINTER. Has dual channel input, prints 3 columns digital data, 1 column code data for each channel. Second channel input capacity permits simultaneous operation from two independent sources. Ten-line decimal inputs to digit columns, code input for code columns. 24 lbs.
51 D 5688 U.....1040.00

PR 4900-55. DUAL-CHANNEL INPUT, DUAL 5-COLUMN PRINTER. Prints up to 10 columns of digital information (4 columns digital data, 1 column code data for each channel). Second channel input capacity for simultaneous operation from two independent sources. 24 lbs.
51 D 5689 U.....1290.00

PR 4900 SERIES DIGITAL PRINTER AND DMS MEASURING SYSTEM ACCESSORIES

P100 FOURTH-DIGIT PLUG-IN ASSEMBLY. Adds fourth digit to 3-digit column inputs, (PR4900-04); permits field conversion to PR4900-05 for four-digit column readouts. Shpg. wt., 1 lb.
51 D 5690.....130.00

P104 SECOND-CHANNEL 4-COLUMN PLUG-IN ASSEMBLY. Field converts PR4900-04 to 2-channel PR4900-44 for simultaneous operation from two independent inputs. Shpg. wt., 1 lb.
51 D 5691 T.....300.00

P105 SECOND-CHANNEL 5-COLUMN PLUG-IN ASSEMBLY. Provides field conversion of PR4900-05 ro PR4900-55 for dual-channel 5-column readouts from two independent inputs. Shpg. wt., 1 lb.
51 D 5692 T.....440.00

P220 BCD 1248 DECODE BOARD PLUG-IN. Use to convert any PR4900 printer to operation from BCD 1248 code inputs instead of 10-line decimal inputs. (4-column printers will give 3-digit readouts; 5-column printers will give 4-digit readouts. Code columns require separate input signal coding). Shpg. wt., 1 lb.
51 D 5693.....140.00

P230 BCD 1224 DECODE BOARD PLUG-IN. Use to convert any PR4900 printer to operation from BCD 1224 code inputs instead of 10-line decimal inputs. (4-column printers will give 3-digit readouts; 5-column printers will give 4-digit readouts. Code columns require separate input signal coding). Shpg. wt., 1 lb.
51 D 5694 T.....150.00

P300-3 3-FT. INTERCONNECTING CABLE. Cable with connectors permits connection of any PR4900 printer with The DM3200P Main Frame for use in DMS measuring system. 5-digit PR4900 Models will print out "overspill" fourth digit of DMS system. Also used to connect Model 1050 Digital Set Point Controller with DMS3200P Main Frame. Shpg. wt., 1 lb.
51 D 5695.....35.00

P401 INK CARTRIDGE. Long-life ink cartridge for PR4900 Series Printers. Provides 250,000 imprints. Shpg. wt., 8 oz.
51 D 5696.....35.00

P402 PRINT-OUT PAPER. Standard 3½" roll for PR4900 printers. Use with P401 Ink Cartridge above. Shpg. wt., 1 lb.
51 D 5697.....1.00

P403 PRINT-OUT PAPER. Standard 3½" pressure-sensitive paper for convenient printouts without ink. For all Series PR4900 Printers. Shpg. wt., 1 lb.
51 D 5698.....9.50

P301-1 1-FT. INTERCONNECTING CABLE. Permits connection of two Model 1050 digital set-point controllers for positive control of up to 6 digits in DMS measuring system. Shpg. wt., 1 lb.
51 D 5646.....10.00

P-302-3. 3-FT. INTERCONNECTING CABLE. Specially made for connection of DMS 3200P Main Frame, PR4900 Printers, and Model 1050 Digital Set-Point Controller. System provides start and stop of peripheral functions for DMS-3200P Main Frame, with data printout. Shpg. wt., 1 lb.
51 D 5109.....75.00

100-143 RACK-MOUNT ADAPTER KIT. Permits mounting PR4900 Printers to standard 19x8¾" racks. Shpg. wt., 2 lbs.
51 D 5699.....29.00

100-137 RACK-MOUNT ADAPTER KIT. Permits mounting Model 1050 Digital Set-Point Controller to 19x8¾" racks. Shpg. wt., 3 lbs.
51 D 5648.....29.00

16970-83 LOW-CAPACITY PROBE. For Model DP100 and DP110 modules.
51 D 5643. Shpg. wt., 1 lb.....38.00

16970-87 LOW-CAPACITY PROBE. For DP140, 150, 160, 210.
51 D 5649. Shpg. wt., 1 lb.....38.00

12450-419 48" TEST LEADS. For DP100, 110, 170, 200, D310.
51 D 5642. Shpg. wt., 1 lb.....3.00

12450-416 36" TEST LEADS. For DP130, 140, 150A, 160, 210.
51 D 5644. Shpg. wt., 1 lb.....10.00

1050-174 TEST CLIP BLOCK. For DP170, 200 modules.
51 D 5107. Shpg. wt., 1 lb.....7.00

16525-217 TEST CLIPS. Pair. For DP170, 200 modules.
51 D 5108. Shpg. wt., 1 lb.....3.00

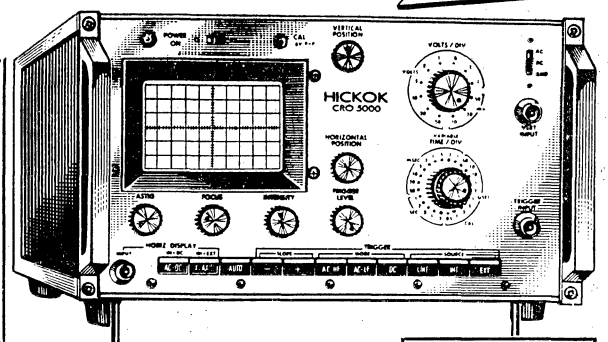
See Pages 452 and 453 for Hickok DMS Measuring System and Modules

Quality Oscilloscopes

HICKOK

CRO 5000 SOLID-STATE 25-MHz LAB AND INDUSTRIAL OSCILLOSCOPE

- Extra-Wide Vertical Bandwidth Assures Usable Display from DC Levels to Over 50 MHz
- 24 Clearly Calibrated Time Base Ranges from 0.05 μsec/div. to 2.0 sec/div
- High-Speed Differential Schmitt Triggering Circuit Permits Selection of Positive or Negative Slope to Begin Sweep
- Displays Waveform Overloads Up to Five Times Screen Height Without Distortion
- Regulated Power Supplies for High Stability



725.00

MODEL CRO 5000 IS ALSO AVAILABLE FOR USE WITH 220 V, 50-60 Hz AC. WRITE ALLIED FOR INFORMATION

Medium-priced, high-precision 4" scope with features and specifications comparable to more sophisticated, more costly scopes. Solid-state design eliminates basic performance changes due to tube aging and minimizes the effects of heat build-up. Offers exceptional stability and reliability, cool operation with minimum maintenance, light weight and low power consumption.

Vertical bandwidth of DC to 25 MHz (at 3dB down point) with better than 14 nsec rise time satisfies 90% of all applications requiring oscilloscopes in laboratory, quality control, inspection and production activities. Roll-off characteristic above 25 MHz is essentially Gaussian for optimum pulse display with minimum overshoot. Excellent vertical gain and outstanding overload characteristics make bandwidth usable to over 50 MHz, with stable displays and adequate horizontal expansion.

Has vertical deflection system of 10 mV/div. to 50.0V/div. in 12 calibrated ranges with an accuracy of ±3.0%. Built-in vertical delay line permits viewing the leading edge of pulse displays when triggered internally. Internal delay line provides up to 50 nanoseconds of baseline prior to beginning of pulse display. Vertical sensitivity of 10 mV per division, plus 12 calibrated sensitivity steps accommodate a broad range of input signal levels. Vertical input impedance, 1 meg, shunted by 30 pF (±1 pF), 600 VDC plus peak AC, overload protected at 25 MHz (1000:1). Vertical amplitude of a waveform may be increased to five times screen height with essentially zero distortion. Vertical positioning range permits shifting the display vertically to view any portion of the waveform, including pulse top or bottom with accuracy and precision.

Horizontal amplifier response is DC to over 5 MHz (at 3 dB down point) permitting accurate horizontal waveform display, Lissajous figures, phase measurements and other X-Y presentations. Has 24 calibrated time base ranges from 0.05 μsec/div. to 2.0 sec/div. Horizontal input impedance, 1 meg shunted by 30 pF, with AC or DC coupling at front panel. Sensitivity is 200 mV/div (±5%). Accuracy, ±3.0%, slightly less on slowest three ranges.

High-speed differential Schmitt triggering circuit permits stable triggering for waveform displays up to 50 MHz. Sweep positioning allows waveform to be delayed up to 40 div. for full screen presentations of small portions of the input waveform. Selectable internal, external or line triggering signals. Internal triggering, 0.2 div. deflection; external, 200 mV p-p. Input impedance, 1 meg shunted by 10 pF. Front panel calibrator for adjustment of probes and gain settings: 1 kHz square wave at 0.6 with 200-nanosecond volts, peak-to-peak, rise time.

Precision metal film and wirewound resistors are used in all critical circuitry. Regulated power supplies assure consistent performance and calibration accuracy over wide line voltage fluctuations. Flat-face 4" CRT has P-31 phosphor. Features low distortion, small spot size and excellent linearity. Graticule major divisions are 0.8 cm, display area is 6x10 major divisions. Heavy-duty, extruded aluminum closure sections. Top, bottom and sides can be removed for easy access to all components. "Flip down" bail permits tilting the scope for added viewing ease. Size, 6⅞x11¼x19". For 110-120 V, 50-60 Hz AC. Order probe, rack-mount kit below.

51 D 5004 U. Shpg. wt., 24 lbs..... **725.00**

MODEL CRO 5000 ACCESSORIES

16970-87 LOW-CAPACITY PROBE. Has "loop-type" clamp tip for positive circuit connection with minimum circuit loading. Adjustable compensation matches probe to oscilloscope input resulting in constant division over entire frequency range for highly accurate and precise measurements. 10:1 division ratio, ±2.0%. Impedance at probe tip is 10 megohms shunted by approximately 6 pF. Designed of high-impact Cycolac plastic for ease of handling and long-term durability. Front-panel scope connection. Includes 3-foot replaceable cord. 36" long. Shpg. wt., 1 lb.

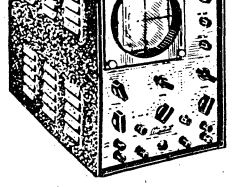
51 D 5649..... **38.00**

100-138 RACK-MOUNT KIT. Permits mounting the CRO 5000 scope in standard 19" wide, 8¾" high rack-mount panel. Shpg. wt., 1 lb.

51 D 5110..... **29.00**

677 WIDEBAND 5" OSCILLOSCOPE

- Pre-Set Horizontal, Vertical Sweep
- Built-in Peak-to-Peak Calibrator
- Separate Astigmatic Control



High-quality instrument at an economical price—designed for precision TV servicing. Vertical amplifier has cathode follower input (imp., 3 meg shunted by 10 pF). Horizontal amplifier provides minimum 5 times sweep expansion—facilitates detailed observation of TV sync waveforms, including colorburst (imp., 5 meg., shunted by 30 pF). 40 mV rms/inch vertical sensitivity. Built-in retrace blanking. Response: vertical, ±3 dB, 5 Hz to 4.5 MHz; horizontal, ±3 dB, 5 Hz to 350 kHz. Synchronization: plus or minus internal, external, 60 Hz line frequency. 30 Hz and 7875 kHz fixed frequencies. Separate astigmatic control for bright, sharp traces. Rugged metal case. 14x9½x18½". With all test leads. For 110-120 V, 60 Hz AC. Shpg. wt., 36 lbs.

51 D 5283 U.....**269.50**

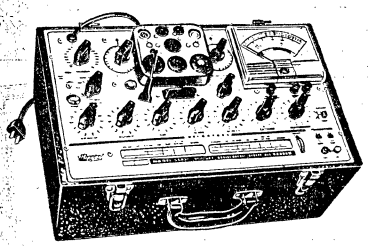
770A 5" LABORATORY OSCILLOSCOPE

- Two Bandwidth Sensitivities
- 8-Step Vernier Attenuators
- Vertical Positioning Control

Versatile 5" scope designed for use in industrial and laboratory applications. Features Gaussian roll-off for true pulse rate reproduction; Flat-face 5" tube. Calibrated horizontal sweep with choice of recurrent, driven, and automatic modes of sweep generator operation. Post-accelerated, with 18-position sweep rate selector and 5 times horizontal magnification. Miller run-up sweep circuit. 75 nanosecond rise time. Vertical response, ±3 dB, 3 Hz to 3.5 MHz at 0.01 V/div.; ±3 dB, DC to 4 MHz at 0.1 V/div. Horizontal, ±3 dB to 600 kHz. Vertical input, 1 meg shunted by 40 pF. Inputs to horizontal amplifier, direct, 60 Hz line, sweep generator, + or — internal, external, 60 Hz line sync. 13¾x11x17½". Leads. 105-125 V, 60 Hz AC. Shpg. wt., 57 lbs.

51 D 5287 Z.....**475.00**

HICKOK Quality Test Equipment

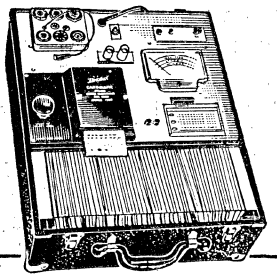


MODEL 6000A PORTABLE TUBE TESTER

- Hickok-Developed Gm Test Circuit
- Direct Reading Grid Current (Gas) Test
- Immediate Filament Continuity Test
- Continuous Line Voltage Indication

Deluxe unit tests over 1600 tube types including latest types; up-to-date roll chart issued semiannually. Tests more tubes, faster, without sacrificing accuracy. Tests transconductance, shorts, leakages, gas, filament continuity. Direct reading of grid current (gas) in microamps on meter. Instantaneous shorts and leakage test with new, increased sensitivity. Continuous line voltage indication permits correction at any time during test. Provides test for NPN and PNP transistors, forward conduction efficiency test on semiconductor diodes. Sockets: octal; loctal; 7, 9 and 10-pin min.; compactron; novar; 5, 7-pin nuvistor. 3000, 6000, 15,000 micromhos. Socket plate replaceable for obsolescence protection. Size, 7½x16¾x11¾". For 105-125 V, 50-60 Hz. Shpg. wt., 21 lbs.

51 D 5006 U.....297.50

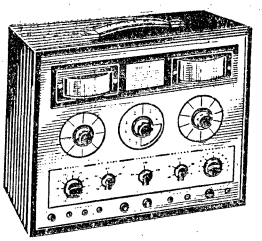


MODEL 123R "CARDMATIC" AUTOMATIC TUBE TESTER

- Fast, Accurate Card-Programmed Testing
- Tests Saturation and Cutoff Plus G_m
- Regulated Supplies, 3-5% Accuracy

Can be programed at any point on the characteristic curve to determine performance. Low 220 mV signal voltage and regulated power supplies. 500 test cards included, with cards available for 3100 additional types, 48 hour service. Calibration cards included to set overload protection, G_m, shorts sensitivity, fixed bias and power supply voltages. Tests industrial and computer types, nuvistors, novars, low power thyratrons, VR's, with adapters available for compactrons, 10-pins and European rimlocks. Tests G_m, grid emission, leakage, shorts, gas. Also saturation and cut-off, important for computer tubes. Ranges: 500-26,000 micromhos; 100 μA-510 mA. Sockets: 4, 5, 6, 7-pin, octal, loctal, 7 and 9-pin miniature, 7-pin in-line and octal submin. For 105-125 V, 50-60 Hz AC. 9¼x16½x19½".

51 D 5115 Z. Wt., 57 lbs.....795.00

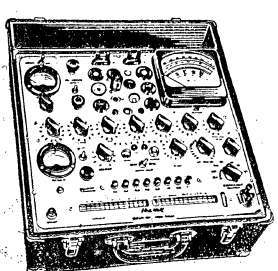


288-AX FM-AM SWEEP AND MARKER GENERATOR

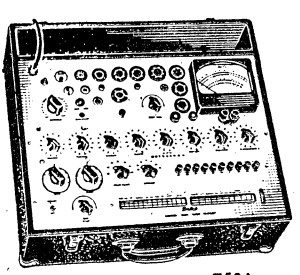
- Harmonic-Rich 100 kHz and 1 MHz Crystal Outputs, Switch Selected
- External or Internal FM Modulation
- Calibrated Modulation Control

Crystal-controlled high output FM-AM sweep and marker generator—a complete alignment instrument. Eight FM bands ranging from 35 kHz to 160 MHz, and eight AM bands ranging from 35 kHz to 110 MHz. Provision for internal or external amplitude or frequency modulation of RF output. Includes a fixed FM oscillator at approximately 50 MHz, with 450 kHz sweep; low distortion FM is obtained by beating with the output of the internal AM generator. Has built in dB meter, —10 to +38 dB. Internal fixed 400 Hz AM or FM modulation and 20 to 15000 Hz variable AM modulation. Switch-selected 100 kHz and 1 MHz crystal outputs. Vernier RF control plus attenuator. Size, 13x16x7". Complete with crystals and cable. For 110-120 V, 50-60 Hz AC. Shpg. wt., 33 lbs.

51 D 5120 U.....415.00



539C



752A

MODEL 539C LABORATORY TUBE TESTER

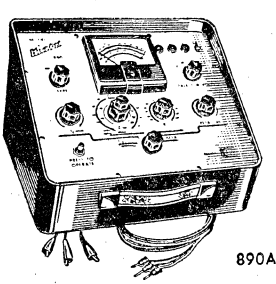
Measures transconductance, leakage, gas, cathode life. Tests voltage regulators for firing point, voltage, current. Ranges: 60,000, 30,000, 15,000, 6000, 3000, 600 micromhos; rectifier diode; regulators. Sockets: 4, 5, 6, 7-pin, octal, loctal; 7, 9 and 10-pin miniature; 7-pin in-line and 8-pin rd. submin.; compactron, novar, 5 and 7-pin nuvistor. Test Voltages: fil., 0-117 V in 18 steps; signal, 0.25, 0.5, 1.0, 2.5 V rms; plate, 66, 150 V; screen, 56, 130 V.; bias, 0-40 V. Meter and lamp indication of inter-element leakage to 50 meg. Panel terminals for monitoring plate and heater current. Also provides for self bias testing. Meters: G_m (includes leakage and regulator scales); line voltage monitor; grid bias. 7½x16¾x18⅜". Roll chart. 105-125 V, 50-400 Hz AC. Shpg. wt., 35 lbs.

51 D 5005 U.....625.00

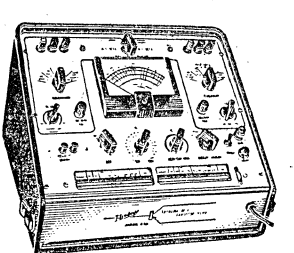
MODEL 752A PORTABLE TUBE TESTER

Tests over 1600 tube types. Roll-chart updated semiannually by Hickok. Bias and line fusing; safety interlocked switches prevent damage; self-bias test jacks on panel. Adapters available for CRT pencil-type, and other special tubes. Measures transconductance, leakage, cathode life. Tests voltage regulators for firing point, voltage, current. Dual section tubes need only one setting. Ranges: 1500, 3000, 6000, 15,000, 30,000 micromhos; scales for leakage, voltage regulators. Sockets: 4, 5, 6, 7-pin octal, loctal, 7, 9 and 10-pin min., 7-pin in-line and 8-pin round submin. acorn, compactron, novar, 5 and 7-pin nuvistor. 7½x18⅜x16¾". 117 VAC.

51 D 5116 U. Shpg. wt., 27 lbs.....475.00



890A



870

MODEL 890A IN-CIRCUIT TRANSISTOR TESTER

Quality transistor tester provides true AC signal gain test without disconnecting leads. Ideal for all solid-state equipment. Utilizes AC bridge principle to nullify total impedance, permits measurements of AC beta with ±5% accuracy in or out of circuit (0-50, 100, 200). Also measures I_c (0-10 mA); transistor input resistance (50-10,000 ohms); circuit input impedance (100-100,000 ohms); all in or out of circuit. I_{cbo} (0-50 μA) out of circuit. Variable collector voltage—1.5, 3.0 or 4.5 volts. 1000 Hz test signal set at 5 μA base current. Uses one 22½-V, four 1.5-V batteries. Portable case with convenient carrying handle. 9¼x12¼x13¼". Order batteries below.

51 D 9646 U. Shpg. wt., 8 lbs.....235.00
18 D 5105. Type K-15 22½-V. Battery. Uses 1.....1.65
18 D 5865. Type 1 1.5-V. Battery. Uses 4.....Pkg. of 2 for .33

MODEL 870 AC AND DC BETA TRANSISTOR TESTER

Ideal for quality control, incoming inspection, sorting and any assignment requiring precise measurement. Roll chart provides test data for over 2500 types; updated semiannually. Tests at specified I_c, V_{ce} and I_b. Tests I_{ebo} with variable V_{eb} of 0-100 V, on ranges of 0-100 microamp, 0-1 0-10 mA. Small-signal AC beta, large-signal DC beta tests: Collector voltage variable, 0-5 V, collector current, 0-5 mA for small-signal test; 5 mA-2 amps for large-signal. Beta ranges: 0-100-300 with 5 μA base current. 0-600 with 2½ μA base current. Beta test accuracy, ±5%. With battery and charger. Overall size, 7⅞x14⁹⁄₁₆x11¾". 110-120 V, 60 Hz AC.

51 D 9652 U. Shpg. wt., 22 lbs.....425.00

MODEL CA-5 UNIVERSAL ADAPTER

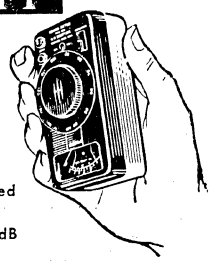
For testing compactrons, novars, 5 and 7-pin nuvistors, 10-pin types. For use with Hickok testers, except Models 532, 533, 534, 536, 538, 539A, 546, 600 and 605. Shpg. wt., 6 lbs.

51 D 5113.....59.50

Test Equipment by Scott, Pioneer, and Weston

SCOTT®

MODEL 450B SOUNDMETER



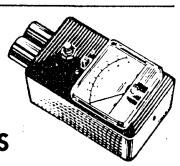
- Measures Sound Level, Response and Dispersion
- Transistorized and Battery-Operated
- Wide Operating Range, 40-142 dB

Pocket-size, transistorized sound-level meter. Can be used to survey noisy areas for possible ear damage, to estimate frequency response characteristics of speakers and rooms, to measure level and dispersion patterns of PA and theater sound systems, and for classroom acoustic experiments.

Compact, transistorized design allows thousands of readings from one 22½-volt battery. Wide operating range: from 40 to 142 dB in sound level; from 35 to 8000 Hz in response. Heavy-gauge aluminum case for field use. Has direct-reading scale with step-type attenuator; built-in crystal mike. Has input jack for extension mike or vibration pickup, monitoring output jack, and 2½" meter calibrated on random noise. Completely non-microphonic—no spurious readings. Calibrates itself on 110-volt AC. Battery check button. Includes case, wrist strap, carrying cord and battery. 6x3x2" Shpg. wt., 2½ lbs.

51 D 5298 T.....198.00

PIONEER SINGLE AND DUAL-RANGE TACHOMETERS



MODEL 36 DUAL-RANGE TACH. Measures 0-2400 and 0-12,000 rpm with accuracy of ±2%, full scale. Contrasting tape included for marking rotating or reciprocating machinery. Cadmium-sulfide photocell counts pulses, rpm shows on direct-reading transistorized meter. No electrical or mechanical connection to device being measured. Accuracy can be improved with extra markers. With two 1.4-V and one 5.6-V mercury batteries. Size, 7¾x2⅝x3½". Shpg. wt., 3 lbs.

51 D 5629 T.....150.00

MODEL 12. Similar to Model 36 above, but has single 0-12,000 rpm scale. With mercury batteries. Shpg. wt., 3 lbs.

51 D 5630.....125.00

MODEL 24. All the features of the Model 36 tachometer, but single range. Measures 0-2400 rpm; ±2% accuracy, full scale. No electrical or mechanical connections to device being measured. Powered by two 1.4-V and one 5.6-V mercury batteries. Size, 7¾x2⅝x3½". Shpg. wt., 2 lbs.

51 D 5628.....99.50

MODEL 36R SNORKEL TACH. Same basic features as the Model 36 Dual-Range Tach, but adds a new dimension to rpm measurement. Snorkel extension lets you reach around corners or into close quarters where the ordinary tach cannot be used. It is extremely useful when rpm must be measured in dangerous or inaccessible areas. Measures rpm of all kinds of rotating and reciprocating machinery. Permits accurate measurements with reading-unit up to 50-feet away. Measures 0-2400 and 0-12,000 rpm with accuracy of ±2%, full scale. No mechanical connections are required between units. Tach has magnetized mount, and can be placed quickly and securely on any ferrous metal surface. Includes tachometer, swivel, 12-ft. cord, and mercury batteries (two 1.4 V and one 5.6 V).

51 D 5633 T. Shpg. wt., 6 lbs.....200.00

WESTON SERIES 80, 81, 82 AC AND DC TEST INSTRUMENTS

- Employ Console-Design Concept for Optimum Readability, Easy Access to Controls
- Exclusive Anti-Parallax Viewing Corrector for "On-the-Mark" Readings

Series 81 and 82 instruments feature five-way binding posts with 0.75" spacing to allow the use of plug-type leads. Switches have silver-alloy contacts for low resistance and long life. Resistors and shunts are metal film or wire-wound, except carbon resistors in the highest voltmeter ranges.

MODEL 81 DC MILLIAMMETER/AMMETER. Includes features of Model 80 at right. DC milliamps, 0-10-30-100-300; DC amps., 0-1-3-10. Include 5-way binding post to permit use with plug-type leads. Less leads.

51 D 5478. Shpg. wt., 4 lbs.....87.00

MODEL 81 DC MICROAMMETER/MILLIAMMETER. Same as Model 81 Ammeter above, but has ranges: 0-0.1-0.3-1-3-10-30-100 milliamps; 0-2500-1390-475-164-50-16.6-5 ohms. Accuracy ±1%; Scale: 100 and 60 divisions. Shpg. wt., 4 lbs.

51 D 5479.....87.00

MODEL 81 DC VOLTMETER. DC voltage ranges: 0-0.25-1-2.5-5-10-25-50-100-250-1000 volts. Scale: 50 divisions; Sensitivity: 20,000 ohms per volt. Accuracy ±1%, except 2.0% on the 1000 volt range.

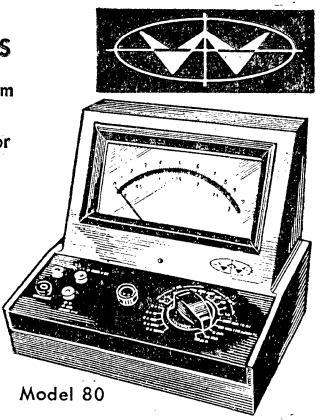
51 D 5480. Shpg. wt., 4 lbs.....87.00

MODEL 82 AC MILLIAMMETER/AMMETER. Ranges: 0-50-100-200-500 milliamps; 0-1-2-5 amps. Accuracy: 2%, 60 to 400 Hz; from 25 to 1000 Hz frequency error is 1.5%, usable to 5 kHz. Transformer-rectifier type.

51 D 5481. Shpg. wt., 4 lbs.....90.00

MODEL 82 AC VOLTMETER. Ranges: 0-2.5-10-50-250-500-1000 AC volts. Ranges below 250 volts are usable to 15 kHz. Sensitivity: 5000 ohms/volt. Accuracy ±1.5%; Scale: 50 divisions. Rectifier type.

51 D 5482. Shpg. wt., 4 lbs.....90.00



Model 80

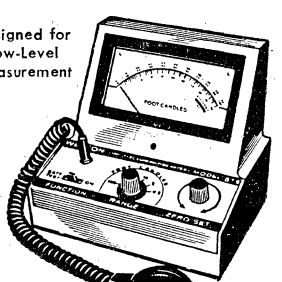
MODEL 80 BENCH MULTIMETER. Versatile, highly accurate bench multimeter specially designed for easy use. Console-design concept for portable instruments provides optimum readability and easy access to the control deck, whether you are sitting or standing. Specially designed scale gives "on the mark" readability, without eyestrain or ambiguity. Easy-viewing slope-front panel and fingertip controls make unit ideal for production line use as well as for lab and service applications. Large 5½" meter is diode protected to prevent burnout, and entire instrument is fuse-protected on the two lowest ohmmeter ranges.

Ranges: AC voltage, 0-2.5-10-50-250-500-1000-5000 volts @ 5K ohms/volt; DC voltage, 0-0.25-1-2.5-10-25-50-100-250-1000-5000 volts @ 20K ohms/volt; DC current 0-50 microamps, 0-1-10-100 milliamps, 0-1-10 amps; 5 resistance ranges read 2000 ohms to 20 megohms full scale, 20 to 200 K center scale. dB, −10 to +10.

Accuracy of readings is 1% on DC scales; 1½% on AC scales. Anti-parallax scale. Size, 9¼x9¾x9¼". Housed in high-impact, thermoplastic case.

51 D 5458. Shpg. wt., 5 lbs.....105.00

Designed for Low-Level Measurement



MODEL 879 ILLUMINATION METER

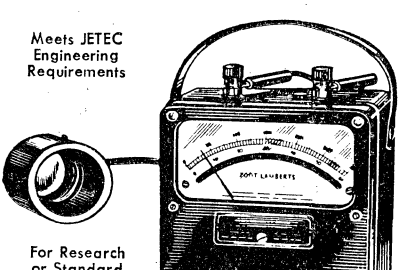
- Reads Low as 0.5 Footcandle Full Scale
- Illuminated Anti-Parallax Scale

Portable 6-range illumination meter provides a high degree of accuracy over a broad range of light values. Ideal for research and routine work or as a master instrument for checking other light measuring instruments and devices. Especially designed to allow low level light measurement with a full-scale accuracy of 5% (15°C to 35°C) in ranges of 0.5, 2, 10, 20, 50 and 100 footcandles. Compact and fully portable, operates on self-contained mercury batteries. Illuminated anti-parallax scale for easy, accurate readings. Separable light sensor with retractible cord. Built-in battery test circuit. With leather carrying case. 8x7x8".

51 D 5056 T. Shpg. wt., 4 lbs.....544.50

Meets JETEC Engineering Requirements

For Research or Standard Reference

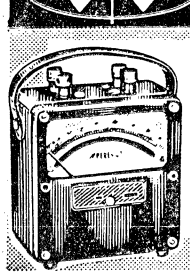


MODEL 759 FOOT-LAMBERT METER

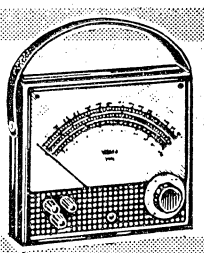
Meets requirements of TV engineers as outlined by sub-committee on phosphor and optical characteristics of the Joint Electron Tube Engineering Council. "Viscor" filtered high output cell is used with a very sensitive microammeter unit. Tubular baffle which restricts oblique light and provides a basic range of 0 to 60 ft.-lamberts. Removable multiplier disc provides second range of 0 to 300. Standard lamps are used for the exclusive purpose of calibration. Meters are standardized at color temperature of 6754° K by specially calibrated filter. Separable hooded light target and "Viscor" filter; multiplier disc; calibration curve. Unit, 7⅝x10¼x10¾"; light target, 3⅜" diam.

51 D 5457 T. Shpg. wt., 5 lbs.....438.00

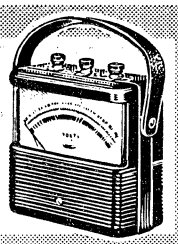
Weston Instruments for Plant or Lab



432
433
931
Series



911
912
Series



901
904
905
Series

931 SERIES

• Accuracy ±½% • 4.04" Mirror Scale

MATCHED DC VOLTMETERS, AMMETERS, MILLIAMMETERS, MICROAMMETER. Matched portable instruments of very high accuracy for industrial DC testing . . . within ½ of 1%. Moderately priced and designed for the requirements of most industrial test situations. For highest readability all instruments have knife-edge pointers and long, 4.04" mirror scale to eliminate parallax reading error.

Movement is the self shielded permanent magnet moving coil type—unaffected by stray fields. Available in DC voltmeters, ammeters, milliammeters and microammeter. Less leads (takes any type). Size, 5½x5x3½". Av. shpg. wt., 4 lbs.

DC VOLTMETERS

Stock No.	Ranges DC Volts	Ohms/Volt	EACH
51 D 5151 T	0-150-300-750	5000	158.00
51 D 5150 T	0-3-15-150	5000	158.00
51 D 5357 T	0-7.5-30-75	5000	158.00

DC AMMETERS

Stock No.	Ranges DC Amps	EACH
51 D 5152	0-5-20-50	143.00
51 D 5365	0-1.5-3-15	143.00
51 D 5364	0-0.1-1-10	143.00

DC MILLIAMMETER

Stock No.	Ranges DC mA	EACH
51 D 5368	0-30-300-3000	139.00

433 SERIES

• Accuracy ±¾% • 4.04" Mirror Scale

MATCHED AC VOLTMETERS, AMMETERS, MILLIAMMETERS. Exceptionally accurate instruments for industrial testing. Movable vane type mechanism offers precision readings at moderate cost. Knife edge pointer for accurate readings and mirror scale to eliminate parallax. Binding post terminals accept any type of leads (not supplied). Size, 5¼x5x3¼". Av. shpg. wt., 4 lbs.

AC VOLTMETERS

Stock No.	Ranges AC Volts	Resp. Hz	EACH
51 D 5154 T	0-150-300-600	25-125	157.00
51 D 5370	0-75-150	25-125	134.00
51 D 5371	0-30-60	25-125	134.00
51 D 5374 T	0-150-300-600	25-1000	175.00

AC AMMETERS

Stock No.	Ranges Amps	Resp. Hz	EACH
51 D 5155 T	0-5-20-50	25-500	196.00
51 D 5378 T	0-3-7.5-30	25-500	196.00
51 D 5379 T	0-1.5-7.5-15	25-500	196.00
51 D 5380 T	0-1-5-10	25-500	196.00
51 D 5381 T	0-5-10	25-500	143.00
51 D 5383 T	0-1-2.5-5	25-1000	203.00

AC MILLIAMMETERS

Stock No.	Ranges AC mA	Response Hz	EACH
51 D 5425	0-250-500	25-1000	148.00

432 SERIES—DC OR SINGLE-PHASE AC WATTMETERS

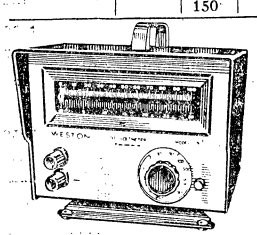
• Accuracy ±½% • 4.04" Mirror Scale • Electrodynamometer Type

For measuring DC or AC wattage. AC coverage from 25 to 125 Hz with power factors above 50%. Each unit has two ranges selected by binding posts and each range may be doubled. Power consumption: potential circuit @ 115 V, 60 Hz—1.2 watts, 1.2 volt-amperes. Current circuit @ 5 amps, 60 Hz—0.65 watt, 0.68 volt-ampere. *High range/low range. 3¼x5x5¼". Av. shpg. wt., 4½ lbs.

Stock No.	Volts* Normal	Volts* Max.	Amperes* Normal	Amperes* Max.	Watts High Range	Watts Low Range	Scale Div.	EACH
51 D 5384 T	150/75	200/100	1/.5	1.5/.75	0-75-150	0-37.5-75	75	269.00
51 D 5385 T	200/100	260/130	5/2.5	7.5/3.75	0-500-1000	0-250-500	100	269.00
51 D 5386 T	300/150	400/200	5/2.5	7.5/3.75	0-750-1500	0-375-750	75	269.00
51 D 5050 T	Same as 51 D 5386 T, for 25-1000 Hz Coverage							292.00
51 D 5387 T	300/150	400/200	10/5	15/7.5	0-1.5-3.0kW	0-0.75-1.5kW	75	269.00

LOW POWER FACTOR WATTMETER

51 D 5051 T	300/150	5/2.5	300/150	150/75	75		310.00



MODEL 401 PROJECTED-LIGHT DC VOLTMETER

Optical pointer system for parallax-free readings; transistorized overload protection; magnetic shielding. 8 ranges: 0-.1-.3-1-3-10-30-100-300 VAC. 100,000 ohms/volt sensitivity; 0.5% accuracy. Single range/reset switch; shrouded case; swivel base. 7.16x7.2x8.76". 115 VAC.
51 D 5057 T. Shpg. wt., 7½ lbs. 204.00

MODEL 401 DC MICROAMMETER/MILLIAMMETER. Same as above, but 9 current ranges: 0-.01-.03-.1-.3-1-3-10-30-100 mA. Overload protection, 3 to 5 times on all ranges.
51 D 5058 T. Shpg. wt., 7½ lbs. 209.00

911 SERIES

• Mirrored Scale • Self-Shielded

DC VOLTMETER. Converts to panel or switchboard mounting without adapters. Has: easy-to-read 7.2" mirrored scale with maximum natural brilliance; knife-edge pointer; self-shielded mechanism; spring-back jewels; sure-grip knob; metal-film resistors. Range: 0-1-3-10-30-100 V, ±1%; 0-300-1000 V, ±2%. Sensitivity, 20,000 ohms/volt. Supplied less leads. With panel-conversion hardware. 7½x6½x2⅜". Shpg. wt., 6 lbs.
51 D 9508 . . . . . 89.00

51 D 9509. DC Ammeter. Amps, 0-1-3-10; mA, 0-10-30-100-300. ±1%. Physically same as above 89.00

51 D 9510. DC Milliammeter. 0-0.1-0.3-1-3-10-30-100 mA. ±1%. Physically same as above. 89.00

912 SERIES

• Mirrored Scale • ±2% Accuracy

AC VOLTMETER. Matches 911 series DC meters above. Converts to panel or switchboard mounting without adapters. 7.2" mirror scale; shielded movement; metal film resistors; spring-back jewels. Ranges: 0-10-30-100-300 V, ±2%; 0-3 and 0-1000 V, ±3%. Sensitivity, 5000 ohms/volt. Size, 7½x6½x2⅜". Shpg. wt., 6 lbs.
51 D 9511 . . . . . 102.00

51 D 5388. AC Ammeter. Similar to above. Ranges: 0-50-100-200-500 mA; 0-1-2-5 AC amps. Accuracy: ±2% full-scale in all ranges. Transformer-rectifier types for use at 60-4000 Hz sine wave. 102.00

901 SERIES

• Industrial Class • High Shielding
• Accuracy ±¼% • 5½" Mirror Scale

DC AMMETER. For use where easy reading and high shielding are desired. Has 5½" calibrated, mirror scale with knife-edge pointer. Ranges: 0-2-5-20 amps, with 50 mV meter movement. ¼% accuracy. Permanent magnet moving coil design. Less leads. 7½x7¼x3⅝". Shpg. wt., 5¾ lbs.
51 D 5159 T. 232.00

51 D 5160 T. DC Milliammeter. As above but with ranges 0-10-20-50-100-200-500-1000 mA. Max. res. 2.5 ohms 241.00

51 D 5161 T. DC Voltmeter. 0-3-15-30-75-150-300-750 V. 5000 ohms/V. Same case and features as above. 255.00

904 SERIES

• Industrial Class • High Shielding
• Accuracy ±½% • 5½" Mirror Scale

AC VOLTMETER Offers high shielding and sufficient accuracy for checking other meters. Movable iron-vane type. 0-3-7.5-15-30-75-150-300-750 V. Response: 50-125 Hz with ½% accuracy; 125-450 Hz with 1% accuracy. 5½" scale. 7½x7¼x3⅝". Less leads. Wt., 5¾ lbs.
51 D 5162 T. 346.00

51 D 5198 T. AC Ammeter. 0-2-5-10-20-50-100-200 amps. ½% accuracy. Response: 50-450 Hz. Same as above. 311.00

51 D 5390 T. AC Ammeter. As above but ranges 0-1-2-5-10-20-50 amps. 302.00

905 SERIES

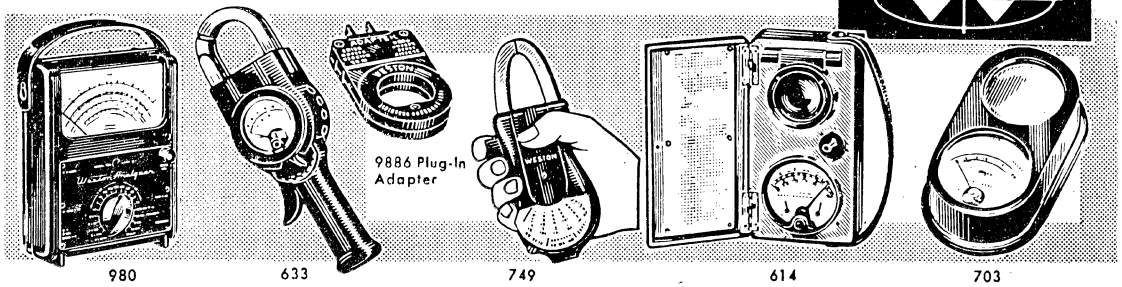
• Industrial Class • High Shielding
• Accuracy ±½% • 5½" Mirror Scale

AC-DC SINGLE-PHASE WATTMETER. AC coverage from 25-60 Hz. Dynamometer-type movement. Ranges: Volts; Nor. 200/100, Max. 300/150. Amps: Nor. 10/5, Max. 20/10. Watts: High range; 2/1 kW: Low Range; 1/0.5 kW. Less leads. 7½x7¼x3⅝". Shpg. wt., 5¾ lbs.
51 D 5054 T. 297.00

LEATHER CARRYING CASE

TYPE 48532. Protect test equipment with this attractive leather case. For series 931, 432, 433 (except 51 D 5374).
51 D 5153. Shpg. wt., 1 lb. 23.50

Weston Meters for Schools, Industry



WESTON SERVICING AND MEASURING INSTRUMENTS

MODEL 980 MARK II VOM

- ±2% DC Accuracy
- 20,000 Ohms/Volt DC Sensitivity
- Large 4.63" Meter Scale
- Fused Resistance Ranges

Sensitive rugged volt-ohm-milliameter with a DC sensitivity of 20,000 ohms per volt and an AC sensitivity of 1000 ohms per volt. Designed for accurate measurements. Features: spring back jewels; fused resistance ranges; insulated crackproof case. Single knob selects function and range. Ranges: DC volts, 0-1.6-8-40-160-400-800-4000; AC volts, 0-1.6-8-40-160-400-1600; Decibels, —15 to +54 in 6 ranges; DC μA, 0-80; DC mA, 0-1.6-8-80-800; DC amps, 0-8; Resistance, 1 K to 10 meg full-scale and 25 to 250K center-scale (5 ranges). Accuracy: DC, ±2%; AC, ±3%, 4.63" scale. With leads, less batteries. 7⅜x6¼x3". Shpg. wt., 3 lbs.

51 D 9280 ..... 61.00

633 AC CLAMP VOLT-AMMETER

TYPE VA-1. For AC testing without breaking circuits. Clamps around conductors (to 2" dia.) to measure AC amps; test leads measure AC volts. Safety trigger for bare-hand use. AC amps: 0-10-25-100-250-1000. AC volts; 0-175-350-700. Accuracy: ±3%, 50-70 Hz, adjustable 0-400 Hz, 2.36" scale length. Bakelite case; shatterproof glass. 750 V insulation. 13⅝x4⅜x2½". Shpg. wt., 4½ lbs.

51 D 9512 T 167.00

749 AC CLAMP POCKET VOLT-AMMETER

Pocket-size version of meter above. Takes conductors to 1" in dia. AC amps, 0-6-15-30-60-150-300. AC volts, 0-150-300-600. 2.36" scale. With case, voltage test leads, insulated clips, 3 accessory probes. 7½x3x1¼". Shpg. wt., 1 lb.

51 D 9513 ..... 57.75

MODEL 9886 PLUG-IN ADAPTER. Aids in current readings of double-conductor leads. Has 10-1 current divider. Shpg. wt., 7 oz.

51 D 9514 ..... 7.00

MODEL 614 LIGHT METER

- Easy-to-Read 2.36" Scale
- With Viscor and Cosine Filters
- Compact, Completely Portable
- For Color and Direction Correction

Professional-quality footcandle meter measures wide range of light values directly in footcandles in 3 ranges on a 2.36" scale. Ranges: 0-100-250-500 fc. Supplied with "Viscor" and cosine filters for color and direction correction, respectively. With bakelite case and leather carrying strap. Completely self-contained. Size, 7⅜x3⅜x 2¼". Shpg. wt., 3 lbs.

51 D 5199 T 213.50

LIGHT METER. Same as above except range is 0-60-120-600 footcandles and with "Viscor" filter for visual correction of color only. Shpg. wt., 3 lbs.

51 D 5415 T 207.90

SERIES 703 SIGHTMETERS

TYPE 3A. Pocket-size meter has been designed to assist in filling industrial lighting requirements. Ideal for checking illumination levels at work stations, in offices, etc. Can be placed on table or desk, or held in hand in any position. Gives instant indication whether light is adequate for a particular task. Many applications in sales and demonstrations of lighting equipment. Meter has a range of 0 to 75 footcandles. Unfiltered. Scale length, 1.57". Size, 4⅝x2⅝x1⅝". Optional case below. Shpg. wt., 2½ lbs.

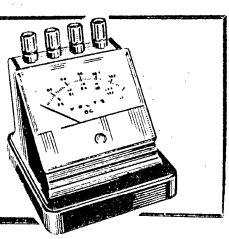
51 D 5232 ..... 67.95

TYPE 51. Range 0 to 150 footcandles. With quartz filter for ultraviolet use. Fluorescent characters and pointer on black background. Optional case below. Shpg. wt., 2½ lbs.

51 D 5257 ..... 124.50

51 D 5235. Leather Case For 703 Series. Shpg. wt., 1 lb. 4.50

HIGH-ACCURACY "BENCH TESTERS"



- Choice of Single or Multi-Range Models
- Feature ±2% Full-Scale Accuracy
- Spring-Backed Jewels for Stability
- Binding Posts on Multi-Range Models

MODEL 2931, 2932 AND 2936 "BENCH TESTERS". Designed primarily for use in laboratories of schools, colleges and industrial firms to measure electrical values. Accuracy on all meters is ±2% of full scale. Ranges on multi-range models are selected by connecting to the appropriate binding posts, which accept pin tips, spade lugs or banana plugs. Spring-backed jewels for rugged long-term stability. Damping is designed for minimum response time. Av. shpg. wt., 1½ lbs.

2931 DC VOLTMETERS SENSITIVITY 1000 OHMS/VOLT

Stock No.	Ranges—Volts DC	Scale Divisions	EACH
51 D 5394	0-1.5-3-30	60	41.00
51 D 5395	0-3-15-30	60	41.00
51 D 5396	0-1.5-15-150	75	41.00

2931 DC AMMETER

Stock No.	Ranges—Amps DC	Scale Divisions	EACH
51 D 5400	0-1.5-3-30	60	61.00

2931/2936 DC GALVANOMETERS ZERO-CENTER NULL INDICATORS

Stock No.	Range—VDC	Scale	EACH
51 D 5403	30-0-30	Standard—2μA/div.	28.00
51 D 5404	30-0-30	Linear—1μA/div.	39.00

Allied is your direct factory source for test equipment at OEM prices. Our service assures same-day shipment.

MODEL 2932 1000 OHMS/VOLT AC VOLTMETERS (RECTIFIER TYPE)

Stock No.	Ranges—Volts AC	Scale Divisions	EACH
51 D 5402	0-30-150-300	60	46.00
51 D 5401	0-3-15-150	75	46.00

MODEL 2931 TWO-RANGE DC MILLIVOLTMETER (CONVERTIBLE TO AMMETER)

Range: 0-50 millivolts. Two scales of 50 and 75 are provided with divisions of 100 and 150, respectively. Use with external shunts and leads below to measure DC current.

51 D 5397 ..... 28.00

NO. 9858-131442 LEADS. 5-foot leads with resistance of 0.065 ohm to match DC Millivoltmeter. Shpg. wt., 4 oz.

51 D 5406 ..... 1.80

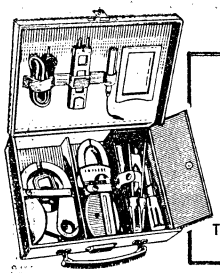
MODEL 9992 50-mV SHUNT

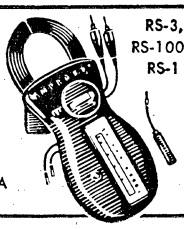
Converts Model 2931 DC Millivoltmeter into DC amplifier with ranges as shown. Shpg. wt., 5 oz.

Stock No.	Mfr's Type	Range—Amps DC	EACH
51 D 5411	41214	0-25	14.00
51 D 5412	41218	0-50	14.00
51 D 5413	41223	0-100	15.00

Amprobe Testers

SNAP-AROUND AC VOLTAGE/CURRENT TESTERS





MODEL TM-33A TEST-MASTER KIT

A complete trouble-shooting and test kit for electrical maintenance. Consists of Amprobe RS-3 AC Voltmeter-Ammeter-Ohmmeter with 3 ranges to 600 volts, 5 ranges to 300 amps and 25-ohm (midscale) range. A-50-1 Deca-Tran to multiply amps ranges 10X; and A-45L Energizer to increase current sensitivity; VLK-311 Extendo Leads. Portable case with snap-lock and space for small tools. 11¾x8x3". Wt., 3 lbs.

51 D 5200.....98.50

ROTARY-SCALE TESTERS

Rotary-scale testers provide greater accuracy—only one scale, appropriate to the range selected, shows behind magnified unbreakable window. Pointer-lock freezes readings; measure in dark, read in light.

MODEL RS-3. Insulated jaws clamp around conductor (up to 1 1/16" dia.) for current. Test leads plug-in for voltage and resistance checks. Reads 0-150-300-600 V, AC; 0-6-15-40-100-300 amps. AC; 25 ohms mid-scale. Accurate ±3%, full scale. With portable case, leads. 7 3/32x2 5/8x1 11/32". Wt., 2 lbs.

51 D 9268.....58.50

MODEL RS-1000. As RS-3, but reads 0-15-40-100-300-1000 amps. AC. 2" dia. cond.

51 D 9244. Wt., 2 lbs.....77.50

MODEL RS-1. Reads 0-6-15-40-100 amps; AC; 0-150-600 V, AC. No resistance range.

51 D 9243. Wt., 2 lbs.....44.85

MODEL VLK-311 EXTENDO LEAD KIT. (Not illus.) Simplifies use of RS-1, RS-3.

51 D 9245. Wt., 12 oz.....3.95

AMPROBE JUNIOR

Snap-around testers measure voltage, amperage. For conductors to ½" in dia. Measure amps shown and AC volts, 0-125-250 except *0-150-600; YT Models 0-150 and 0-300. ALP series has conductor tracer, 10 station markers, two station holders, voltage and ground leads, fused battery attachment, portable case. Y series with leads, less case. Shpg. wt., 1 lb.

Stock No.	Model	Amps	EACH
51 D 9089	Y25	0-25	24.50
51 D 9167	Y525*	0-25	24.50
51 D 9168	Y550*	0-50	24.50
51 D 9169	Y500*	0-100	24.50
51 D 9170	YT1025	0-10 0-25	28.50
51 D 9171	YT25100	0-25 0-100	28.50
51 D 5419	ALP550*	0-50	41.50

51 D 9105. Case for Y Series.....3.25

AMPROBE JR. TEST MASTER KITS

Consists of a YO Amprobe Jr., A-45L Energizer, and a specially designed rugged carrying case. Measure voltage, current, and resistance instantly and accurately on calibrated scale (not just an indication). The Energizer increases the versatility of the instrument by increasing the sensitivity 5 or 10 times for precise readings on fractional horsepower motors and appliances; permits direct readings at any convenience outlet. Voltage range, 0-150/600. Current range: 0-25, 0-50 or 0-100 as indicated below. Also measures resistance. Ohmmeter range: 25 ohms midscale. 4¾x2½x1⅜". Supplied with battery attachment and test leads. Shpg. wt., 1½ lbs.

Stock No.	Model	Amps	EACH
51 D 5201	TM-YO-525	0-2.5-5-25	39.85
51 D 5202	TM-YO-550	0-5-10-50	39.85
51 D 5203	TM-YO-500	0-10-100	39.85

TYPE VLK355 EXTENDO-LEAD KIT FOR JUNIOR MODELS (Not Illus.)

Simplifies taking voltage readings. One lead attaches to jaw with adapter, other reaches to other test point. Shpg. wt., 12 oz.

51 D 9246.....3.95

AMPROBE RANGE-EXTENDING ACCESSORIES

MODEL A-50-1 DECA-TRAN. Use with any model Amprobe to extend amperage ranges 10 times—up to 1200 amps. Includes case and 2' cord for remote reading. 1 lb.

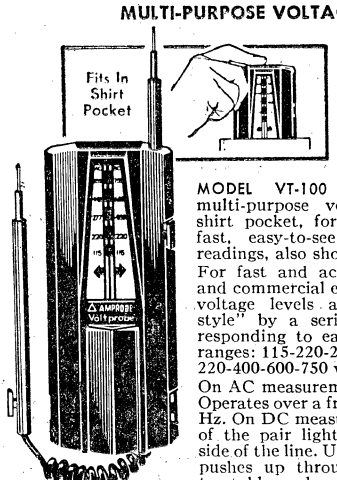
51 D 5207.....30.50

MODEL A-45L ENERGIZER. Increases sensitivity of most Amprobes by 5 or 10 times. Permits current readings on permanently wired low-current equipment. 5 oz.

51 D 5227.....7.25

PORTABLE VOLTAGE TESTER AND TEST-MASTER KITS

MULTI-PURPOSE VOLTAGE TESTER



- Indicates Correct DC Polarity
- Both Sliding and Retractable Probes
- Can Measure Points Over 3 Feet Apart

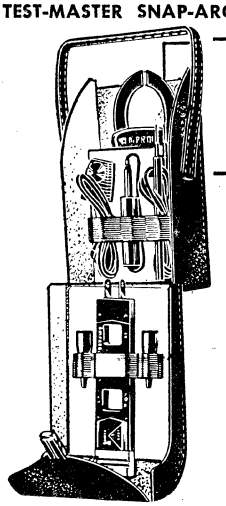
MODEL VT-100 VOLTPROBE. Compact, multi-purpose voltage tester fits in a shirt pocket, for use anywhere. Provides fast, easy-to-see AC and DC voltage readings, also shows DC polarity.

For fast and accurate testing residential and commercial electrical circuits. Nominal voltage levels are shown "thermometer style" by a series of two windows corresponding to each voltage level. Voltage ranges: 115-220-227-440-550 volts AC; 115-220-400-600-750 volts DC.

On AC measurements, both windows light. Operates over a frequency range of 25 to 800 Hz. On DC measurements only one window of the pair lights, indicating the positive side of the line. Unit has a sliding probe that pushes up through the body, and a retractable probe with a 3-ft. coil cord. Permits two-hand operation; unit can be held in the hand while testing, for easy reading. Weighs only 5 oz. High-impact case takes plenty of rough use. Overall size only 6x2¼x¾" with probes retracted. Shpg. wt., 8 oz.

51 D 5210.....9.50

TEST-MASTER SNAP-AROUND VOLT-AMP-OHMMETER KIT



- Rotary Scale Reveals Only One Range At a Time—Eliminates Guesswork
- Convenient Two-Hand Operation
- Everything at Your Fingertips for Easy Trouble-Shooting

MODEL TM-63. Versatile test kit is a must for electrical trouble-shooting. Includes the RS-3 Rotary-Scale Snap-Around Volt-Amp-Ohmmeter. Insulated jaws clamp around conductor (up to 1 1/16" dia.) for current; test leads plug in for voltage and resistance tests. Ranges: 0-150/300/600 VAC; 0-6/15/40/100/300 amps AC; 25 ohms mid-scale. ±3% accuracy, full scale. Pointer lock. With VLK-311 "Extendo-Leads" that eliminate the need for a "third hand"; plus A-45L Energizer for increasing the sensitivity of the RS-3 five or ten times. Permits current readings on permanently wired low current equipment. Compact "A" Case has hinged cover, snap lock, carrying handle. 12x4¼x3". 3 lbs.

51 D 5209.....69.85

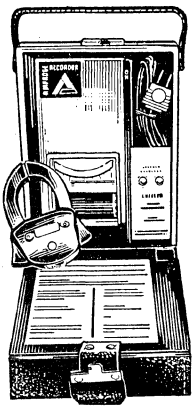
MODEL TM-60 TEST-MASTER KIT. Adds versatility to RS-1 or RS-3 (not included). Includes A-45L Energizer that extends sensitivity five or ten times; VLK-311 "Extendo-Leads" for two-hand operation; compact "A" case with hinged cover for easy access.

51 D 9247. Shpg. wt., 2 lbs.....15.85

Amprobe Chart Recorders, AEL Testers

CHART RECORDERS FOR PERMANENT, ACCURATE RECORDS BY AMPROBE

DUAL SCALE RECORDER-INDICATORS



Can be used as standard indicating voltmeter, indicating ammeter, recording voltmeter or recording ammeter. Provides visual, accurate, permanent and objective record. Simple to operate and maintain. Paper-loading is especially easy with no rollers or drums to thread. Pressure-sensitive paper takes inkless stylus for clean hands, smudgeless operation. Can be used to monitor line-voltage, balance circuits on 24-hour basis, check motor loading, machine cycling or operating time.

Chart speed of 12 inches per hour for 30 hours on one roll of paper. Chart size: 2½" wide x 30" long. Chart speed of 1 inch per hour available on Special Order. Accuracy, ±3% full scale, except expanded scales; ±1% (or one division with 60 Hz sine wave input). Meter sensitivity, 260 μA with 375 ohms resistance. Requires 115 volts, 60 Hz AC. With snap-around current transducer, portable case. 7x 5 7/16x3 5/8". Shpg. wt., 4 lbs.

Stock No.	Mfr's Type	Range (AC) Volts	Range (AC) Amps	EACH
51 D 5445 T	LAVA81	95-130 190-260	0-10-50-250-500	158.85
51 D 5446 T	LAVA82	95-130, 190-260	0-5-25-100-250	153.85
51 D 9718 T	LAVA83	95-130 190-260 380-520	0-10-50-250 500	174.85
51 D 9719 T	LAVA84	95-130 190-160 380-520	0-5-25-100-250	169.85

CHART RECORDERS

- Inkless Stylus for Smudge-Free Impressions
- Up to 30 Hours Recording Per Roll of Paper
- Provides One Impression Every 5 Seconds

Provides permanent records of any variable than can be converted into an electrical signal. Records voltage, current, temperature, flow, pressure and other conditions. Uses pressure-sensitive paper marked with an inkless stylus. This means smudgeless charts and clean hands for the operator. One roll of paper runs for 30 full hours at a chart speed of 12 inches per hour. Easy drop-in paper loading. Gives highly accurate recording of ±3% on full scale. Provides one impression every 5 seconds.

Type LAV8600 has sensitivity of 1380 ohms/volt. Type LAA81 Meter includes clamp-on transducer. For 115 volts, 60 Hz AC. Size, 7x5 7/16x2 1/8". Each model includes portable case. Uses 2½" x 30-ft. long paper charts (order Strip Charts from table below). Av. shpg. wt., 4 lbs.

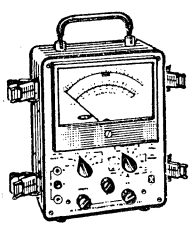
Stock No.	Mfr's Type	Description	Range	EACH
51 D 5448	LAV8600	Voltmeter	0-150-300-600VAC	108.85
51 D 5443	LAA81	Ammeter	0-10-50-250-500 Amps AC	114.85

STRIP CHARTS FOR CHART RECORDERS

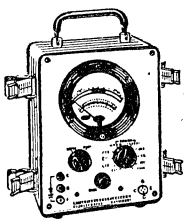
Perforated and printed in one color. Individually boxed rolls, chart size, 2½" wide x 30' long. Marked volts or amps appropriate to recorder indicated. Package of six rolls.

Stock No.	Mfr's Type	For Use with These Recorders	Six Rolls
51 D 5459	835X3A	LAVA81, 82, 83, 84	9.00
51 D 5460	830AV600	LAV8600	9.00
51 D 5461	850A	LAA81; LAVA81, 82, 83, 84	9.00

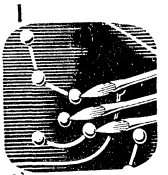
SEMICONDUCTOR CIRCUIT TESTERS



Model 259C



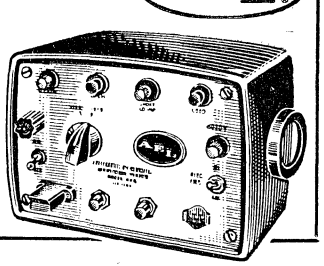
Model 245M



MODEL 242 PROBE

- Makes Testing Much Easier
- Three Adjustable Contacts
- One Hand Operation

Makes one-hand testing possible. Features three contacts, quickly adjustable to exact contact configuration. For Model 240, right. 1 lb.
51 D 5011 ..... 39.50



MODEL 259C LIGHTWEIGHT PORTABLE TESTER

- Tests Transistors, Diodes, FET's
- Automatic Beta Calibration

In-circuit semiconductor tester designed to fill a requirement for testing semi-conductors in-circuit with simplicity and complete safety. Measures both low- and high-power transistors either in or out-of-circuit for 1000-Hz Beta (h_{fe}) within a range of 1 to 1000, and transconductance (Gm) of Field Effect Transistors to 10,000 μmhos.

The 259C will also measure the resistance appearing between the emitter and base, collector and base, and collector and emitter electrodes of transistors and F.E.T.'s, as well as measuring the reverse leakage of diodes, rectifiers and F.E.T.'s either in or out-of-circuit. Measurements are easily read on a 6" taut-band meter.

The 259C Tester includes an Automatic Beta Calibration Circuit, which automatically sets the collector current of the transistor under test at 1 milliamp. Small, lightweight, ruggedly built tester is battery operated (batteries included). Size: 7½x8½x 10". Supplied with test leads. Optional one-hand probe, next column. Shpg. wt., 10 lbs.
51 D 5028 T 360.00

MODEL 245M TESTER

Extremely versatile transistor and diode tester—provides in-circuit or out-of-circuit tests. Simplified operation with only 3 controls: PNP/NPN switch, function switch, and Beta calibration adjust. The wrong setting of the PNP/NPN switch will be indicated by a reverse meter reading when setting the calibration adjust for measuring Beta. Can't damage semiconductor under test. Measures high and low power transistors. in- or out-of-circuit, for 1000-cycle Beta within a range of 1 to 1000. Also measures resistance across emitter-to-base, collector-to-base, collector-to-emitter. Measures Beta and I_{CBO} out-of-circuit, as well as reverse leakage of diodes and rectifiers. High-impact plastic case, cover with compartment for probe storage. 4½" taut-band meter. Uses 6 type C batteries. Size, 10x8x 6½". Shpg. wt., 5 lbs.
51 D 5009 T 250.00

51 D 5016. Model 246 In-Circuit Probe. (Not illus.) 3 contacts permit using Model 245M and 259C Semiconductor Testers to check transistors with one-hand 39.50

MODEL 240 AUTOMATIC CIRCUIT TESTER

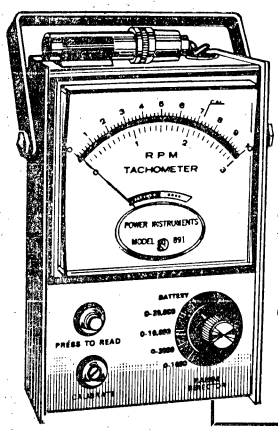
- Makes Tests In or Out of Circuit
- Sets Test Voltages Automatically

In-circuit semiconductor tester utilizes a revolutionary principle in transistor test equipment which permits accurate, automatic transistor testing. The test set automatically applies the proper voltages to the appropriate leads after determining and adjusting for the correct voltages for silicon or germanium transistor types. Will not damage or burn out components.

Checks transistors out-of-circuit, or in-circuit with shunts as low as 250 ohms (germanium) or 470 ohms (silicon), base to emitter. Absolutely no knobs to adjust, no potentiometers to turn and no calibration to make. Results immediately indicated by go, no-go and fault indicating lights. Accurately checks for and indicates gain, shorts and opens in your transistors. Ideal for production-line uses.

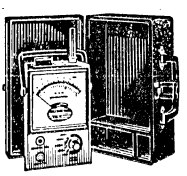
Test virtually every type of transistor including power, switching, small signal, junction, alloy, point contact and military types. Size, 7¾x5½x6". For 110-120 volt. 60 Hz AC. Shpg. wt., 18 lbs.
51 D 5008 T 450.00

Professional-Quality Test Equipment



POWER INSTRUMENTS
PHOTO-ELECTRONIC TACHOMETER

- Reads Low or High Speed
- Instant Field Calibration
- Direct-Reading Mirror Scale
- Silicon Photocell
- Solid-State
- Four Ranges



CARRYING CASE

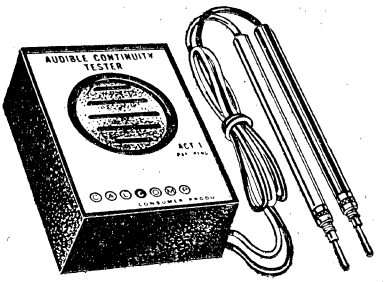
Wood-covered with black simulated leather. Polyurethane foam inside. Metallic hinges, hardware. 4½x11x7⅜". 3 lbs.
51 D 5812.....15.00

MODEL 891. Portable, photo-reflective tach with a wide variety of applications for rpm measurements of motors, discs, grinders, shafts, turbines, engines, gear trains—any rotating or reciprocating action. Touchless to prevent torque loss. Pickup probe on 24" retractile cord contains lamp and high-speed response silicon photocell for speed sensing. Light is collimated and concentrated by lens at the end of probe. Ranges: 0-1000/3000/10,000/30,000 rpm. Accuracy, 1.5% of full scale. 4½x4⅓" clear-face dial with mirror-type scale for easy, accurate readings. Shockproof meter movement. Instant field calibration. Built-in battery test. Aluminum case, 7½x5⅛x2½". Shpg. wt., 4 lbs.
51 D 5635.....145.00

51 D 5810. Model 909. Same as above, but 0-10,000/30,000/100,000/300,000 rpm ranges. Shpg. wt., 4 lbs.....145.00

51 D 5811 T. Model 912. Same features and ranges as Model 891, but operates on 110-120 V, 50-60 Hz AC. Shpg. wt., 6 lbs.....195.00

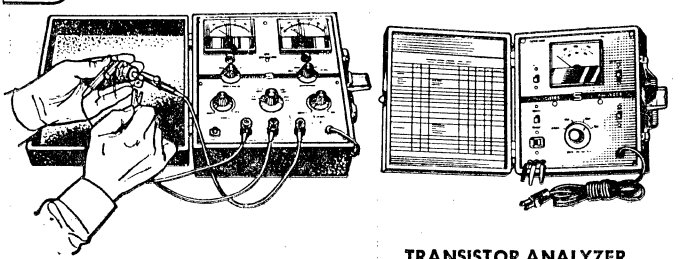
CALCOMP MODEL ACT-1
AUDIBLE CONTINUITY TESTER



- Eliminates Visual Check—Tone Shows Continuity
- Safe for Semiconductors and Delicate Circuits
- Low Voltage—No Danger of Inductive Kickback
- Short-Circuit Measurement Draws Only Six Milliamperes at Test Probes

Fully self-contained and portable audible continuity tester ideal for servicing radio, TV, hi-fi, intercom systems, other electronic equipment. Excellent for use on production lines also. Indicates circuit continuity with clear audible tone—eliminates need for visual checks. Pitch varies with resistance (0 to 50 ohms). Short-circuit measurement draws just 6 mA at probes. Safe for use even with semiconductors and other delicate circuits. Convenient 30" test probe leads. Uses single 9-volt battery. Overall size, 3¾x2¾x1⅜". Wt., 8½ oz.
51 D 5017. 1-9....Each 9.95 10-24....Each 8.25
25-99.....Each 6.95 100-Up...Each 5.97

TESTERS FOR TUBES AND TRANSISTORS



SCR ANALYZER

MODEL 240. Portable, self-contained analyzer for fast, easy measurements of Silicon-Controlled Rectifiers. It's an invaluable aid for the design engineer and technician in developing new equipment using SCR circuits. Provides exact measurements for precision design.

Measures gate voltages and currents for matching and sorting to firing circuit requirements. Also permits accurate check of Peak Forward Voltage and Current as well as Peak Reverse Voltage and Current to pre-determine the proper SCR to use under various operating conditions. Provides facilities for matching of SCR's to particular voltage and current parameters, or sorting SCR's into matched pairs or threes to share the work load evenly in full-wave or three-phase rectifier applications. Has simultaneous two meter readout for precision voltage and current measurements.

Housed in durable, vinyl-covered carrying case with latching lid and handle. Insulated binding posts accommodate leads with either tip or banana plugs. Overall size, 10½x9x5". With detailed operating instructions. For 105-125 volts, 60 Hz AC. Shpg. wt., 8 lbs.
51 D 9005 X.....144.50

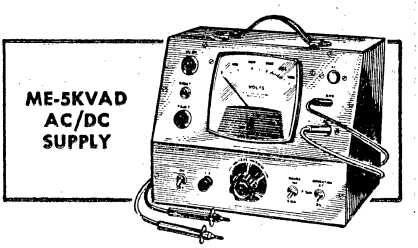
TRANSISTOR ANALYZER

MODEL 260. A virtual necessity for servicing today's modern equipment. Provides complete tests and measurements of semiconductor parameters. Tests transistors IN or OUT of circuit. Requires no set-up data. Thoroughly analyzes both power and signal type transistors. Fast dynamic in-circuit evaluation tests transistor with a self-contained oscillator circuit—gives fast "go-no-go" check. Dynamic test also lets you quickly identify NPN and PNP transistor types, in addition to lead connections. Out-of-circuit DC analysis is made by plugging transistor into universal speed-test socket mounted on front panel.

Test positions: Dynamic—for in-circuit testing; Beta—direct meter reading of DC gain; I_{ceo}—collector-to-emitter leakage; I_{cbo}—collector-to-base leakage. Dynamic test oscillator frequency, approximately 7 kHz. All test voltages are zener regulated.

Analyzer is mounted in a durable vinyl-covered carrying case. Has internally connected, insulated alligator-clip leads. Size, 8¾x7⅜x4¼". Complete with detailed operating instructions. For 105-125 volts, 50-60 Hz AC. Shpg. wt., 5 lbs.
51 D 5239.....69.50

MILWAUKEE ELECTRONIC INSULATION TESTERS



- Continuously Variable 0-5000 AC and DC Output
- Non-Destructive—Adjustable Trip Circuit
- Excellent for Lab Research and Production Lines

Flexible in use and completely safe in operation. High potential insulation tester provides both AC and DC output voltages, continuously variable from 0 to 5000 V. Non-destructive—trip circuit instantly de-energizes high voltage transformer when leakage current exceeds preset limits.

Current trip-out is adjustable in three ranges with adjustment tolerance ±10%. Highest sensitivity range, up to 1 mA. Maximum current, AC or DC, 5 mA. AC and DC voltages not to be used simultaneously. 4" meter reads rms voltage applied (±3%).

"HV On" and "Fault" lights plus reset button are provided. Safety features include: grounded metal case; high leakage transformer to limit max. current; one side of HV grounded; fused primary; 3-wire cord and plug. In convenient sloping panel case with carrying handle. With 6' leads. For 115 V, 50-60 Hz AC. 8¼x8¾x10½". Wt., 25 lbs.
51 D 5001 U.....278.75

MODEL ME-5KV—AC POTENTIAL

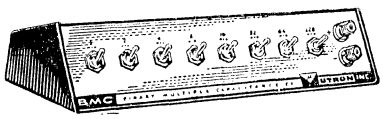
Similar to ME-5KVAD above but provides only AC. Max. leakage current 10 mA; high sensitivity 1 mA; low sensitivity, adj. 5 to 10 mA. 8¼x8¾x10½". 6' leads. 115 v., 50-60 Hz AC.
51 D 5003 U. Shpg. wt., 19 lbs.....225.75

Depend on Allied for the Latest in Professional-Quality Test Equipment

Test Equipment and Accessories

MUTRON INC. BMC CAPACITANCE SUBSTITUTION BOX

- 1 to 255 μF in Steps of 1 μF
- Accuracy of Up to 2%

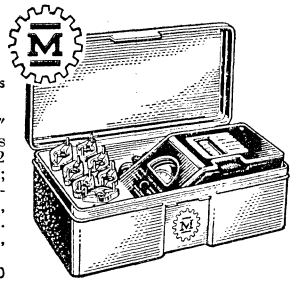


Uses binary switching for greater range, more flexibility. High accuracy—lab measured values supplied with each box. Designed for use in development and testing of transistor circuits, the Binary Multiple Capacitance box uses high-quality electrolytic capacitors to achieve a range of 1 to 255 μF in steps of 1 μF. All capacitors are rated at 50 WVDC. Tolerance in all switch positions: —10 to +30%. Using lab values supplied, accuracy to 2% can be achieved. Sleek anodized case is permanently marked. Simple instructions supplied. Case size, 9¾x3x3". Shpg. wt., 1¾ lbs.

51 D 9002 ..... 35.50

MILLEN GRID-DIP METER

- Seven Direct Reading Scales
- Wide Range, to 300 MHz
- Convenient Carrying Case Holds Seven Coils and Meter



MODEL 90651. Easy-to-read, 2" meter with 0-100 scale. Has plug-in coils for 1.7-300 MHz; 2 switches for filament and plate; terminals for battery. Transformer supply. For 110-120 V, 50-60 Hz AC. Size, 7x3⅜x3⅜". With carrying case. Shpg. wt., 3½ lbs.

21 D 4324 ..... 78.50

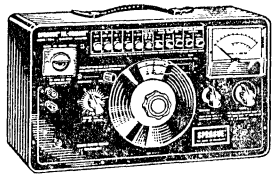
EXTRA COILS. Cover frequencies from 220-2000 kHz. Wt., 3 oz.

Stock No.	Mfr's Type	Range kHz	EACH
21 D 4325	46702	925-2000	9.40
21 D 4326	46703	500-1050	9.40
21 D 4327	46704	325-600	9.40
21 D 4328	46705	220-350	9.40

SPRAGUE

MODEL TO-6 TEL-OHMIKE CAPACITOR ANALYZER

- Extremely Low Bridge Voltage
- Low Cap. Range, 1 pF to 100 pF
- Tests Leakage up to 600 V



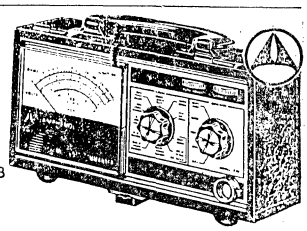
Lab accurate instrument for complete checks of all capacitors. Five overlapping ranges of Wien bridge measure up to 2000 μF, with low-capacity 1 pF to 100 pF range. Low bridge voltage, 1.35 for electrolytics; 2.85 for others. Checks insulation resistance of paper, micas and ceramics in 2 ranges, 10K meg and 50K meg. Tests leakage at up to 600V, with leakage current in 4 ranges: 0-0.06-0.6-6-60 mA. Checks power factor to 50%. Has turns ratio scale for power and audio transformers. Also: overload protected meter; magic eye tube for easy bridge balancing; convenient pushbutton range selectors. 8⅞x14⅝x6⅛". For 110-120 V, 50-60 Hz AC. Wt., 16¾ lbs.

51 D 5655 U 109.50

COMMANDER

MODEL 870 FET VOLTMETER

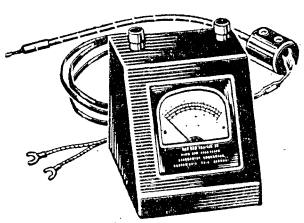
- Rugged Solid-State Circuit
- Reads AC/DC Volts, Ohms, dB
- Portable, Battery Powered



Highly sensitive solid-state voltmeter uses FET for constant high input impedance of 10.6 megohms. Measures DC volts from .1 to 1000 V in nine overlapping ranges; AC volts from 1/100 to 300 Vrms in 10 overlapping ranges. DC accuracy, ±2%; AC accuracy, ±3%. Reads dB in 10 ranges from —40 to +50; resistance from 0 to 500 megohms in seven overlapping ranges (center scales from 10 ohms to 10 megohms). Easy-to-read burnout-proof meter; single switchable AC-ohms/DC test probe for fast, easy multiple measurements. Built-in battery test. 6⅜x9¼x5¾". With batteries, probe.

21 D 4583 X. Shpg. wt., 5 lbs. 99.95

JBT PYROMETERS



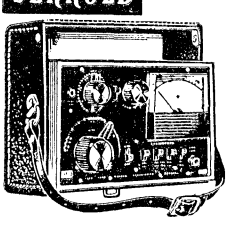
MODEL 32-J. Small, accurate instruments, mounted in sloping-front metal stands, 4¼x4⅛x4⅜". Medium-resistance system damped for quick reading on 2⅜" scale. Compensated for ambient temperature. ±2% accuracy. With thermocouple and lead supplied. Use only the type and resistance of thermocouple and lead provided; if lead is too long, coil it to maintain calibration. Protection tube is usually not required. For extra convenience, keep an extra thermocouple and lead on hand. Shpg. wt., 2 lbs.

51 D 5791. Temperature Range, 0-650° F to 350°C. With SA-91 0-650-1200° F thermocouple with 12" conductors, SA-84 392° F 6-ft. leads, and CB-1 0-2000° F, 1½x1⅜" dia. connector block 37.00

51 D 5792. Temperature Range, 0-1200° F to 650° C. With SA-87 0-1200-2000° F thermocouple with 12" conductors, SA-82 194° F 6-ft. leads, and CB-1 0-2000° F, 1½x1⅜" dia. connector block 37.00

51 D 5793. Temperature Range, 0-2000° F to 1100° C. With SA-87 0-1200-2000° F thermocouple with 12" conductors, SA-82 194° F 6-ft. leads, and CB-1 0-2000° F, 1½x1⅜" dia. connector block 37.00

JERROLD®



Battery Operated, Ideal for Field Uses

PORTABLE METER

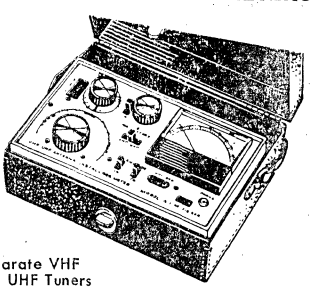
MODEL 720B. Lightweight, battery-operated solid-state meter ideal for MATV applications. Rugged printed circuit construction for maximum compactness and portability. Covers VHF-TV, FM and commercial and industrial FM communications from 54-216 MHz continuous, plus wideband UHF coverage from 470-890 MHz continuous range.

Has 10-10,000 μV scale; —30 to 0 dB mV range; 3x20 dB and 1x6 dB attenuators for greatly increased operating versatility. Maximum meter ranges, 2 volts, +66 dB mV. Matched 75-ohm ("F") input provides low VSWR over entire range; input jack for headphone, oscilloscope or DC recorder. Four direct reading dB scales simplify calculations when 20 dB attenuator sequence is used. VSWR: VHF, 1.2:1 with one attenuator; 1.4:1 with no attenuator. UHF, 1.4:1 with one attenuator; 1.8:1, no attenuator.

Zero-control knob, battery test switch. Voltage regulating circuit operates on four 9-volt batteries. (Burgess 2MN6, Eveready 222, etc.). 8¼x4¼x2¼". "F" connector, crystal earphone, strap, batteries. 7 lbs.

51 D 9703 T 295.00

VHF AND UHF FIELD STRENGTH METERS



Separate VHF and UHF Tuners

ANTENNA INSTALLER'S METER

MODEL AIM-78. Lightweight, compact signal strength meter reads directly in dB mV and μV to show exact antenna requirements for best installation. Provides continuous coverage of 54-216 MHz for VHF-TV and FM, 470-890 MHz for UHF-TV. Features 75 or 300-ohm input with specially designed plug-in matching transformer supplied.

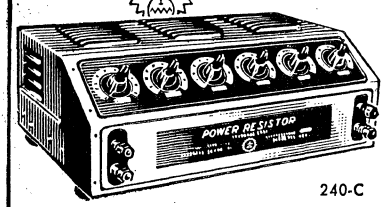
Two built-in 20 dB attenuators greatly increase μV and dB meter ranges. Reads: 50-2,000 μV basic scale; 500-20,000 μV with one attenuator; 5,000-200,000 μV with two attenuators. dB scales: VHF/UHF, —26 to 0 dB basic scale; —6 to +20 dB with one attenuator; VHF only, +14-40 dB with two attenuators. Accuracy: VHF, —3 dB; UHF, —6 dB. Sensitivity: 20 μV at 75 ohms; 40 μV at 300 ohms. Has 300-ohm receptacle; 4 spring terminals for Type "F" connector for 75-ohm use with transformer.

Rugged case with latching cover, special safety switch to turn off power when cover is closed. Operates on four 9-volt batteries (included). 9x6½x4". With audio output jack and crystal earphone. 4½ lbs.

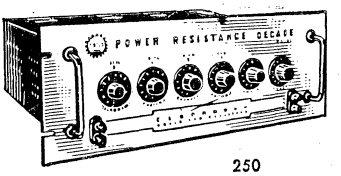
51 D 9657 T 179.50

Decade Boxes, Multimeter, Scope Probe

RESISTOR DECADE BOXES



240-C



250

MODEL 240-C BENCH TYPE RESISTOR DECADE

Allows selection of any value from 1 to 999,999 ohms in 1-ohm increments. Six dials read Rx1, Rx10, Rx100, Rx1K, Rx10K and Rx100K for quick setting and direct readout. Dissipates up to 225 W; maximum, 1000 V DC, or 660 V AC per decade. All have 2% tolerance except Rx1 decade, 5%. Maximum current ratings range from 5 amps for Rx1 to 5 mA for Rx100K. Rugged, long-lasting Clarostat "Greenohm" wirewound power resistors used throughout. Two sets of terminals accept any of the following: banana plugs, spade lugs or plain wire connections. 8½x13x5¾". Wt., 1¾ lbs.

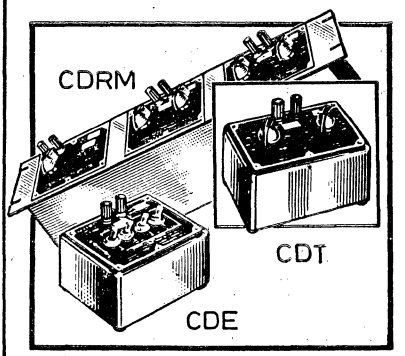
51 D 5250.....**115.50**

MODEL 250 RACK-PANEL TYPE RESISTOR DECADE

Electrically identical to 240-C, but mechanically rearranged to fit std. 19" relay rack panel. Size, 13¼x19x7". For use in systems or other non-bench applications. Wt., 24¼ lbs.

51 D 5251 U.....**157.50**

CAPACITOR AND RESISTOR DECADES



CAPACITOR DECADES

Rated at 600 volts DC, and 220 volts AC. Provide a reliable and accurate source of selected, precision values for breadboarding and substitution. Three different boxes, CDA-2, CDB-3 and CDC-3, can be easily paralleled to provide capacitances of 0 to 1.111 in 0.0001-μF steps. CDA-2 has a mica dielectric, others are oil-impregnated. CDT-5/10 is polarized tantalum foil, provides an extended range of values. Last figure in Mfr's Type No. indicates ±% tol. Each has chart giving exact value for all scale markings. *Indicates Aluminum Electrolytic Capacitor substitution box. 3 13/16x5x3 5/8". 2 lbs.

Stock No.	Mfr's Type	Range μF	μF/ Step	EACH
51 D 5244	CDA-2	.0001-.011	.0001	15.37
51 D 9103	CDB-3	.01-1.1	.01	17.28
51 D 9104	CDC-3	1.0-10	1.0	28.61
51 D 9769	CDE*	10-150	10.0	17.00
51 D 9053	CDT-5/10	10-1100	10.0	139.54

CDRM RACK-PANEL CAPACITOR DECADES

A combination capacitor decade unit consisting of CDA-2, CDB-3, and CDC-3 (described above) mounted on durable 3½x19x4" rack panel. Shpg. wt., 7¼ lbs.

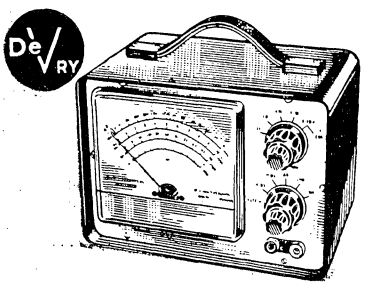
51 D 5246 X.....**79.43**

RESISTOR DECADES

Each permits selection of 110 values. Units of resistance may be selected from the direct-reading panel switch scale. Series connected, they cover from 1 to 1,111,110 ohms in 1-ohm steps. Have 2 rotary switches with 11 positions. RDA and RDB use wirewound resistors; RDC uses carbon resistors. Size, 3 13/16x5x3 5/8". Shpg. wt., 1¾ lbs.

Stock No.	Mfr's Type	Range Ohms	Ohms/ Step	EACH
51 D 9123	RDA	1-110	1	19.82
51 D 9124	RDB	100-11,000	100	21.87
51 D 9125	RDC	10,000-1,100,000	10,000	19.64

DEVRY TRANSISTORIZED MULTIMETER



- With Long-Lasting Rechargeable Battery and Built-In Charger
- Usable from 10 to 500,000 Hz

Combines the high impedance of a VTVM with the current measuring ability and freedom from AC power of a VOM. Uses 1% precision multiplier resistors for an overall accuracy of ±3%. Ranges, with input resistances in parentheses: DC volts, 0-1 (.92 meg), 0-10 (10.1 meg), 0-100 (9.19 meg), 0-1000 (9.1 meg). AC volts, 0-5 (650K), 0-50 (1.75 meg), 0-500 (1.85 meg), 0-1000 (1.85 meg). Resistance (ohms), 0-10K-100K-1 meg-10 meg. DC current, 0-50 μA-500 μA-5 mA-50 mA. Reads 0-500 mA and 0-5 amps with accessory shunts (below). Amplifier circuit designed to make meter burnout impossible. Has zero adjust. Current drain only 6 mA. Requires 115 VAC for charger. Size: 7¾x5½x4½". Wt., 6 lbs.

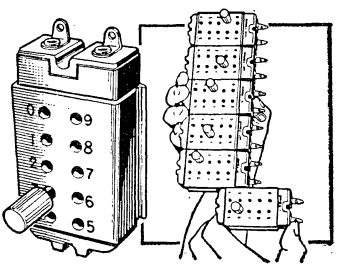
51 D 5217.....**120.00**

51 D 5216. As above, but without charger and with "D" battery instead of rechargable battery.....**92.50**

51 D 9766. Shunt. 0-500 mA range.....**4.00**

51 D 9765. Shunt. 0-5 amp range.....**4.00**

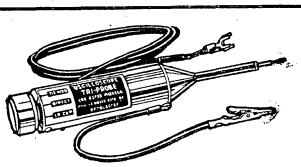
CLAROSTAT DECADE BOXES



- Provide Precision Resistance Values for a Wide Variety of Applications
- Easy-to-Join Tongue and Groove Units

Use Claro-Decs wherever accurate steps of resistance values between 0.1 ohm and 900K are needed. Each unit is a network of five 1% metal film-resistors (wirewound in Models 260-1, 260-2, plastic coated in others) graduated in value. The desired resistance value is obtained by simply inserting a banana plug (included) into the hole by the proper decade digit. Boxes can be side-stacked, mounted on breadboards, connected by wire jumper, etc. Values, resistance multiplier clearly marked. Size, 1½x⅞x2¾". Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Range Ohms	Ohms/ Step	EACH
51 D 9054	260-1	.1-.9	.1	4.15
51 D 9055	260-2	1-9	1	4.15
51 D 9056	260-3	10-90	10	4.15
51 D 9057	260-4	100-900	100	4.15
51 D 9058	260-5	1000-9000	1K	4.15
51 D 9059	260-6	10K-90K	10K	4.15
51 D 9060	260-7	100K-900K	100K	4.15



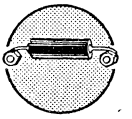
OSCILLOSCOPE TRI-PROBE By FAR HILLS DESIGN

- Demodulation/Direct/Low-Cap Probe
- Operating Range, 0-250 Megahertz
- Adjusts for Various Input Ohms

This single-knob-operated probe ends bothersome switching. Just dial the section you need: Demodulation—traces waveforms in RF and IF stages; Direct—tests low frequency and low impedance circuits. Low-Capacity—traces high imp. circuits, reduces distortion. Needle-point pierces light insulation for easy testing. With leads. 12x3x3¼". Shpg. wt., 1 lb.

51 D 9061.....**29.95**

Metergard



Prevents Bent Pointers and Damaged Pivots, Due to Overloads

Ends expensive meter repairs. No larger than a paper capacitor. Metergard wires across any meter from 25μA to 25mA to protect against overloads of up to 10,000%. Will not change accuracy of meter. Shpg. wt., ¼ oz.

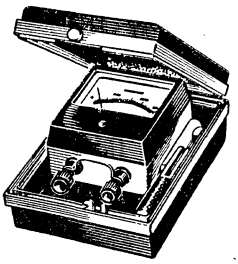
51 D 5627. 1-9.....Each 2.95
10-49....Each 2.60 50-99.....Each 2.39
100-249..Each 2.19 250-Up.....Each 1.95

Make Allied Your Headquarters for Quality Test Equipment

Pyrometers, Frequency Meters, Power Supply

API HIGH-ACCURACY PORTABLE PYROMETERS

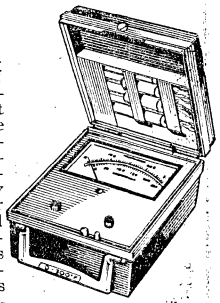
MODEL 6030



Precision, thermocouple-actuated portable pyrometer for general-purpose industrial uses. Typical applications include temperature checks of laboratory ovens, furnaces, refrigeration equipment, solder pots, oil baths, etc. Features rugged taut-band meter with ±1% accuracy. Mirrored scales indicate temperature in both degrees Fahrenheit and degrees Centigrade. Fully compensated for ambient and copper error with bimetal and thermister. Calibrated for rustproof Chromel-Constantan (Cr/C) thermocouple probes (order below). Interchangeable probes can be carried right in meter case. Easy-to-read 5.5″ meter scale. Aluminum trimmed ABS plastic case, 7.3x8x3.3″. Shpg. wt., 1½ lbs.

Stock No.	RANGES °F	RANGES °C	EACH 1-24	EACH 25-99	EACH 100-249
51 D 5827	−100 to +1100	.....	75.00	67.50	63.75
51 D 5828	−100 to +600	−70 to +310	75.00	67.50	63.75
51 D 5829	0 to +300	0 to +150	75.00	67.50	63.75
51 D 5830	0 to +500	0 to +260	75.00	67.50	63.75
51 D 5831	0 to +750	0 to +400	75.00	67.50	63.75
51 D 5832	0 to +1000	0 to +500	75.00	67.50	63.75
51 D 5833	0 to +1500	0 to +800	75.00	67.50	63.75

MODEL 3030



Thermocouple-actuated portable pyrometer provides accurate measurements of temperature in lab ovens, furnaces, refrigeration equipment, much more. Pocket size, great for making quick checks in the field. Taut-band meter movement provides excellent ±1% accuracy. Frictionless movement offers near perfect repeatability, high shock resistance. Fully compensated for ambient and copper error with bimetal and thermistor. Calibrated for rustproof Chromel-Constantan thermocouple probe. Interchangeable probes (listed below) are carried in fitted compartment in meter case. Meter indicates both degrees Fahrenheit and degrees Centigrade. Has clearly calibrated, easy-to-read 3″ meter scale. Rugged aluminum trimmed ABS plastic case. Overall size 5.5x5.8x2.3″. Shpg. wt., 1 lb.

Stock No.	RANGES °F	RANGES °C	EACH 1-24	EACH 25-99	EACH 100-249
51 D 5834	−100 to +1100	.....	65.00	58.50	55.25
51 D 5835	−100 to +600	−70 to +310	65.00	58.50	55.25
51 D 5836	0 to +300	0 to +150	65.00	58.50	55.25
51 D 5837	0 to +500	0 to +260	65.00	58.50	55.25
51 D 5838	0 to +750	0 to +400	65.00	58.50	55.25
51 D 5839	0 to +1000	0 to +500	65.00	58.50	55.25
51 D 5840	0 to +1500	0 to +800	65.00	58.50	55.25

THERMOCOUPLE PROBES FOR 6030 AND 3030 PYROMETERS ABOVE

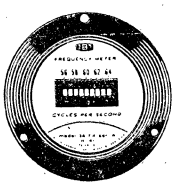
51 D 5841. Straight Surface Probe. Wt., 4 oz.....Each 30.00
51 D 5842. Angle-Surface Probe. Wt., 4 oz.....Each 35.00
51 D 5843. Needle Probe. Wt., 4 oz.....Each 30.00
51 D 5844. General-Purpose Probe. Wt., 4 oz.....Each 30.00
51 D 5845. Wire. Shpg. wt., 4 oz.....Each 6.00
51 D 5846. Probe Handle. Wt., 4 oz.....Each 5.00

LECTROTECH POWER SUPPLY

Replaces Ohmmeter Battery in Most VTVM's

True miniature 1½-volt DC power supply replaces ohmmeter batteries in VTVM's. Takes only a few minutes to mount and wire. Eliminates need for replacement batteries; danger from battery bleeding and corrosion. Occupies same space as standard "D" cell. Fits any VTVM using standard grounded "D" cell for ohmmeter.
51 D 5634. Shpg. wt., 4 oz.....3.95

JBT REED FREQUENCY METERS



Feature unique, patented vibrating reed design for use where constant or known frequency is important to efficient operation of equipment. Have nine reeds with high Q for sharp, fast response, accuracy is within ±0.3% at 77° F. Remains unaffected by poor waveforms, external magnetic disturbances, or voltage fluctuations. No mechanical or moving parts to wear out and lose calibration. Flush panel, MIL-M-6B mounting. Flange, 3½″; body diameter, 2 1/16″; depth, 2 23/32″. Both models have rugged molded cases for added dependability. For operation from 100-130 volts.

MODEL 33-FX. For 400 Hz power sources, particularly aircraft. Range: 380 to 420 Hz with frequencies in 5 Hz steps. 1.5 watts power consumption, 90 ohms/volt.
52 D 6701. Shpg. wt., 12 oz.....35.80

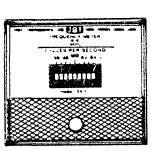
MODEL 34-FX. Range: 56-64 Hz, frequencies in 1 Hz steps. 1 watt, 110 ohms/volt.
52 D 6700. Shpg. wt., 12 oz.....28.65

JBT FG SERIES FREQUENCY METERS

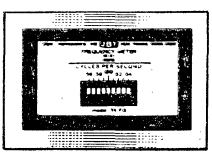
Modern-styled frequency meters designed to enhance any installation. 3½″ wide and 3″ high, designed for flush mounting. Specially designed to match most models of other manufacturer's meters.

Special design flexibility is provided by the use of a half-bezel adapter (listed in table at right) that acts as a "picture window" to outline a panel area 3.83x 2.27″ and effectively concentrate attention in the portion of the dial to be read. Permanently calibrated dials need no further adjustments.

High Q characteristics make them ideal for measuring frequency in electronic circuits. Retain high accuracy under almost all conditions, not affected by poor waveforms, external magnetic disturbances or line voltage fluctuations. Tightly sealed for long-life dependability. 100-130 VAC. Av. wt., 1 lb.

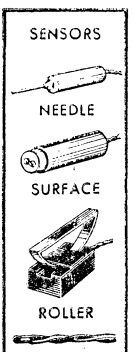


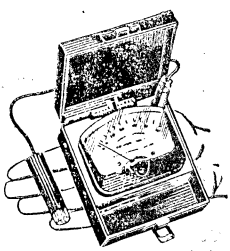
FG METER



PANEL MOUNT

Stock No.	Mfr's Type	No. of Reeds	Frequency Range, Hz	EACH
52 D 6706	30-FG-10	10	48-52, 58-62	32.50
52 D 6707	30-FG-18	18	46-54, 56-64	52.50
52 D 6708	31-FG-5	5	58-62	28.50
52 D 6709	31-FG-7	7	57-63	30.50
52 D 6710	34-FG-9	9	56-64	32.25
52 D 6711	34-FG-11	11	55-65	34.50
52 D 6712	34-FG-21	21	45-65	45.50
52 D 6713	13A-234	Half-Bezel Adapter		2.75





ELECTRONIC DEVELOPMENT LABS

1% Accuracy

MODEL MP SERIES II PYROMETERS

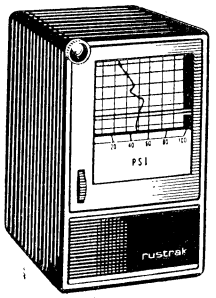
Versatile pyrometer has automatic bi-metal and thermistor compensation for copper, cold end, and ambient temperature. Self-contained antimagnetic steel case with sensor storage area. Large meter. Automatic transit switch. Choice of surface, needle, roller contact, wire sensors. 5¼x4¼x2″. Wt.: Actual, 22 oz.; shpg., 3 lbs.

PYROMETER ONLY—ORDER SENSORS BELOW
51 D 9913. 50-400°F.....56.50
51 D 9914. 50-600°F.....56.50
51 D 9915. 0-800°F.....56.50

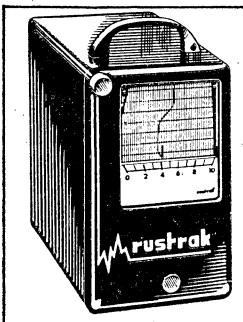
SENSORS FOR ABOVE PYROMETERS

51 D 9916. Surface Sensor. For flat objects, all temp. ranges. 4 oz.....18.25
51 D 9903. Needle Sensor. Up to and including 600° F. Stainless steel 1x.059″. Shpg. wt., 4 oz.....18.25
51 D 9912. Needle Sensor. For 800°F and up. Shpg. wt., 4 oz.....20.25
51 D 9904. Roller Contact Sensor. For pipes, rollers ½ to 40″ dia., all temp. ranges. Stainless steel. 4 oz.....18.25
51 D 9917. Wire Sensor. For 50-600°F. Has small weld at end of 56″ lead. For ovens, dryers, ranges, etc. Shpg. wt., 4 oz...18.25

rustrak Miniature Chart Recorders

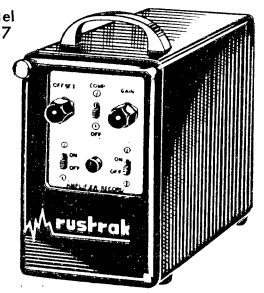


Model 2162

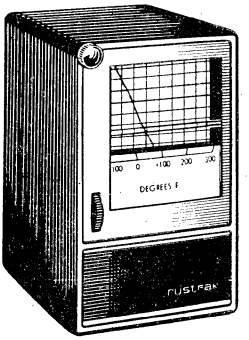


Recorder

Model 2147



Amplifier



Model 2144

PRESSURE RECORDER

MODEL 2162. Single-channel recorder designed to provide accurate continuous monitoring of gas and liquid pressures. Utilizes C-type Bourdon tube made from seamless Grade A phosphor bronze. Available with ranges other than listed below, or zero suppression up to 50% on special order. Accuracy, ±2%. Connector: ⅛" male thread NPT. Overall size, 5⅜x3⅝x4⅛". For 115-volt, 60 Hz. Shpg. wt., 5 lbs.

51 D 9038. 0-15 psi.....110.00
51 D 9328. 0-50 psi.....110.00
51 D 9329. 0-100 psi.....110.00
51 D 9039. 0-300 psi.....110.00

AMPLIFIED TEMPERATURE RECORDER

MODEL 2147. Amplified recording system includes a stable, chopper modulated DC amplifier with selectable automatic temperature compensator and matching recorder. Suitable for either laboratory or industrial measurements of temperature with thermocouples, or for low DC voltages with strain gauges or temperature bridges. Automatic cold junction compensation with C/C, I/C, and C/A standards. Sensitivity, 2 mV max full scale. Span down to 75° F. Amplifier, 5⅜x3⅝x5 13/16"; recorder, 5⅜x3⅝x4⅛". For 115-volt, 60 Hz. Shpg. wt., 12 lbs.

51 D 9030 T......267.50

TEMPERATURE RECORDERS

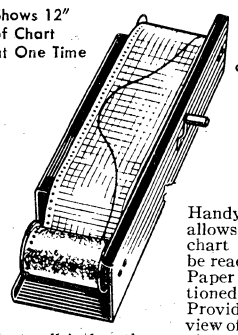
MODEL 2144. Self-contained temperature recorder utilitzing a nickel wire sensor for accurate, high resolution recordings from −100°F to +600°F. Span: 100°F min.; 600°F max. Accuracy, +2.5% of span, ±0.5% full-scale. Supplied with probe and 15-ft. extension cable. **Specify temperature span within range.** 5⅜x3⅝x5⅞". 105-130 V, 60 Hz. Shpg. wt., 7 lbs.

51 D 9330 T. 0 to 300° F.....195.00
51 D 9331 T. 0 to 500° F.....195.00
51 D 9040. Model 304 SST Tubular Probe. For above. Shpg. wt., ½ lb.....40.50
51 D 5143. Surface Probe. 3 oz.....16.50

MODEL 168 CHART VIEWER

Shows 12" of Chart at One Time

Easy to Set Up and Operate

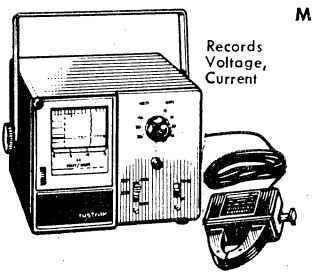


Handy viewing aid allows 12" span of chart recording to be read at one time. Paper can be positioned in seconds. Provides rapid review of complete 63-foot roll in less than a minute. Can also be used for spot-checking and searching.

Compact and lightweight unit, designed for simple operation. Precision clutch mechanism permits clockwise cranking for chart travel in either direction. Lateral snap-action of crank-shaft changes direction of chart travel for fast spot viewing.

Accepts strip-chart recording paper from 1⅞" to 3" wide, with ⅝" I.D. core. Maximum roll capacity, 2" diameter. Special mandrels available for other core diameters. Weighted construction with non-skid pads for use anywhere; will not mar polished surfaces. 14x3½x2⅝". Shpg. wt., 3½ lbs.

51 D 9036.....42.50



Records Voltage, Current

MODEL 2113 AC POWER RECORDER

Simultaneously records both current and voltage, with synchronous input switching for one solid and one broken trace. Available with 1-rpm motor only, for a writing speed of alternate strokes every 4 seconds. Two-point recording permits usable chart width of 2 5/16" for each parameter. Voltage ranges: 0-150, 0-300, and 9-600 volts. Current ranges: 0-15, 0-30, 0-60, and 0-150 amperes. Recording accuracy, 3% on both current and voltage scales. Overall size, 7¼x5⅝x7½". Clip leads for voltage and clamp-on transducer for current are attached. Includes chart access window and all features of the 200 Series chart recorders, listed on page 467. For 105-130 volts, 60 Hz AC. Shpg. wt., 8 lbs.

51 D 9332.....215.00

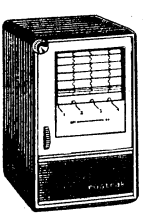
MODEL 2122 RECORDING PYROMETER

Self-contained, miniature temperature recording system complete with sensors. For a wide range of industrial applications. Records in 4 ranges: 0-400° F and 0-1200° F with Type J (I/C) thermocouple; 0-800° F and 0-2400° F with Type K (C/A) thermocouple. Taut-band-suspension galvanometer assures accuracy to ±2% of span. Cold-junction compensation over 65° ambient temperature range (−60 to +125° F). Pushbutton self-calibrating feature permits quick and easy recalibration for any thermocouple resistance from 0 to 23 ohms, without using external precision resistors or millivolt standard. Provision for remote control operation.

Maximum writing speed: 1 strike per second. Maximum chart speed: 24 inches per hour. Standard motor operates at 2 rpm. Has chart access window. Supplied with Types J and K thermocouples, each with 6-ft. wire. Available with °F or °C calibration in standard ranges shown. Specify °F or °C. For 115 or 220 volts, 50-60 Hz AC; or 12 or 24 VDC. 5⅝x3⅝x5⅞". Shpg. wt., 7 lbs.

51 D 9961 T.....180.00

MODEL 292-4 4-CHANNEL EVENT RECORDER



Simultaneously records up to 4 ON-OFF events. Requires 24 volts DC at 70 mA for actuators for each channel. For time studies, working time of machinery, maintenance schedules, etc. Response time, 10 milliseconds. Chart drive for 115 V, 60 Hz AC. **With 2-rpm motor, specify Gear Train for desired recording speed from Table at right.** Shpg. wt., 5 lbs.

51 D 9962 A.....103.00

Model 921-8 Power Supply. Supplies 24 volts DC from 110-130 V, 60 Hz for pen actuator of 292-4 recorder above. Shpg. wt., 5 lbs.

51 D 9048.....20.00

MODEL 292-4 EVENT RECORDER CHART SPEED DATA* (2-rpm motor)

Gear Train Assembly No.	¼	½	1	2	3	6	10	12	15	30	60
Chart Speed (Inches/hr.)	¼	½	1	2	3	6	10	12	15	30	60
A or B (Sec.)	720	360	180	90	60	30	18	15	12	6	3

*Based on 0.050" (1.27 mm) minimum event time (A) or minimum time between events (B). Choose gear train closest to A or B to suit your particular recording use.

MOTORS TO 100 rpm AVAILABLE ON SPECIAL ORDER ONLY: CONTACT ALLIED FOR PRICE AND DELIVERY INFORMATION.

SINGLE-CHANNEL CHART RECORDERS

DC MICROAMMETER RECORDERS

Stock No.	Model	RANGE	Ohms	EACH
51 D 9963	288	0-10 μA	5700	130.50
51 D 9964	288	0-50 μA	5400	114.50
51 D 9965	288	0-100 μA	4600	109.50

DC MILLIAMMETER RECORDERS

51 D 9966	288	0-1 mA	100	99.50
51 D 9962	288	.5-0-.5 mA	100	104.50

DC MILLIVOLTMETER RECORDERS

51 D 9968	288	0-10 mV	10	109.50
51 D 9041	288	0-25 mV	12.5	109.50
51 D 9969	288	0-100 mV	100	99.50

AC VOLTMETER RECORDERS

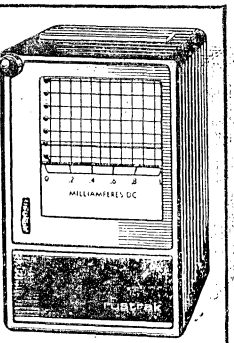
Stock No.	Model	RANGE	Ohms	EACH
51 D 9970	288R	0-150 V	.....	110.00
51 D 9971	293	70-135 V	.....	110.00
51 D 9972	293B	70-135/140-270/ and 280-540 V	.....	120.00
51 D 9042	293A	70-135/140-270 V	.....	115.00
51 D 9043	2186	105-135/210-250 V	.....	150.00
51 D 9044	2186A	105-125/210-250/ and 420-500 V	.....	160.00

AC AMMETER RECORDERS

Stock No.	Model	RANGE	Ohms	EACH
51 D 9045	2118	0-1 and 0-5 amps	.....	128.00
51 D 9046	2107	0-500 amps with clamp-on transducer	.....	145.00

LAB-GRADE PORTABLE AND PANEL RECORDERS

Basic Recorder Low As **99.50**



Miniature recorders feature continuous line recording through striker bar that transforms angular motion of DC galvanometer into rectilinear trace. Pressure-sensitive chart paper requires no ink or heated stylus. May be operated from sub-zero temperatures to 150° F, from sea level to 100,000 foot altitude. Housed in rugged aluminum case, finished with durable epoxy charcoal gray suede coating. Choice of single or dual-channel instruments (dual-channel listed below). Rustrak recorders have countless applications in the fields of oceanography, medicine, pollution control, meteorology, communications, manufacturing and laboratory tests.

Standard units include a synchronous motor that operates from 115 volts, 60 Hz. Chart speed is 1" per hour, with 31 day recording capability per chart roll. Other chart speeds available using interchangeable gear trains—see Accessory listings below. Accuracy is 2% of full scale (1% on Special Order) for DC units, 3% of full scale for AC. Response time, 0.8 to 1 second. Portable case, with panel mounting hardware furnished. Tear-off or reroll operation. Quick, easy chart review and rewind; chart advance thumbwheel. Sliding access window allows making notes on chart. Scale width: single-channel, 2⅝"; dual-channel, 1". Instruction manual. 5⅝x3⅝x4⅛". Wt., 5 lbs.

DUAL-CHANNEL RECORDERS, AMPLIFIERS, ACCESSORIES

[A] DUAL-CHANNEL RECORDERS

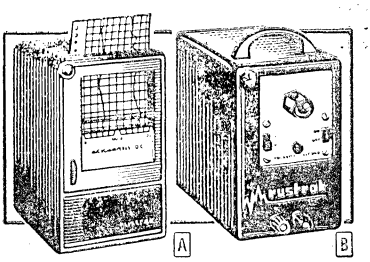
Model 291. Same as single-channel recorders above, but with two individual galvanometers for simultaneous recording from separate signal sources. Excellent for integrating comparison charts. Accuracy, 2% of full scale. Scale width, 1" per channel. Cast aluminum case for rugged use. 5 lbs.

Stock No.	Ranges	Ohms	EACH
51 D 9973	0-1 mA DC; 0-1 mA DC	100	143.50
51 D 9974 T	0-100 μA DC; 0-100 μA DC	4600	158.50
51 D 9047	0-50 μA DC; 0-50 μA DC	5400	167.50

[B] SOLID-STATE DC AMPLIFIER

MODEL 157A. Chopper modulated DC amplifier for use with any 1 mA recorder. All circuits are solid-state with the exception of the 10,000-hour chopper. Can be used alone as a variable gain device. Incoming DC signal is chopped and converted to equivalent AC signal, which is then amplified; amplifier output is detected by chopper and reconverted to DC, preserving the DC signal polarity. Can be operated from 115 V/60 Hz; 220 V/50 Hz; 12 VDC, 24 VDC or 48 VDC.

Sensitivity, 1-100 mV with continuous adjustment. 100K input resistance. Accuracy, 2.5% at any gain setting. Response time to step charge, 2 seconds. 5⅝x3⅝x5 1⅜6". 51 D 9716 A. Shpg. wt., 7 lbs..... 180.00



MODEL 2194 1-MICROAMP DC RECORDER (Not Illus.)

Solid-state chart recorder ideal for use as temperature bridge readout, strain gauge readout, or as recorder accessory for a wide range of laboratory and process instruments. Has full scale DC sensitivity of 1 μA, range of 0 to 10 mV DC. ±2% full scale accuracy over 0 to 50° C operating temperature. Source impedance, 100 ohms max. Input impedance, 10,000 ohms. Response time (to step function), 1 second. 5⅝x3⅝x7⅞". 120 V, 60 Hz AC. 51 D 9333. Shpg. wt., 3½ lbs..... 180.00

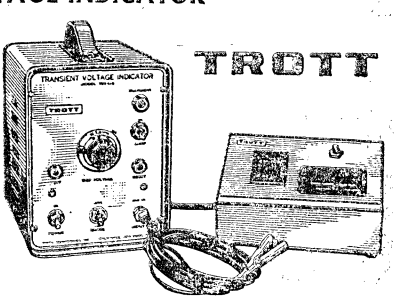
ACCESSORIES AND MOUNTING PANELS FOR RUSTRAK CHART RECORDERS

Stock No.	Description	EACH
51 D 9325 C	Extra gear trains. In per hr.: ¼, ½, 1, 2, 3, 6, 10, 12, 15, 30, 60. Specify speed.	5.00
51 D 9276	2-unit rack mtg. panel	20.00
51 D 9277	3-unit rack mtg. panel	20.00
51 D 9278	4-unit rack mtg. panel	20.00

Stock No.	Description	EACH
51 D 9326	63' chart paper rolls, Style A 50 divisions	2.25
51 D 9327	Style B, 75 divisions	2.25
51 D 9279	Style C, 65 divisions	2.25
51 D 5185	Style D, 20 div. (dual chan.)	2.25
51 D 5186	Style EE (event rec.)	2.25
51 D 5149	Style F, 15 div. (dual chan.)	2.25

TROTT TR741B SOLID-STATE TRANSIENT VOLTAGE INDICATOR

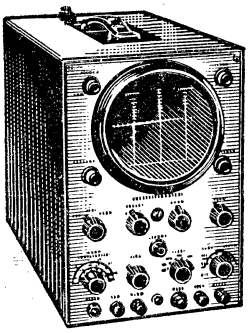
Transistorized, battery-operated device for sensing and indicating the presence of voltage transients in electronic circuitry. Detects transients as short as 0.5 μsec. Adjustable, direct-reading multi-turn control for any trip amplitude—0 to 2000 volts. Additional 0-200 volt range offers expanded scale for low voltage tests. Zener regulation and unijunction firing circuit permit 0.25% repeatability. Once tripped, indicator lamp remains on until reset. Also provides 22½ volts for external counter trip. Accuracy is ±2% of full scale. Input impedance: 1 meg shunted by 5 pF. Rugged construction for long life and dependable operation. Gray hammertone portable case, 8x6½x8". With two 22½-volt "B" batteries, two 4-ft. test leads. Shpg. wt., 7 lbs.
51 D 9792 T..... 195.00



MODEL TR741EC1 COUNTER

For use with above voltage indicator. Counts transient pulses up to 9999. Resets indicator unit after each pulse. Up to 10 counts per second. Size, 4½x7¼x4½". Supplied complete with 22½-volt battery, plus an 18-inch cable and plug. Shpg. wt., 3 lbs.
51 D 9793..... 95.00

RCA World-Famous Test Equipment



WO-91C DUAL-BAND 5" OSCILLOSCOPE

269.00 *With WG-300B Low-Cap. Probe*

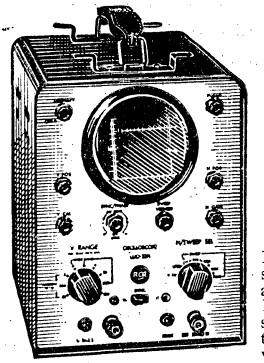
- Extremely High Sensitivity
- Accurate Voltage Calibrator
- Two-Stage Sync Separator

Deluxe professional scope boasts front panel switch to select wideband or high sensitivity operation; built-in voltage calibration with VTVM-type voltage scales on screen for simultaneous presentation of waveform displays and peak-to-peak voltage measurements. Has two-stage TV-type sync separator with preset "V" and "H" sweep positions. 10 Hz to 100 kHz continuously adjustable sweep. Rise, time, 0.1 μsec. Frequency-compensated 3-to-1 step attenuators; vertical polarity reversal switch. Dual-band response: wideband, ±1 dB, 10 Hz to 4.5 MHz; narrow-band, —6 dB, 10 Hz to 1.5 MHz or —1 dB, 10 Hz to 0.5 MHz. Sensitivity: wideband, 0.150 V p-p/in.; narrowband, 0.05 V p-p/in. Maximum sensitivity, 0.018 Vrms/in. Z-axis input; access to vertical deflection plates of CRT for observing higher-frequency RF wave-forms. 13½x9x16½". 105-125 V, 50-60 Hz AC.

21 D 4543 U. Shpg. wt., 35 lbs. 269.00

21 D 4280. WG-302A RF/IF/VF Signal Tracing Probe. 2 oz. 9.00

21 D 4136. WG-354A Voltage Divider Probe. Capacitance type. For observing pulse signals up to 5000 V. Shpg. wt., 1 lb. 11.00



WO-33A WIDEBAND 3" OSCILLOSCOPE

139.00

- Lightweight, Easy-to-Handle
- An All-Purpose Oscilloscope
- Dual-Band Sensitivity

Professional-type general-purpose scope—especially suited to black-and-white or color TV servicing. Boasts dual bandwidth and sensitivity. High gain positions of attenuator have narrow bandwidth within —3 dB, 20 Hz to 150 kHz. Low-gain positions of attenuator have wide bandwidth within —3 dB, 5.5 Hz to 5.5 MHz. Wideband sensitivity: 0.3 V p-p/in. (0.1 Vrms); narrowband, 0.1 V -pp/in. (.003 Vrms). Sawtooth sweep range, 15 Hz to 75 kHz. Plus, minus, internal, external sync. 160° adjustable phase line sweep. Sync locks as high as 4.5 MHz. Vertical input impedance: 90 pF and 1 meg direct; 50 pF and 1 meg at panel; 10 pF and 10 megs at low-cap position. 8¾x6½x10¼". With direct low-capacity probe, instruction manual. 105-125 V, 50-60 Hz AC.

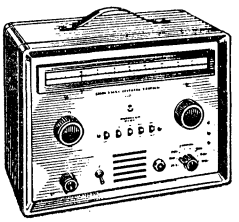
21 D 4276 U. Shpg. wt., 16 lbs. 139.00

21 D 4378. WG-350A Demodulator Probe. Wt., 4 oz. 5.25

21 D 4279. WG-300B Direct/Low-Capacity Probe. Requires WG-271A adapter for use with WO-33A. Shpg. wt., 1 lb. 12.00

21 D 4137. WG-271A Adapter for above. Shpg. wt., 4 oz. 2.50

WR-99A MARKER GENERATOR

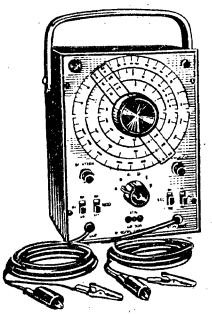


256.50 *3 Instruments In One*

Ideal for servicing color or black-and-white TV, communications and other equipment. Covers 19 to 260 MHz in eight bands. Combines functions of multiple marker generator, heterodyne frequency meter and crystal calibrator in one instrument. Heterodyne detector, amplifier and speaker. Built-in 4.5 MHz crystal. Triple markers. Rugged metal case, 13½x10x7", carrying handle For 105-125 V, 50-60 Hz AC. 21 lbs.

21 D 4329 U. 256.50

WR-50B RF SIGNAL GENERATOR

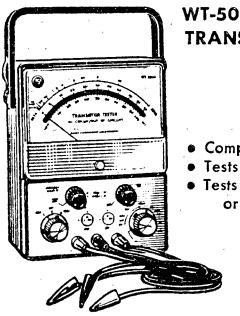


65.00

For precision alignment and signal tracing of all types of AM, FM, high-fidelity audio, Ham and CB equipment. Fundamental frequencies from 85 kHz to 40 MHz in 6 ranges. Variable output, ±2% dial accuracy. Clearly-calibrated circular dial for precise settings. 400 Hz oscillator. RF output, 0.05 volts rms min. Front panel crystal socket. 7¾x5⅜x4¾". With test leads, instructions. 105-125 V, 50-60 Hz AC. 10 lbs.

21 D 4192 ..... 65.00

WT-501A IN-CIRCUIT TRANSISTOR TESTER



66.75

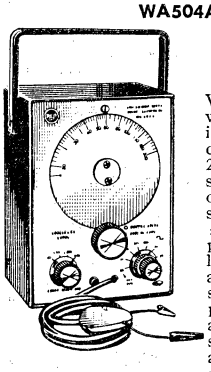
- Compact, Lightweight
- Tests Beta, I_{CBO}, I_{CEO}
- Tests Transistors In or Out of Circuit

With Leads, Batteries

Battery-operated, Tests transistors both in and out-of-circuit. Has NPN and PNP sockets for matching; low-impedance circuit for reliable in-circuit testing. Tests for DC Beta from 1 to 1000; I_{CBO} leakage down to 2 μA; I_{CEO} leakage from 20 μA to 1 amp. Collector current adjusts from 20 μA to 1 amp in four ranges. Tests relative front-to-back ratio of diodes. 100 μA movement. 6⅞x5¼x3⅛". With batteries, leads. 4 lbs.

21 D 4318 ..... 66.75

WA504A SINE/SQUARE WAVE GENERATOR



Flat Output Voltage: ±1.5 dB, from 30 Hz to 100 kHz

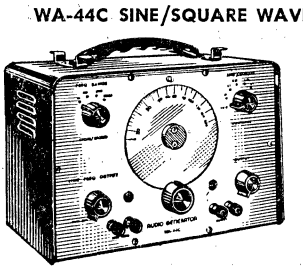
95.00

- Solid-State Circuit
- Easy-to-Read Scale
- 10-1 Step Attenuator

Versatile, factory calibrated sine/square wave audio generator. Designed for use in industrial, lab, service, educational applications. Generates sine/square waves from 20 Hz to 200 kHz in four ranges. Stable, solid-state circuit including MOS FET oscillator stage for exceptional frequency stability. Essentially flat output voltage—±1.5 dB, 30 Hz to 100 kHz. Sine wave output voltage, 10 volts rms or more into rated load. Distortion: 0.25% or less over entire audio frequency range. Has front panel switch-selection of sine or square wave output; 10-1 step attenuator with continuously adjustable output control. Easy-to-read single scale dial. Square wave output voltage: 10 volts p-p. Rise Time, less than 1.0 μsec. Tilt, less than 5.0%. Rugged metal case, 7¾x5⅜x4⅜". 105-130 V, 50-60 Hz AC. Shpg. wt., 4 lbs.

21 D 4352 ..... 95.00

WA-44C SINE/SQUARE WAVE AUDIO GENERATOR



98.50 *A "Must" For Audio Work*

- 20 Hz to 200 kHz Output
- "Bridged T" Oscillator
- 10-1 Step Attenuators

Precision engineered sine/square wave generator provides low-distortion waves for measuring frequency response, finding L-C combinations, impedance of loudspeaker enclosures, other uses. Also useful in testing supersonic equipment. Factory calibrated. Generates 20 Hz to 200 kHz in four ranges with sine or square wave output. Square waves have less than 5% tilt. Output, 8 volts rms maximum with rated load; frequency response, ±1.5 dB, 30 Hz to 100 kHz. Distortion under 0.5% for entire audio frequency range. Has separate 60 Hz output for intermodulation distortion measurements. Stable, bridged "T" oscillator with cathode follower outputs; 10-1 step attenuators plus continuously variable level control. Rugged steel cabinet, 7x10¹¹⁄₁₆x6½". For 105-125 V, 50-60 Hz AC.

21 D 4290 U. Shpg. wt., 12 lbs. 98.50

ALLIED CAN SUPPLY THE ENTIRE RCA TEST EQUIPMENT LINE

Quality Test Equipment

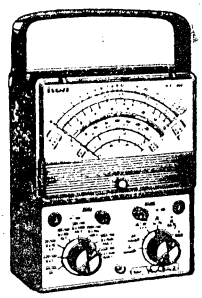
RCA

SOLID STATE

WV-500B VOLTOHMYST

79.00

- 11-Megohm DC Resistance
- Reads AC Volts (p-p and rms)
- 10-Millivolt DC Range



Versatile, battery-operated electronic voltmeter has countless uses in audio, radio, TV and industrial servicing and testing applications. Specially designed for stable, drift-free operation. Features dependable solid-state circuit; sensitive burnout-protected meter; 11 megohm input resistance on all DC input ranges. Reads AC volts (both p-p and rms); DC volts, DC current and resistance. 10-millivolt DC range for accurate transistor work.

Ranges: DC volts, 0-.01-0.5-1.5-5-15-50-150-500-1500. AC volts (rms), 0-0.2-1.5-5-15-50-150-500-1500. AC volts (p-p), 0-0.5-14-42-140-420-1400-4200. DC current in eight ranges from .01 mA to 1.5 A. Seven overlapping resistance ranges from 0.2 ohms to 1000 megohms. AC frequency response (on 1.5 and 5 VAC ranges), ±1 dB, 30 Hz to 3 MHz. Sensitive 100 μA meter movement, color-coded scales. Accuracy for all voltage and current functions is ±3% of full scale reading.

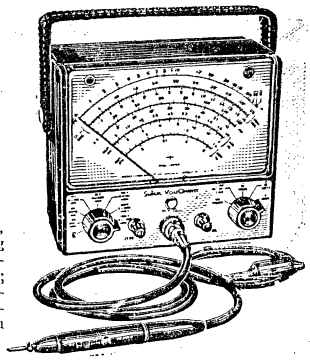
Front panel ohms and zero-adjust; single AC-ohms/DC test probe for fast multiple measurements. Rugged case, 6⅞x5¼x3¼", convenient carrying handle. With probe, batteries. Shpg. wt., 3½ lbs.

21 D 4573 ..... 79.00

MODEL WV-98C SENIOR VOLTOHMYST

88.50

- Deluxe Mirrored Scale
- Single AC-Ohms/DC Probe
- 11-Meg DC Input Resistance



Deluxe multi-function tester, ideal for all types of servicing in shop or lab. Features electronic burnout protection; rugged 200-μA meter movement; and 1% precision resistors for highest accuracy on all measurements.

6½" meter has mirrored scale, ±3% accuracy. Has seven voltage ranges for AC p-p and rms volts; eight ranges for DC volts. Seven resistance ranges. Reads AC rms and DC volts to 1500; AC p-p volts to 4200. Has 0.5 VDC scale for accurate transistor work. Reads resistance from 0.2 ohm to 1000 megs.

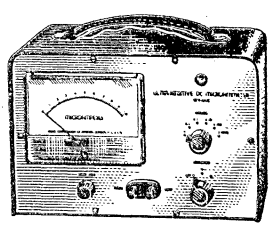
DC input resistance is 11 megohms for negligible circuit loading. AC input impedance from 830K ohms and 70 pF to 1.5 megs and 60 pF. Rugged die-cast aluminum case. 6½x7x3¾", convenient carrying handle. With probe, shielded cable. 110-130 V, 50-60 Hz AC. Shpg. wt., 8 lbs.

21 D 4211 ..... 88.50

ULTRA-SENSITIVE WV-84C DC MICROAMMETER

110.00

- Protected Meter Movement
- ½-V Drop for Full Deflection



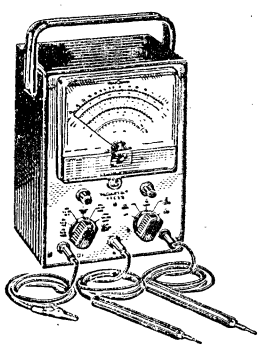
Measures minute direct current and DC voltages; plus high resistance voltage. Converts to high-resistance voltmeter when used with external multiplier resistors (supplied) with an input resistance of up to 100 megohms/volt. Measures resistance in billions of ohms. Reads from 0.0002 to 1000 μA in 6 DC current ranges. Has ½-volt drop for full-scale deflection. Accuracy, ±4% of full scale reading except on lowest range, ±5%. Fully protected meter movement. With 50 and 950-megohm multipliers. 8¾x10¾x6½".

21 D 4273 U. Shpg. wt., 10 lbs. 110.00

WV-77E VOLTOHMYST

52.00

- Electronically Protected Meter
- Easy-to-Read Color-Coded Scales
- Fuse-Protected Ohms Network



Top-value test instrument, ideal service aid in a wide range of applications for laboratory, service shop or hobby bench. Features: electronically protected meter movement; easy-to-read scales. 11-megohm input impedance on all DC ranges minimizes circuit loading.

Ranges: AC rms and DC volts: 0-1.5-5-15-50-150-500-1500; AC p-p volts, 0-4-14-40-140-400-1400-4000; resistance, 0-1000-10K-100K ohms; 0-1-10-100-1000 megohms. AC frequency response: ±5% from 40 Hz to 5 MHz on 1.5, 5 and 15 Vrms, and 4, 14, and 40 V peak-to-peak ranges. Accuracy: DC, ±3% of full scale; AC, ±5% of full scale.

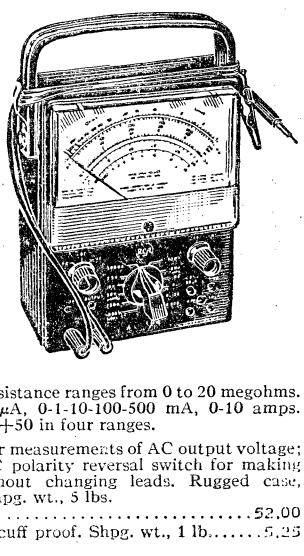
Has individual scales for 1½-V rms and 4-V p-p. Rugged metal case, 7¾x5⅝x4¾". With ultra-slim probes and extra-flexible test-lead cables, plus detailed operating instructions. For 105-125 V, 50-60 Hz. AC. Shpg. wt., 5 lbs.

21 D 4209 ..... 52.00

WV-38A ALL-PURPOSE VOM

52.00

- 1-V and 250-mV Ranges
- Large 5¼" Meter Scale
- Polarity Reversal Switch



Highly accurate VOM features 1-volt and 250 mV full-scale DC ranges for transistor servicing; easy-to-read 5¼" meter scale. Ranges: 0-0.25-1-2.5-10-50-250-1000-5000 VDC at 20,000 ohms/volt. 0-2.5-10-50-250-1000-5000 VAC at 5000 ohms/volt.

Boasts high DC accuracy of ±3%; AC, ±5%. Wide AC frequency response on 2.5-50 volt ranges: ±½ dB, from 10 Hz to 50 kHz. Has three resistance ranges from 0 to 20 megohms. 8 DC current ranges: 0-50 μA, 0-1-10-100-500 mA, 0-10 amps. Reads decibels from —20 to +50 in four ranges.

Has DC blocking capacitor for measurements of AC output voltage; front panel ohms adjust. DC polarity reversal switch for making multiple measurements without changing leads. Rugged case, 6⅞x5¼x3½". With leads. Shpg. wt., 5 lbs.

21 D 4219 ..... 52.00

21 D 4220. WG-270A Case. Scuff proof. Shpg. wt., 1 lb. 5.25

ACCESSORIES FOR VTVM'S/VOM'S

21 D 4209. WG-297 HV Probe. For WV-77E and WV-38A. Extends DC range to 50,000 V. Shpg. wt., 1 lb. 13.50

21 D 4212. WG-289 HV Probe. For WV-98C. Extends DC range to 50,000 V. Shpg. wt., 1 lb. 13.50

21 D 4213. WG-206 Multiplier. Use with WG-289. 1090 meg mult. for VTVM's having to match 11-meg input. 2 oz. ... 3.75

21 D 4274. WG-210 Multiplier. 900-megohms. Multiplies 5000 VDC range of 20K ohms/V. VOM by factor of 10. 2 oz. ... 3.75

21 D 4275. WG-211 Multiplier. 495-meg. Multiplies 250-VDC range of 20K ohms/V by factor of 100. Wt., 2 oz. 3.75

21 D 4215. WG-301A Crystal Diode Probe. "Slip-on" with WG-299D. Range to 250 MHz. Shpg. wt., 8 oz. 8.25

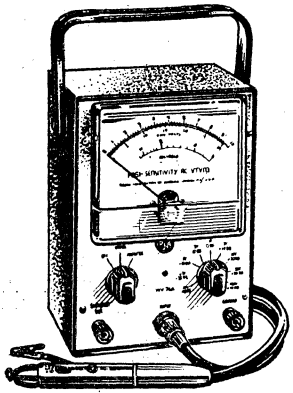
21 D 4366. WG-351A Crystal Diode Probe. For use with WV-77C, WV-77E. To over 100 MHz. 4 oz. 5.25

21 D 4214. WG-299E DC/AC-Ohms Probe. Includes cable. Shpg. wt., 1 lb. 9.75

Lab and Special-Purpose Test Equipment

RCA TEST INSTRUMENTS

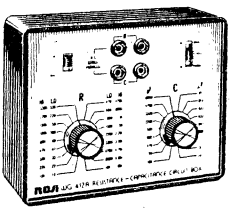
WV-76A AC VTVM



High sensitivity AC VTVM for hi-fi and other audio applications. Measures AC volts from 0.0002 to 500 volts over frequency range of 10 Hz-1.5 MHz. Has 9 overlapping AC voltage ranges from 10 millivolts to 100 volts. Measures dB from −40 to +40. Built-in amplifier provides 38 dB gain for use as preamplifier in frequency range of 10 Hz to 500 kHz with probe in "low-cap" position, 10 Hz to 1.5 MHz with probe in "direct" position. With Type WG-300B Direct/Low Capacitance Probe. Switch in probe for quick selection between "direct" (100 volts maximum) and "low-cap" (500 volts or +56 dB max.) for added range and versatility. Overall dimensions: 7⅜x5⅜x4¾". Complete with probe, leads, connector. For 110-120 V, 60 Hz AC.

21 D 4455. Wt., 5 lbs.....**90.00**

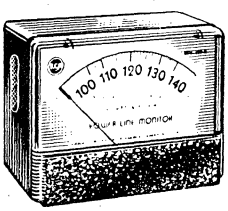
MODEL WG-412 R-C SUBSTITUTION BOX



Resistance-capacitance circuit box provides convenient selection of standard resistor and capacitor values. Can be used separately, in series, or in parallel R-C combinations. A handy, time-saving addition to the repair shop, QC stations. Ideal for instant component substitution in servicing and circuit design, as well as establishing R-C circuits for checking impedance, reactance and frequency characteristics. It's also a useful tool for classroom demonstrations of Ohm's law, capacitive reactance, etc. Compact unit includes 36 one-watt resistors rated from 15 ohms to 10 megohms, plus eighteen 600-volt capacitors from 100 pF to 0.22 μF. All resistors and capacitors have 10% tolerance. Resistance and capacitance values can be quickly selected with two rotary slide switches on panel. Slide switches provide selection of series/parallel/separate connections for direct output of a wide range of values through the four outputs on the panel face. 6⅞x5⅜x2⅜". With alligator clip leads. Shpg. wt., 1¾ lbs.

21 D 4461.....**30.00**

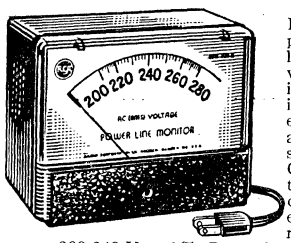
MODEL WV-120A POWER LINE MONITOR



Provides continuous line voltage monitoring without need for interrupting work to check. Expanded scale provides high accuracy. Easy to use, just plug line cord into any AC outlet. Ideal for application in radio-TV repair, laboratories, shop, factory floor, or anywhere it is necessary to accurately monitor power-line voltage at all times. Voltage range: 100-140 volts. Frequency range: 25-400 Hz. Accuracy: ±2% at 120 volts. Large moving vane type meter provides accurate readings of powerline rms voltage even when voltage is not a pure sine wave. 3¹⁵⁄₁₆x5x3¹⁄₁₆". Shpg. wt., 1½ lbs.

21 D 4193.....**18.50**

MODEL WV-503A POWER LINE MONITOR

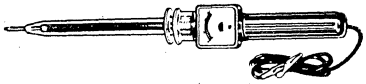


Power-line monitor designed especially for use in industry, labs, or the service shop—anywhere a continuous, accurate indication of AC line voltage is needed. Once unit is connected, a glance tells yon line voltage without handligs probes, switches, or selecting scales. Can be used with isolation transformer for selecting precise line voltages for accurate equipment checks. Frequency range: 25-400 Hz. Voltage range: 200-240 V, ±2%. Rugged metal case, 3¹⁵⁄₁₆x5x3¹⁄₁₆".

21 D 4398. Shpg. wt., 1½ lbs.....**18.50**

POMONA ELECTRONICS HIGH-VOLTAGE TEST PROBES

MODEL 2900 30-KV DC TEST PROBE

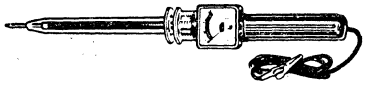


- Range to 30,000 V
- Built-in Voltmeter
- ±3% Accuracy

Self-contained probe is small enough to carry in a tube caddy. Tests high-voltage on any color or black-and-white set. Built-in voltmeter. Range: 0-30,000 VDC. Sensitivity: 20K ohms/volt. 50 μA movement. ±3% full scale. Multiplier: 600 megohms, ±2% full scale. High-impact handle, polystyrene probe. 14¾" long.

21 D 4160. Shpg. wt., 8 oz.....**19.95**

MODEL 3200 AC TEST PROBE



- Range to 10,000 V
- Built-In Voltmeter
- With Carrying Case

AC high voltage probe is ideal for testing high potential AC voltages such as neon lights, transformers, hi-pot testers, etc. Built-in meter magnetically shielded. Range: 0-10,000 VAC. Sensitivity: 2000 ohms/V (500 μA). Accuracy: ±3%, 30-1000 Hz. Multiplier: 20 meg, ±2%. High-impact polystyrene probe. Length, 14¾".

21 D 4462. Shpg. wt., 8 oz.....**29.95**

SENCORE TEST INSTRUMENTS

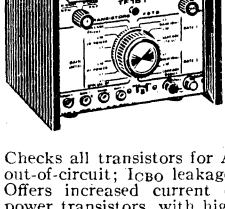
FE16 FET METER

- High Accuracy
- Tests In or Out of Circuit

Tests Field Effect Transistors in or out of circuit. Perfect for servicing black-and-white or color TV, hi-fi, etc., where many FET's are being used. Tests transistors, diodes, and rectifiers in their circuits without disconnecting a lead. Tests them just as reliably out of circuit. 7 DC and AC voltage ranges from 1 to 1000 volts, AC peak-to-peak readings of 2800 V max., with response of ±3 dB from 10 Hz to 10 MHz. 5 resistance ranges to 1000 megohms; 5 DC current ranges, 100 mA-1A. 3 high voltage ranges: 3kV, 10kV, 30kV. 5x7³⁄₁₆x3¹⁄₁₆".

21 D 4183. Shpg. wt., 4 lbs.....**84.50**

TF151 TRANSISTOR AND FET TESTER

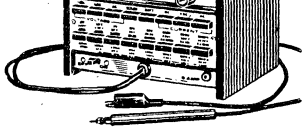


- Tests All FET's
- Checks AC Beta, Leakage

Checks all transistors for AC Beta, in- or out-of-circuit; I_{CBO} leakage out-of-circuit. Offers increased current check for high power transistors, with high accuracy. Includes special test for critical transistors (GE9's, etc.) plus a true Gm mutual conductance test for FET's. Also checks FET's for I_{GSS} leakage with special Gate 2 check for FET's with 2 gates. Special I_{DSS} (zero bias) current checks for matching or "culling". 9x7½x6". With instructions.

21 D 4405 U. Shpg. wt., 9 lbs.....**129.50**

FE149 FIELD EFFECT MULTI-METER



FEM operates on rechargeable batteries or 105-125 VAC, has 7" mirrored meter scale. Eight DC ranges to 1500 volts. Low 0.5 volt scale has 0.25 V on either side for accurate transistor bias tests. Eight AC ranges to 1500 volts rms, 4500 volts p-p. Eight resistance ranges to 6000 megohms. Nine AC/DC current ranges to 5 amps, Eight dB ranges. Accuracy: ±1.5% DC. ±3% AC. Size, 9x7½x6". Less batteries.

21 D 4404 U. Shpg. wt., 7 lbs.....**149.90**

21 D 4408. High-Voltage Probe. 10 oz. **9.95**

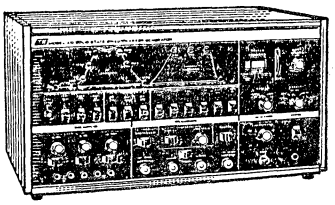
Depend on Allied for the Latest Electronic Test Instruments

Quality Test Instruments

B&K

MODEL 415 MARKER GENERATOR

- 11 Crystal-Controlled Markers
- All Solid-State with Dual Gate FET's
- Marker Tilt for Easy Marker Identification



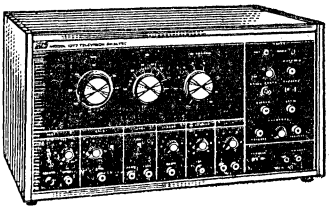
Marker generator features all-solid-state circuitry with dual gate MOS FETs plus 11 crystal-controlled markers that utilize post injection, one additional marker space. Markers may be used simultaneously as four sets of markers on video, RF 4, RF 10, and IF. Modulator marker for trap alignment. Built-in marker tilt shifts marker horizontally or vertically to permit easy identification of markers regardless of slope of the curve. External marker capability. May be aligned from antenna terminals. Pattern sweep and direction can be reversed by switches on the unit.

Also features built-in Zener reference, transistor regulator, and power supply for maximum stability with no drift. Overload protected over bias supplies minimize chance of burnout. Three complete bias supplies designed for both transistors and tubes. Has RF attenuator, RF output of 72 ohms, 300 ohms. 10.7 MHz provides continuous change of markers, 4.5 MHz for TV audio. 15 kHz filter. 9¾x18x12". With direct probe, demodulator probe, leads.

21 D 4574 U. Shpg. wt., 26 lbs. **349.95**

MODEL 1077 TV ANALYST

- Checks Every Stage of TV Receivers
- Provides All Standard TV Test Signals
- Cuts Troubleshooting Time to Minimum



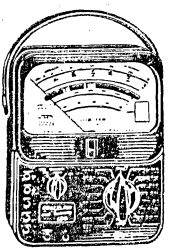
Pinpoint any TV trouble in minutes with this complete analyzer and signal generator. Combines a miniature TV transmitter with a circuit analyzer. Directly injects RF, IF, video or audio signals into any stage of black-and-white or color TV sets. You view result on set's screen—no external scope or waveform interpretation needed. Repair tough dogs, intermittents, and general troubles with this simplified technique. Injects horizontal and vertical sync, plus grid and plate drive for sync and sweep checks.

Outputs: 9 VHF channels, all UHF and video frequencies; 4.5 MHz with 1000 Hz audio for TV sound; sync, video, chroma (low Z for transistor TV sets). Also has outputs for completely analyzing sweep section (horizontal and vertical), output for checking horizontal output transformers and yokes. Generates IF signals of 20-48 MHz for testing IF amplifier stages. Checks for B+ boost and provides high voltage indicator, high level keying pulse and low Z calibrated bias supply. 9¾x18x12". For 105-125 VAC.

21 D 4172 U. Shpg. wt., 31 lbs. **379.95**

MODEL 120 61-RANGE VOLT-OHM MILLIAMMETER

- Extra-Low Ohms, Current, Voltage Ranges for Work with Solid-State Equipment
- Reads AC and DC Volts to 6000
- Accuracy of ±2% on DC, ±3% on AC Ranges
- 5" Mirrored, No-Parallax Scale



Features mirrored, no-parallax scale; transit meter movement protection; DC polarity reversing switch; ±2% DC and ±3% AC accuracy; extra-low ranges of 0.3 VDC and 2 ohms center scale. Other ranges: AC/DC volts: 0-1.2-3-12-60-300-600-1200-6000 (20,000 ohms/volt DC, 5000 AC). AC output V to 600. DC current; 0-60-300 μA, 0-1.2-12-120-600 mA, 0-12 amps. Ohms: 0-200-2K-200K, 0-2-20 megs. 8 dB ranges: −20 to +77. 7x5⅜x3⅛". With batteries, leads, manual. Shpg. wt., 4 lbs.

21 D 4283 ..... **59.50**

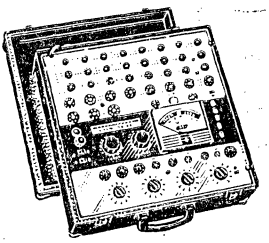
21 D 4522. Model 120M VOM. Precision model of above, with ½% multipliers for ±1½% DC accuracy, ±3% AC. Wt., 4 lbs. **69.50**

21 D 4523. TV-2C 30,000 VDC Probe. Shpg. wt., 2 lbs. **12.95**

21 D 4285. LC-3 Carrying Case. For 120, 120M. 3 lbs. **8.95**

707 DYNA-JET DYNAMIC MUTUAL CONDUCTANCE TUBE TESTER

- Accurate, Fast, Easy to Use, Made for Long Life
- Tests Tubes Under Actual Operating Conditions
- Switch Section Gives Obsolescence Protection



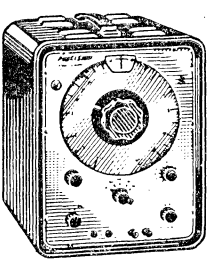
Tube tester features multiple-socket plug-in-and-check section, plus obsolescence-proof switching section for accommodation of new tube types. Tests radio and black-and-white and color TV tubes, voltage regulator, thyratrons, auto-radio hybrids, European hi-fi and industrial tubes, nuvistors, novars, both types of 10-pin tubes, 12-pin compactrons. Checks each section of multi-section tubes individually. Single button makes complete test for interelement shorts automatically. Adjustable grid emission, gas and grid-cathode leakage are tested at sensitivity of over 100 megohms. Life test predicts probable future failures. Large 4½" meter has "Replace-?-Good" scale. Portable carrying case measures 16⅛x15¾x5⅞". For 105-125 volts, 50-60 Hz AC. Shpg. wt., 16 lbs.

21 D 4165 U **199.95**

TEST INSTRUMENTS BY PRECISION-APPARATUS

MODEL E-310 SINE/ SQUARE WAVE GENERATOR

- Covers 5 Hz to 600 kHz in 5 Fundamental Bands
- Distortion Under 1% at 10 Volt rms Output
- 6" Fine-Tuning Dial

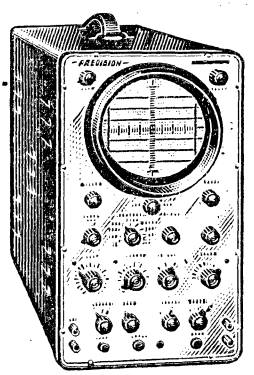


Precision-engineered sine/square wave generator provides low distortion waves for measuring frequency response, finding L-C combinations, impedance of loudspeaker enclosures, other uses. Also useful for supersonic testing, or any form of audio, ultrasonic, or AM testing that requires a highly stable signal source. Features wide-range 5 Hz to 600 kHz output in five fundamental bands. Ideal for TV alignment. Has ±2% accuracy from 50 Hz to 600 kHz; ±1 Hz from 5 Hz to 50 Hz. Distortion less than 1% at 10 Vrms output on all frequencies. Output: ±1 dB from band to band. Has 6" fine-tuning dial with clearly etched scales for easy frequency selection and resettability. 4-position step attenuator. Continuous amplitude control provides constant output. No zero setting—circuitry gives long-term stability. Output levels: sine wave, 10 Vrms into 600 ohms; square wave, 10 V p-p. Square wave rise time: 0.20 μsec. Heavy-duty metal cabinet measures 9x11½x11¼". For 110-120 V, 50-60 Hz operation. Shpg. wt., 24 lbs.

21 D 4287 U **199.95**

MODEL ES-550B 5" WIDEBAND OSCILLOSCOPE

- 10 mV rms/inch Vertical Sensitivity
- Vertical Polarity Reversing
- 3000-Volt Intensifier Anode Potential

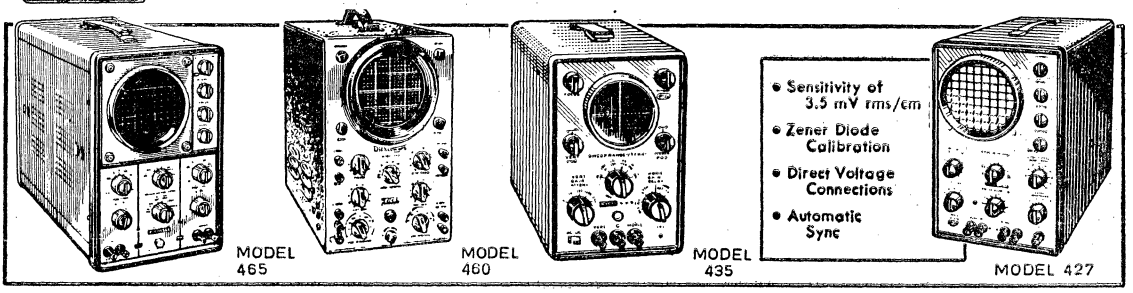


Wideband oscilloscope meets the most stringent test and service requirements. Deluxe 5" scope offers sharp, bright traces, 5 MHz bandwidth. Also features 3000-volt intensifier anode potential; amplified auto-sync on all internal sweep ranges; push-pull horizontal and vertical amplifiers. Direct-reading p-p voltage calibrator permits use as high-impedance VTVM. Vertical and horizontal step attenuators. vertical pattern reversing switch; Z-axis input; 60-Hz phasing control; 4 deflection plate terminals; illuminated graticule. Resp.: vertical, ±1 dB, 10 Hz to 5 MHz; horizontal, ±1 dB, 10 Hz to 1 MHz. Sensitivity: vertical, .010 V/in.; horizontal, .100 V/in. Sweep: 10 Hz to 100 kHz. Sync: 30 Hz and 7875 Hz. 18½x14x8¼". 117 VAC.

21 D 4226 U, Shpg. wt., 47 lbs. **289.95**

21 D 4227. SP-5 Probe. Low capacity, demodulating, resistance, isolation, and direct. Shpg. wt., 1 lb. **29.95**

EICO Popular-Priced Test Equipment Available . .



MODEL 465W WIDEBAND 5″ OSCILLOSCOPE

Professional-quality scope offers vertical response of DC to 8 MHz (+1, —5 dB), usable to 10 MHz; horizontal, DC to 1 MHz (+1, —3 dB). Push-pull amplification throughout minimizes distortion; direct-coupling eliminates low-frequency phase shift. Internal, external and line-frequency sync of internal sweep oscillator: external or line input to horizontal amplifier. Horiz. and vert. calibration Voltages: .05/.5/5/50 V/cm. Vert. Sensitivity: 12 mV/cm rms. Horiz. Sensitivity: 17 mV/cm rms. Sweep Ranges: 10-100-1K-100K Hz, plus 30 Hz TV-VERT position and 7875 Hz TV-HOR position. 12¼x8½x17½″. 117 VAC.

21 D 4536 U. Factory Assembled. Shpg. wt., 27 lbs.....249.95
21 D 4535 U. 465K. Above in kit form. Wt., 27 lbs.....179.95

MODEL 460W WIDEBAND 5″ OSCILLOSCOPE

Vertical sensitivity: 25 mV p-p/cm. DC to 10 MHz vertical response, flat to 4.5 MHz. Easily reproduces 3.58 MHz color sync burst. 4-step attenuator. Sweep: 10 Hz to 100 kHz. Plus, minus, internal, external and line-frequency sync. Edge-lit grating with dimmer. Full screen DC positioning. 13x8½x16″. 105-125 V, 50-60 Hz AC.

21 D 4157 U. Factory Assembled. Shpg. wt., 28 lbs.....149.95
21 D 4158 U. 460K. Above in kit form. Wt., 28 lbs.....99.95

PROBES. Shielded. For 430W, 430K, 460W, 460K, 465W, 465K.

Stock No.	Type	Description	Wt.	EACH
21 D 4151	PSDK	Demodulator Probe Kit	8 oz.	4.50
21 D 4152	PSD	As above, but wired	8 oz.	6.95
21 D 4153	PDK	Direct Probe Kit	8 oz.	3.50
21 D 4154	PD	As above, but wired	8 oz.	4.95
21 D 4155	PLCK	Low-Capacity Probe Kit	8 oz.	4.50
21 D 4156	PLC	As above, but wired	8 oz.	6.95

MODEL 435W 3″ WIDEBAND OSCILLOSCOPE

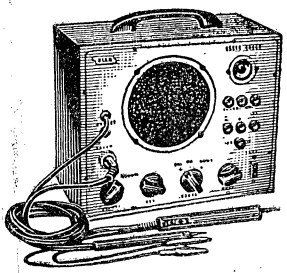
Portable 3″ scope features push-pull 3-stage amplifier; zener diode calibration (200 mV p-p); 4-position attenuator. Reads DC or p-p AC from 50 mV to 500 volts. Response, DC to 4.5 MHz, usable to 10 MHz. Vertical sensitivity, 18 mV rms/cm. Full retrace blanking. Sweep: 10 Hz to 100 kHz plus 30 Hz TV vertical and 7875 Hz TV horizontal. Horizontal response: 1 Hz to 500 kHz; sensitivity, 0.7 V rms/cm. Distortion-free positioning and trace expansion; edge-lighted screen. Overall size, 8½x5¾x12⅝″. For 105-125 volts, 50-60 Hz AC.

21 D 4335 U. Factory Assembled. Shpg. wt., 18 lbs.....169.95
21 D 4282 U. 435K. Above in kit form. Wt., 18 lbs.....119.95

MODEL 427 DIRECT-COUPLED 5″ OSCILLOSCOPE

Highly sensitive, general-purpose scope offers 3-stage push-pull amplification, with direct-coupling throughout the vertical amplifier. Makes DC or p-p AC (or combination) measurements from 10 mV to 500 V. Trace is sharp and clean, free of "blooming"; can be expanded to 30 cm vertically and 20 cm horizontally. Instant drift-free positioning permits centering any part of the expanded trace. Has zener diode calibration, 4-position frequency-compensated decade attenuator. Fully automatic sync; automatic sync limiter and amplifier. Intensity, focus, astigmatism, DC balance controls and sawtooth sweep output on front panel. Positive or negative sync (internal, external or line-frequency). Vertical response: DC to 500 kHz (+1, —3 dB). Vert. sensitivity: 3.5 mV rms/cm (10 mV p-p/cm). Horizontal response: 2 Hz to 450 kHz (+1, —3 dB); sensitivity, 0.18 V rms/cm. Sweep Ranges: 10-100, 100-1K, 1K-10K, 10K-100K Hz. Input Impedance: vertical, 1 meg/30 pF; horizontal, 10 meg/40 pF. 12½x8½x16⅞″. For 117 VAC.

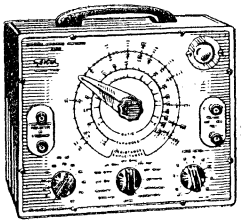
21 D 4581 X. Factory Assembled. Shpg. wt., 23 lbs.....139.95
21 D 4582 X. 427K. Above in kit form. Wt., 23 lbs.....99.95



DELUXE 147W SIGNAL TRACER

Two input channels (high-gain RF and audio); visual and audio monitors (eye tube and 5″ speaker). Noise locator, wattmeter. VTVM/Scope output. 9x10x5″. 117 VAC.

21 D 4130. Factory Assembled. 10 lbs. 49.95
21 D 4131. 147K. Above in kit form. 34.95



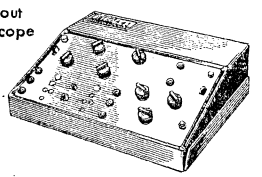
MODEL 950W R-C BRIDGE

R-C Bridge/R-C-L Comparator reads 0.5 ohm to 500 megohms and 10 pF to 5000 μF (in 4 ranges). Has .05-20 comparator range. Variable 0-500 volt DC source tests capacitors for shorts and leakage. Also measures power factor of electrolytics. Less leads. Size, 8x10x4¾″. For 105-125 V, 60 Hz AC. Shpg. wt., 10 lbs.

21 D 4100. Factory Assembled.....39.95
21 D 4101. 950K. Above, kit form...29.95

TRANSISTOR/DIODE CURVE TRACER

- Direct Readout on Any Scope
- Solid-State



Model 443W. Displays DC characteristics of semiconductor devices. Diode test: I_F; 0-1-100 mA. I_R: 1, 10 and 100 μA/div. PIV variable, 0-1000 V. Five transistor tests. 3x11½x9½″. For 115 VAC. Wt., 10 lbs.

21 D 4556 U. Factory Assembled.....99.95
21 D 4555. 433K. Above, kit form...69.95

MODEL 540W READI-TESTER

- Large 3½″ Meter
- Tests Car Batteries, Electric Appliances, Electric Circuits

Ranges: AC-DC volts, 0-7.5-15-150-300; AC-DC amps, 0-15; Resistance, 0-1000 ohms. Neon indicator checks continuity of resistors from 1K to 2 meg, capacitors above .0005 μF. "Good-Bad" reading on 6/12-volt auto batteries. Aluminum panel, bakelite case, 6½x3¾x3½″. With leads and batteries. Shpg. wt., 3 lbs.

21 D 4232. Factory Assembled.....19.95
21 D 4231. 540K. Above in kit form..15.95

MODEL 584W BATTERY TESTER

- Load-Condition Tests
- Switch Selects Battery Voltage and Load
- Large 3½″ Meter

Tests batteries commonly used in transistor and vacuum-tube portable radios, phonographs, tape recorders, hearing aids, photoflashers, flashlights, lanterns. Rotary switch selects exact load and voltage for the battery to be tested (1.5, 4.5, 6, 7.5, 9, 22.5, 45, 67.5, 75, 90 volts, plus a spare position). 6¼x3¾x2″. Leads.

21 D 4228. Factory Assembled.....12.95
21 D 4225. 584K. Above in kit form...9.95

COLOR BAR/PATTERN GENERATOR

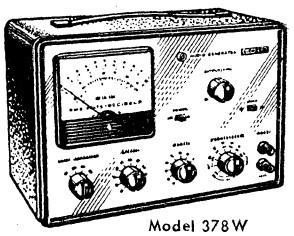
Generates Stable, Crystal-Controlled Patterns

Model 385W. Solid-state battery-operated, portable color bar/pattern generator produces 5 well-defined, crystal-controlled patterns. Color-coded gun killers eliminate any one color or combination of two or more colors from display. Generates 10 color bars; cross-hatch and dot patterns; horizontal and vertical lines. Feeds to TV antenna terminals. 13 transistors, 6 diodes, 3 crystals. Low current drain. 2½x8½x8⅜″. With 6 "C" batteries, leads. 7 lbs.

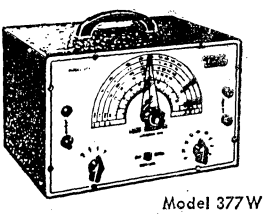
21 D 4538 U. Factory Assembled....109.95
21 D 4537. 395K. Above in kit form.79.95

. . Factory Assembled or in Kit Form

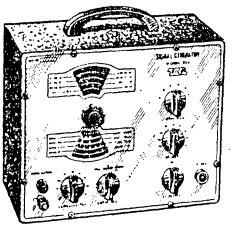
EICO



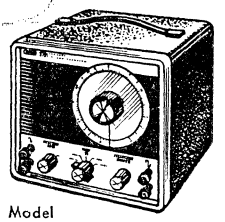
Model 378W



Model 377W



Model 324W



Model 379W

MODEL 378W DELUXE AUDIO GENERATOR

Low-distortion sine wave output, 1 Hz to 110 kHz. Detent switches select 1 Hz, 10 Hz, 100 Hz, 1 kHz, and 10 kHz steps. Has 8-step attenuator. Adjustable output, 0-10 volts rms. Easy-to-read 4½" meter. Accuracy: ±5%. 8½x12½x9". For 117 VAC.

21 D 4337 X. Factory Assembled. Shpg. wt., 16 lbs. **79.95**

21 D 4336 X. 378K. Above, in kit form. Shpg. wt., 16 lbs. . . **59.95**

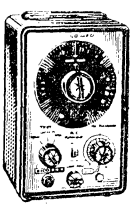
MODEL 377W SINE-SQUARE WAVE GENERATOR

Sine-wave range: 20-200,000 Hz in 4 bands. Square-wave range: 60-50,000 Hz in 4 bands. 5% tilt at 60 Hz, 5% rounding at 50,000 Hz. Response: ±1½ dB, 60 Hz to 150 kHz. Output: 10 volts across 1000 ohms. Wien Bridge oscillator circuit, with 1% resistors. Choke filtered power supply. 6½" dial with 0-100 scale. Accuracy: ±3%, or 1 Hz. Hum: under 0.4% of rated output. Aluminum panel; gray wrinkle steel case, 7⅛x11⅛x7⅝". For 105-125 V, 50-60 Hz AC.

21 D 4134 X. Factory Assembled. Shpg. wt., 14 lbs. **54.95**

21 D 4135 X. 377K. Above, in kit form. Shpg. wt., 14 lbs. . . **39.95**

MODEL 955W BRIDGE-TYPE CAPACITOR TESTER



Tests capacitors for shorts, opens, and value, in or out of circuit. Short Test: up to 2000 μF, with shunt resistance as low as 1 ohm; maximum test voltage, 6.3 VAC (open leads), decreasing with decreasing impedance. Won't damage low voltage electrolytics. Open Test made on capacitors as low as 15 pF. Capacity measurement: from 0.1 to 50 μF in or out of circuit, with Wein Bridge circuitry; shunt resistance as low as 35 ohms for accuracy of ±10%. Uses one coax lead for all tests; detachable, with mike connector coupling. 8½x5¾x6". Less leads. For 105-130 V, 60 Hz AC. Shpg. wt., 6 lbs.

21 D 4102. Factory Assembled. **39.95**

MODEL 955K. Above, in easy-to-build kit form. Less solder.

21 D 4103. Shpg. wt., 6 lbs. **24.95**

MODEL 1180W CAPACITOR DECADE BOX

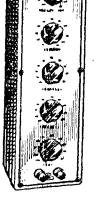
Useful for determining proper capacitance values in circuit design applications. Range: 100 pF to 0.111 μF in 100 pF steps. Rated 350 WVDC continuous, 500 WVDC intermittent. Precision silver-mica capacitors. ±1% accuracy. 7 pF zero capacitance. Ceramic wafer switches; low loss lucite terminal board; 5-way jack-type binding posts, for all popular lead terminals. Gray wrinkle steel case, 9x3½x5½". Less leads. Shpg. wt., 3 lbs.

21 D 4104. Factory Assembled. **29.95**

21 D 4105. Model 1180K. Above, in easy-to-build kit form. Less solder. **19.95**

MODEL 1171W DECADE RESISTANCE BOX

- Has Range of 0-99,999 Ohms
- Determines the Exact Resistance Required
- 1-Watt Resistors, ½% Accuracy at Any Setting



Invaluable in the design, development, and adjustment of electronic and electrical equipment. Comparator position and binding posts permit instant substitution of accurate resistance values. Ideal for adjusting bridge circuits; calibrating ohmmeters; determining the exact values of meter multiplier-resistors and badly damaged or illegible resistors. Features wide range of resistance values: 0-99,999 ohms in 1-ohm steps with 5 decades. ½% accuracy: ½-watt precision resistors. Ruggedly constructed gray wrinkle finished heavy-gauge steel cabinet, 12x 3½x3". Well-designed, easy-to-read, sturdy aluminum panel. Less leads. Shpg. wt., 3 lbs.

21 D 4106. Factory Assembled. **39.95**

MODEL 1171K. 1171W in kit form. With all parts, easy-to-follow assembly instructions. Less solder. Shpg. wt., 3 lbs.

21 D 4107. . . . . . **24.95**

MODEL 324W RF SIGNAL GENERATOR

Expanded frequency range, covering 150 kHz to 145 MHz in six fundamental bands. One harmonic band covers 111-435 MHz. 400-Hz sine wave output, variable 0-50%; takes external modulation sources. Accuracy: ±1.5%. RF attenuators. 8x10x4¾". 115 VAC.

21 D 4140. Factory Assembled. Shpg. wt., 8 lbs. **44.95**

21 D 4141. 324K. Above, in kit form. Shpg. wt., 8 lbs. **32.95**

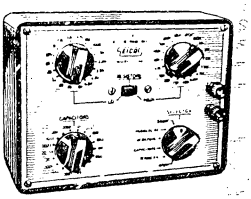
MODEL 379W SOLID-STATE AUDIO GENERATOR

Generates simultaneous sine and square wave outputs; ideal for checking hi-fi amplifiers and transducers, and for sonar apparatus. Sinusoidal output variable 0-7.5 V into hi-Z load; 6.5 V into 600-ohm load. Covers 20 Hz to 2 MHz in 5 bands; output level, ±1 dB except ±2 dB on highest band. Square wave output, 20 Hz to 200 kHz, 0-10 V p-p; rise time, less than 0.1 μsec at 20 kHz. Accuracy: ±3%, 100 Hz to 1 MHz. 7½x8½x8½". 105-132 V, 50/60 Hz AC.

21 D 4244. Factory Assembled. Shpg. wt., 9 lbs. **74.95**

21 D 4177. 379K. Above, in kit form. Shpg. wt., 9 lbs. **54.95**

MODEL 1100W RESISTANCE SUBSTITUTION BOX



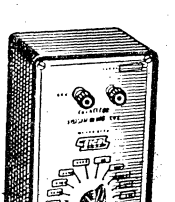
Rapidly substitutes all resistance values that are decade multiples of 15, 22, 33, 47, 68, and 100 ohms. Overall range, 15 ohms to 10 megohms. Determines the best resistance value needed for circuit design; also finds values of worn or charred resistors. Uses standard 1-watt ±10% EIA resistors throughout. Convenient 5-way binding posts. Accuracy, ±10% at any setting. Continuous duty rating, 500 V. Case, 3¾x6½x3½". Less leads.

21 D 4108. Factory Assembled. Shpg. wt., 2 lbs. **14.95**

MODEL 1100K. Above, in easy-to-build kit form. Less solder.

21 D 4109. Shpg. wt., 2 lbs. **9.95**

MODEL 1120W CAPACITANCE SUBSTITUTION BOX

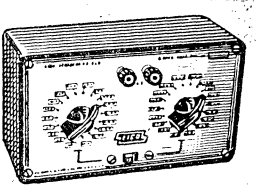


A must for the serviceman, experimenter, or hobbyist. Fast, accurate substitution of any one of 18 values from 0.0001 to 0.22 μF. Useful in checking for open capacitors, and determining values needed for optimum performance. ±10% accuracy. Capacitors are mica and molded plastic rated at 400 and 600 V. 5-way binding posts. 3¾x6½x3½". Less leads. Shpg. wt., 2 lbs.

21 D 4112. Factory Assembled. **12.95**

21 D 4113. Model 1120K. Above, in easy-to-build kit form. Less solder. **7.95**

1140W SERIES-PARALLEL RESISTANCE-CAPACITANCE BOX



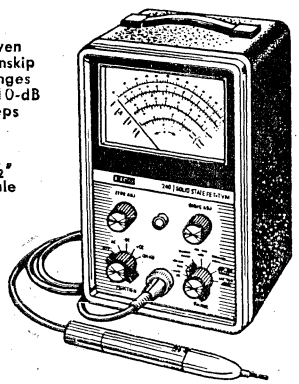
Ideal for laboratory and service applications, experimenters, and hobbyists. Eliminates messy individual components. A combination of the Model 1100W Resistance Box and the Model 1120W Capacitance Box, with additional switching facilities that permit selection of resistance alone, capacitance alone, or any combination of resistance and capacitance in either series or parallel. Makes possible the rapid subsitution of all resistance values that are decade mutliples of 15, 22, 33, 47, 68, and 100 ohms, from 15 ohms to 10 megohms. Provides quick substitution of a wide range of capacitance values from 0.0001 to 0.22 μF in 18 steps. Uses standard 1-watt. ±10% tolerance EIA resistors and mica and molded plastic capacitors. Has open and short-circuit positions. Size, 5⅝x 6⅞x2⅝". Shpg. wt., 3 lbs.

21 D 4110. Factory Assembled. **24.95**

MODEL 1140K. Above, in easy-to-build kit form. Less solder.

21 D 4111. Shpg. wt., 3 lbs. **15.95**

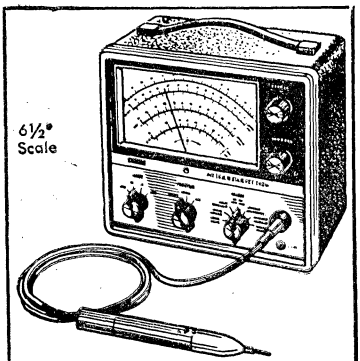
EICO Kit and Wired VOM's and VTVM's



240W FET SOLID-STATE VOM

General-purpose FET VOM, ideally suited for semiconductor circuit testing too. Operates from AC line or self-contained batteries. Big 4½" scale. Reads accurately down to 0.05 volt, useful readings to 0.01 volt. Includes single DC/AC/Ohms Uniprobe. Input Impedance: DC, 11 megs; AC, 1 meg. Balanced transistor meter circuit, stable regulated power supply, and 1% multiplier resistors. Response 25 Hz to 2 MHz. Input FET is protected against damage. Ranges: p-p AC Volts, 0-2.8-8.5-28-85-280-850-2800; AC rms and DC Volts, 0-1-3-10-30-100-300-1000; Resistance, 0.2 ohm to 1000 megs in 7 ranges. 7½x8½x5". 105-132 VAC or 3 Neda #1604 (or equiv.) 9V batteries and a "D" cell.

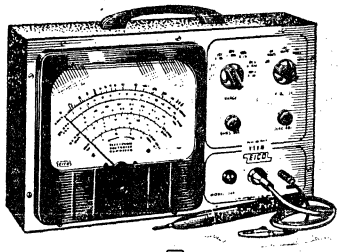
21 D 4305. Shpg. wt., 6 lbs.....**69.95**
21 D 4304. Model 240K Kit. 6 lbs. **49.95**

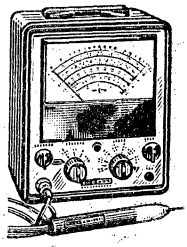


242W FET SOLID-STATE VOM

Versatile FET VOM tests both vacuum-tube and semiconductor circuits. Big 6½" meter and accurate milliammeter scales let you measure AC and DC current from 10 μA to 1 amp. Accurate voltage readings down to 0.05 volt, useful readings to 0.01 volt. Ohmmeter allows testing circuit-semiconductors without risking damage to these delicate components. Includes DC/AC/Ohms/Milliamperes Uniprobe. Input Impedance: DC, 11 megs; AC, 1 meg. Response 25 Hz to 2 MHz. Balanced transistor meter circuit, regulated power supply, 1% multiplier resistors for high accuracy and stability. Ranges: p-p AC Volts and Milliamperes, 0-2.8-8.5-28-85-280-850-2800; AC rms and DC Volts and Milliamperes, 0-1-3-10-30-100-300-1000; Resistance, 0.2 ohm to 1000 megs in 7 ranges. 117 VAC or 3 Neda #1603 9-V batteries and "D" cell.

21 D 4316. Shpg. wt., 5¾ lbs...**79.95**
21 D 4306 Model 242K Kit. 5¾ lbs**59.95**





A MODEL 232W PEAK-TO-PEAK VTVM

Ideal for color TV and all general service. Gives true peak-to-peak measurements on separate scales. Includes all the deluxe features of Model 249W below, but has 4½" meter. With "Uni-Probe"—a great time saver—a half-turn of probe tip selects DC or AC/Ohms ranges. Ranges: p-p volts, 0-4-14-42-140-420-1400-4200 volts; DC/rms volts, 0-1.5-5-15-50-150-500-1500 volts; resistance, 0-1000 megohms in 7 ranges. Response, 30 Hz to 3 MHz. Size, 8½x5x5". For 105-125 volts, 50-60 Hz AC. Wt., 5 lbs.

21 D 4236. Factory Assembled.....**49.95**
21 D 4235. 232K. Above in kit form..**34.95**

B MODEL 249W PEAK-TO-PEAK VTVM

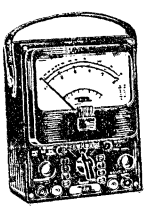
Highly efficient deluxe VTVM for bench or field use. Versatile, easy to use, accurate. Gives true peak-to-peak measurements on separate scales. Includes single DC/AC/Ohms Uniprobe. Electronically protected 7½" meter, balanced bridge circuit. Zero center scale and 1% precision ceramic multiplier resistors. Ranges: p-p AC Volts, 0-4-14-42-140-420-1400-4200; AC rms and DC Volts, 0-1.5-5-15-50-150-500-1500; Resistance, 0-1000 megs in 7 ranges. Frequency Response, flat from 30 Hz to 3 MHz. Size, 8½x13x5". For 105-125 volts, 50-60 Hz AC.

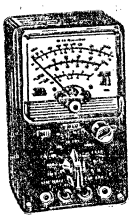
21 D 4234. Shpg. wt., 9 lbs.....**59.95**
Model 249K. Kit version of Model 249W.
21 D 4233. Shpg. wt., 9 lbs.....**39.95**

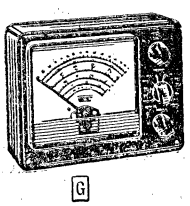
C MODEL 235W PROFESSIONAL VTVM

Good enough to meet the rigid requirements in testing modern electronic equipment. True peak-to-peak measurements on separate scales. Has 1% precision multiplier resistors. Features unique, time saving, dual-purpose "Uni-Probe"—one probe performs all functions—a half-turn of probe tip selects DC or AC/Ohms. Ranges: p-p volts, 0-4-14-42-140-1400-4200; AC rms and DC volts, 0-1.5-5-15-50-150-1500, plus 0-0.5 on DC; resistance, 0-1000 megohms in 7 ranges. Frequency Response, 3 Hz to 3 MHz. With batteries and leads. 8½x7½x5". For 117 volts, 50-60 Hz AC. Wt., 10 lbs.

21 D 4356. Factory Assembled.....**69.95**
21 D 4338. 235K. Above in kit form..**49.95**







D 565W 20,000 OHMS/VOLT VOM

Accurate VOM for TV and FM, AM radio servicing. High current range for complete appliance testing. Big 4½" meter. Ranges: AC/DC Volts, 0-2.5-10-50-100-500-5000 (AC sensitivity 1000 ohms/volt); DC Current, 0-100 μA, 0-10-100-500 mA, 0-10 amps; Resistance, 0-2000-200K ohms, 0-20 megs; Decibels, −12 to +55 in 5 ranges. With batteries. Less leads. 6¾x5¼x3".

21 D 4269. Shpg. wt., 4 lbs.....**34.95**
21 D 4268. 565K Kit. Wt., 4 lbs.....**25.95**
21 D 4271. 555W. Above, 1% resistors**39.95**
21 D 4270. 555K Kit. Wt., 4 lbs.....**29.95**

E 566W 1000 OHMS/VOLT VOM

Features divider resistors and rectifier in dual half-wave circuit. Has full-scale 0-1 volt range. Large 4½" meter. Ranges: AC/DC Volts, 0-1-5-10-50-100-500-5000 (Sensitivity, 1000 ohms/volt); AC/DC Current, 0-1-10 mA and 0.1-1 amps; Resistance, 0-5000-100K ohm, 0-1 meg; Decibels, −20 to +69 in 6 ranges. Complete with batteries. Less leads. Size, 6¾x5¼x3".

21 D 4261. Shpg. wt., 3 lbs.....**25.95**
21 D 4260. 566K Kit. Wt., 3 lbs.....**19.95**
21 D 4263. 556W. Above, 1% resistors.**29.95**
21 D 4262. 556K Kit. Wt., 3 lbs.....**21.95**

F 536W 1000 OHMS/VOLT VOM

Wide-range voltage, current, resistance, and decibel measurements for fast, accurate servicing of electrical equipment. 0-1 volt full-scale range for accurate low-voltage readings. 3" meter. Lightweight, compact, and packaged in a high-impact case, it is sturdy and portable for any shop or field use. Ranges: AC/DC Volts, 0-1-5-10-50-100-500-5000; Current, 0-1-10 mA, 0-0.1-1 amp; Resistance, 0-5000-100K ohms, 0-1 meg; Decibel, −20 to +69 in 6 ranges. 6½x3¾x2¾". With batteries. Less leads.

21 D 4564. Shpg. wt., 3 lbs.....**22.95**
21 D 4565. 536K Kit. Wt., 3 lbs.....**16.95**

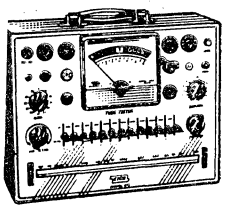
G 567W 20,000 OHMS/VOLT VOM

Efficient portable VOM with self-contained battery; designed for accurate bench or field use. Features 0.25-volt full scale for accurate low-voltage readings. Big 4½" meter protected by special silicon-diode circuit. Ranges: AC/DC Volts, 0-0.25-2.5-10-50-250-1000-5000 (AC sensitivity 5000 ohms/volt); DC Current, 0-100 μA, 0-10-100-500 mA; 0-10 amps; Resistance, 0-2000 ohms, 0-0.2-20 megs; Decibels, −12 to +55 in 5 ranges. Complete with test leads. Less batteries. Size, 6¾x5¼x3".

21 D 4358. Shpg. wt., 3 lbs.....**44.95**
21 D 4357. 567K Kit. Wt., 3 lbs.....**34.95**

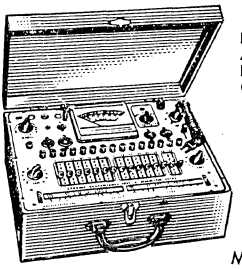
Accurate Test Equipment—Kit and Wired

EICO



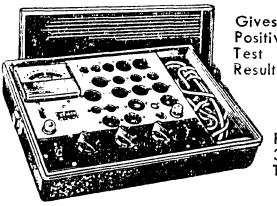
Tests Latest Tube Types

Model 628W



Fast Accurate Easy-to-Operate

Model 667W



Gives Positive Test Results

Portable 3-in-1 Tester

Model 635W

Model 636W

MODEL 628W CATHODE-CONDUCTANCE TUBE TESTER

Easy-to-operate tube tester with big 4½" meter having numerical and 3-color scales. Tests 5-pin nuvistors, 7-pin nuvistors, 7-pin miniatures, octals, loctals, combination 9 and 10-pin miniatures, combination novar and pilot light, compactrons. "Speedroll" 3-column roll chart gives settings and simplifies finding and reading tube test-data. Each active tube element can be connected by 3-position lever switches to plate, screen, grid, filament voltage, ground. Makes interelement short and continuity tests. Has line-voltage adjuster; pin straighteners for 7 and 9-pin miniatures; circuit overload lamp. 9½x12½x4¼". 105-135 VAC.

21 D 4566 X. Shpg. wt., 11 lbs.....79.95
21 D 4567 X. 628K Kit. Shpg. wt., 11 lbs.....59.95

MODEL 667W TUBE AND TRANSISTOR TESTER

Combines mutual conductance (Gm) and plate conductance (Gp) tests into dynamic and peak emission tests to give a single reading of tube quality. Spots bad transistors by gain and leakage tests. Checks nuvistors, novars, compactrons, miniatures, subminiatures, octals, loctals. Also special purpose tubes, VR's, cold cathode regulators, and electron-ray indicators. Has multicircuit lever switch, 12 tube-element pushbutton switches. Easy-to-read 4½" D'Arsonval meter with 200 μA sensitivity. Roll-chart for fast, easy test setups. 4½x15x12". Latching cover. For 105-135 VAC.

21 D 4142 U. Shpg. wt., 23 lbs.....139.95
21 D 4143 X. 667K Kit. Shpg. wt., 23 lbs.....89.95
21 D 4144. CRU CRT Adapter. For 667 and 628 testers. 1 lb...9.95

MODEL 635W PORTABLE TUBE TESTER

Modern tube tester designed for today's rigid requirements for accurately testing the complex tubes used in today's electronic equipment. Combines precision with durability for rugged use. This versatile tube tester saves valuable time and eliminates doubt and guesswork as to tube quality. Tubes are easily and quickly tested on the basis of dynamic cathode emission, shorts, grid leakage, and gas. Gives a fast, positive evaluation of tube quality.

Tube condition is read on a large 3½" burnout-protected D'Arsonval meter and a neon bulb indicator that shows leakage or shorts between elements. A complete tube chart gives switch settings and test data for all tubes. Tester checks virtually all receiving tubes including magnovals, nuvistors, all popular picture tubes, novars, compactrons, 10-pin types, battery-type tubes, auto radio hybrid tubes, foreign and hi-fi tubes, and most industrial types.

Includes power indicator and pin straighteners. Modern luggage-design portable case, 9x12½x4". For 115 VAC.

21 D 4542. Shpg. wt., 4 lbs.....69.95
21 D 4541. 635K Kit. Shpg. wt., 4 lbs.....44.95

MODEL 636W TUBE/BATTERY/CONTINUITY TESTER

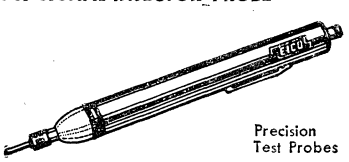
Advanced design, highly versatile portable 3-in-1 combination tester checks tubes, batteries, and continuity to make it extremely useful as a gneral-purpose instrument for the technician or hobbyist. Quick-tests over 800 modern TV, radio, and Hi-Fi tubes for cathode emission, leakage, shorts, opens, and intermittents. Built-in sockets for octals, loctals, 7 and 9-pin miniatures, novars, nuvistors and compactrons.

Has 3-color Good/Replace scales; "Go/No-Go" continuity test; neon-lamp short indicator. Also tests, under load, commonly used batteries from 1.5 to 90 volts in 11 ranges. Front panel has simplified control system and is arranged for best efficiency and quick, easy tests. Has many deluxe features not expected at this moderate price—performance surpasses many testers priced much higher. You'll get dependable service from this quality instrument.

Handsome, bakelite case and convenient compact size, only 8⅝x7½x3⅛". Metal carrying handle. Tube-data manual. 117 VAC.

21 D 4238. Shpg. wt., 4 lbs.....44.95
21 D 4544. 636K Kit. Shpg. wt., 4 lbs.....29.95

PSI SIGNAL-INJECTOR PROBE



Precision Test Probes

Pen-type pocket instrument troubleshoots AF, IF, and RF stages. Also tests tape recorders, amplifiers, etc. Injects signal covering AF, IF, RF spectrum. 5⅝x½" diameter. Requires 1 AA cell.

21 D 4545. Assembled. Wt., 6 oz.....9.95
21 D 4549. PSI-K Kit. Wt., 6 oz.....5.95

Model HVP-2 Assembled High-Voltage Probe. For safe and accurate measurements up to 30,000 volts DC with any VTVM or 20,000 ohms/volt VOM. Multiplier resistor is included to match many popular test instruments. Supplied with 1090-megohm resistor for use with Eico Models 222, 232, 235, 249.

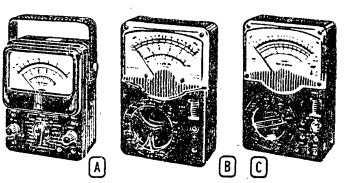
21 D 4241. Shpg. wt., ½ lb.....8.95

Uniprobe. AC/DC/Ohms probe. One probe performs all functions. A half-turn of probe tip selects DC or AC/Ohms. Use 15-megohm series isolating resistor for Eico Model 221; 1-megohm for all other Eico VTVM's. With detailed instructions.

21 D 4243. Assembled. Wt., ½ lbs....7.95
21 D 4242. UP-K Kit.....5.95

RF Measuring Probes. Permit measurement of RF voltages at frequencies up to 250 MHz. For 11-megohm input VTVM's.

21 D 4250. PRF-11. Assembled. 1 lb....5.95
21 D 4251. PRF-11-K Kit.....4.50



A B C

ASSEMBLED VOM'S

A **Model 100A4.** 100,000 ohms/volt DC, 12,500 AC. Highly sensitive professional instrument with laboratory accuracy and versatility. Ranges: DC Volts, 0-500 mV, 0-2.5-10-50-250-500-1000 V; AC Volts, 0-2.5-10-50-250-1000; DC Current, 0-10-250 μA, 0-2.5-250 mA, 0-10 amps; Resistance, 0-20K-200K ohms, 0-2-20 megs; Decibels, —20 to +62 in 5 ranges. 7½x5¼x3¼". Batteries and leads.

21 D 4568. Shpg. wt., 4 lbs.....34.95

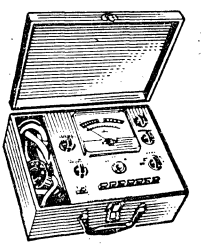
B **Model 20A3.** 20,000 ohms/volt DC, 10,000 AC. Precision pocket portable, ideal for accurate general service. Ranges: DC Volts, 0-0.25-2.5-10-50-250-1000; AC Volts, 0-10-50-250-500-1000; DC Current, 0-50 μA 0-25-250 mA; Resistance, 0-7K-700K ohms, 0-7 megs; Decibels, —10 to +36. 5⅛x3⅜x1⅜". Batteries and leads.

21 D 4571. Shpg. wt., 1¼ lbs.....12.95

C **Model 30A4.** 30,000 ohms/volt DC, 10,000 AC. Fine pocket portable with mirror-back scale and 1% resistors. Ranges: DC Volts, 0-0.6-3-12-60-300-600-1200-3000; AC Volts, 0-6-30-120-600-1200; DC Current, 0-30 μA, 0-60-600 mA; Resistance, X1, X100, X1K, X10K; Decibels, —20 to +63 in 5 ranges. Batteries and leads.

21 D 4570. Shpg. wt., 1¼ lbs.....19.95

CRT TESTER AND REJUVENATOR



Model 633W. Tests and rejuvenates most picture tubes, including color TV types. Has line adjust control; 12 different filament voltages; accurate, easy-to-read meter. Tests picture tube emission, cut-off voltage and life. Checks each color gun independently. Safely rejuvenates color or black-and-white tubes by boosting tube to life, removing shorts and welding cathode. Pushbutton oper. 5¾x12⅝x9¼". 117 VAC.

21 D 4540 U. Shpg. wt., 12 lbs.....99.95
21 D 4539. 633K Kit. Wt., 12 lbs.....69.95

680W TRANSISTOR CHECKER AND VOM

Combination transistor/circuit tester and VOM accurately measures all the basic transistor and diode characteristics. Ranges: DC Volts, 0-5-50; DC Current, 0-50-500 μA, 0-5-50-500 mA; Resistance, 0-2-200K ohms, 0-20 megs (center scales at 12, 1200 and 120K ohms). 20,000 ohms/volt DC sensitivity; 50-μA movement. Easy-to-read 3½" scale. Accuracy, ±2%. 1% precision resistors. Detailed instruction and operating manual. Metal case, 3x5¼x6¾". Less leads and batteries.

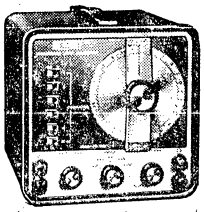
21 D 4148. Shpg. wt., 3 lbs.....49.95
21 D 4149. 680K Kit. Wt., 3 lbs.....34.95

knight-kit
KITS
TEST EQUIPMENT

Top-Performance Laboratory-Quality Test Equipment Kits

THIS CATALOG SHOWS ONLY A SAMPLING OF ALLIED'S LINE OF KNIGHT-KITS

Allied has a complete line of Knight-Kits for every purpose: stereo hi-fi, test equipment, hobby kits, musical instrument kits and many more. Contact the Allied facility nearest you for complete information.



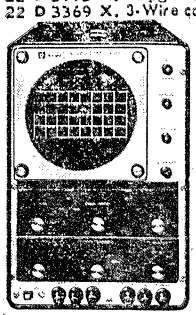
- 20 Hz-2 MHz Sine Wave
- 20 Hz-200 kHz Square Wave
- Solid-State

59.95

KG-688 SINE/SQUARE WAVE GEN. KIT

For audio/ultrasonic/AM testing. Sine wave coverage, 20 Hz to 2 MHz; square wave, 20 Hz to 200 kHz. FET Sulzer oscillator circuit. Silicon transistors. Sine Wave: X10, 20 Hz to 200 Hz; X100, 200 Hz to 2 kHz; X1000, 2 kHz to 20 kHz; X10K, 20 kHz to 200 kHz; X100K, 200 kHz to 2 MHz. Output: adj. 0-7.5 V into 10K ohms or higher, 0-6.5 V into 600 ohms. Level: ±1 dB to 1 MHz; ±2 dB to 2 MHz. Square Wave: X10, 20 Hz to 200 Hz; X100, 200 Hz to 2 kHz; X1000, 2 kHz to 20 kHz; X10K, 20 kHz to 200 kHz. Output: adj. 0-10 V p-p into high-imp. loads. Multiple feedback loop, barreter element. Constant-impedance attenuators. Distortion: 0.25%. Accuracy: ±3%, except ±5% below 100 Hz and above 1 MHz. 7¾x7¾x10¼". Instructions. 2-wire line cord. 115 V, 50-60 Hz AC.

22 D 3995 X. Shpg. wt., 10 lbs.....59.95
22 D 3369 X. 3-Wire cord. Wt., 1 lb...1.98



KG-635 5-INCH OSCILLOSCOPE KIT

- Volts/Inch Attenuator
- Dynamic Sync Limiter
- Auto Astigmatism Correction

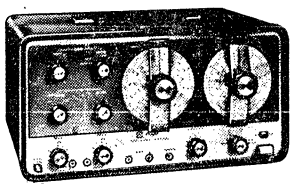
119.95

Low-priced wideband oscilloscope meets practically every test and service requirement—excellent choice for the critical demands of color TV. Superior linearity and lock-in characteristics for extremely stable waveform displays; dynamic sync limiter for trace uniformity; automatic astigmatism correction for sharp, bright traces. DC coupled amplifiers provide accurate display of low-frequency and DC levels. Color bandpass of ±0.5 dB; less than 6% overshoot. Also has retrace blanking; regulated power supply; tapped primary transformer. Positive-lock 5-way binding posts with standard ¾" spacing. Five linear time base ranges; Z-axis input.

Vertical Sensitivity: 17 mV rms per inch min. (7 mV rms/cm). Calibrated .05 volt p-p/inch. Response: ±1.5 dB, DC to 5.2 MHz. Rise Time: 70 nsec. Impedance: 3 megohms shunted by 35 pF. Accelerating Potential: 1650 V. Horizontal Sensitivity: 0.6 V rms/inch. Response: ±1.5 dB, 1 Hz to 400 kHz. Impedance: 7 megohms shunted by 25 pF. 110-130 V, 60 Hz AC.

Metal case, 11⅞x7⅞x15⅞". All parts, instructions. Order probes below. Japan.

22 D 3979 Z. Wt., 29 lbs. Express..119.95
22 D 3152 X. Test Leads. 1 lb.....1.95
22 D 3150 X. Low-Capacity Probe. 8 oz. 6.95
22 D 3151 X. Demodulator Probe. 8 oz. 6.95



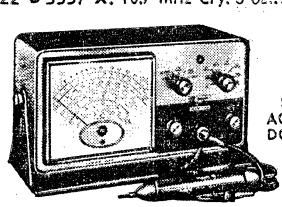
- Covers All TV and FM, IF and TV VHF Frequencies

99.95

KG-687 SWEEP/MARKER GEN. KIT

Silicon transistor circuit. All-electronic sweep from 1 Hz to 18 MHz at highest center frequency; crystal-controlled and variable post-injected marker system. Sweep Range: 3-220 MHz on 5 bands; marker: 2-225 MHz on 4 bands. Regulated power supply; dual-regulated and calibrated 0 to —20 V AGC bias supplies. Automatic level control; AC/DC coupled feedback; 5-band saturable reactor. 4-step decade attenuator with level control. 4" metal dials; 6:1 vernier drive. RF retrace blanking, horizontal phase adjustment for scope use (front panel outputs). Crystal may be mixed with variable marker. On-off switch for crystal function. 10¼x14¾x7¾". 4.5 MHz crystal, HC-6/U holder. Detailed instructions. 110-130 V, 50-60 Hz AC. Shpg. wt., 13 lbs.

22 D 3994 X.....99.95
22 D 3356 X. 5-MHz Crystal. 3 oz.....4.95
22 D 3357 X. 10.7 MHz Cry. 3 oz.....4.95



Single AC-ohms/DC Probe

- ½-Volt Full-Scale DC Range
- Accuracy; DC, ±3% Full-Scale; AC ±5% Full-Scale

39.95

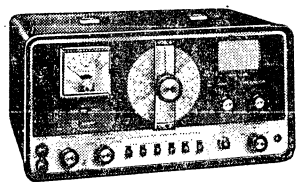
KG-625 DELUXE 6-INCH VTVM KIT

Has easy-to-read 6" 200-μA meter, fluorescent knife-edge pointer, 10 color-correlated scales, 100° arc. ½-volt full-scale DC range. DC polarity reversing switch, zero center scale. Pre-aged bridge tube with matching triode sections.

Ranges: DC Volts; 0-0.5-1.5-5-15-50-150-500-1500. (To 25,000 with optional HV probe below.) AC Volts; (rms) 0-1.5-5-15-50-150-500-1500 (separately calibrated scales for 1.5 and 5 volts). (p-p); 0-4.2-14-42-140-420-1400-4200 (separately calibrated scales for 4.2 and 14 volts). Resistance; 0-1000-10K-100K ohms, 0-1-10-100-1000 megohms (center scales at 10, 100, 1000, 10K, 100K ohms, 1 and 10 megohms). Accuracy:. DC, ±3% full-scale; AC, ±5% full-scale.

11-megohm DC input resistance. AC frequency response: ±1 dB, 30 Hz to 3 MHz; ±3 dB, 30 Hz to 5 MHz (to 250 MHz with probe below). Precision 1% resistors. Switchable AC-ohms/DC test probe. Separate ground lead. Power transformer. 7¼x12x5½". Battery, probe, gimbal bracket, instructions. 115 VAC. Japan.

22 D 3975 X. Shpg. wt., 9 lbs.....39.95
22 D 3130 X. Hi-Voltage Probe. 1 lb...6.95
22 D 3131 X. Hi-Frequency Probe. 1 lb. 6.95



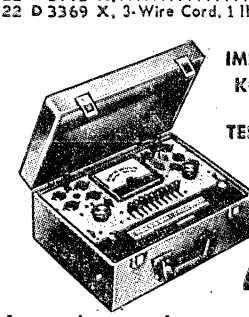
- Coverage from 100 kHz-54 MHz
- Solid-State Circuit

79.95

KG-686 RF SIGNAL GENERATOR KIT

Has silicon transistor circuit. Built-in 100 kHz/1 MHz crystal calibrator. Covers 100 kHz to 54 MHz (all TV IF frequencies). Accuracy: ±1.5% on any of 5 fundamental bands, usable to ±0.1% with crystal calibrator. Floating chassis-isolated oscillator; tunable L and C on every band. Six separate-step attenuators for 21 discrete levels to —96 dB. Detector-amplifier-speaker system gives audible "zero" beats from calibrator. Bridged "T" 2-stage modulation oscillator. 4" metal dial; 6:1 vernier drive with antibacklash. Regulated power supply. Output is calibrated into 50-ohm load, 120,000 μV max. Steel case, 10¼x14¾x7¾". 2-wire line cord. BNC output jack, mated terminal cables. With detailed step-by-step instructions. 110-130 V, 50-60 Hz AC. Shpg. wt., 15 lbs.

22 D 3993 X.....79.95
22 D 3369 X. 3-Wire Cord. 1 lb.....1.98



IMPROVED KG-600C TUBE TESTER KIT

Test Over 2500 Tubes

44.95

Improved version of our popular KG-600B emission-type tube tester kit updated to meet today's complex radio and TV servicing needs. Accurately checks over 2500 tube types, plus many CRT's (with optional harness below), and pilot lights to 117 V.

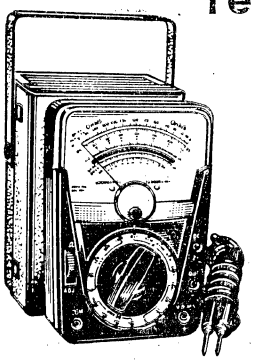
Type of Tester: cathode conductance (emission). Tube Condition Indicator: 3-color 4½" meter with GOOD-REPLACE emission scale; GOOD-BAD gas test scale; 0-100 numerical scale. Individual Element Tests: shorts, opens and continuity indicated by neon lamp. Filament Voltages Available: 0.63, 1.4, 2.0, 2.5, 3.0, 4.2, 5.0, 6.3, 7.5, 12.6, 19.6, 25, 32, 50, 70, and 117 volts. Line and Load Voltage Adjustments: power rheostat located in primary of power transformer compensates for voltage variations. Individual Tube Settings: read from illuminated, gear-driven roll chart with thumbwheel drive that quickly locates tube data. Power Required: 110-130 V, 50-60 Hz AC.

Gray fabrikoid-covered portable case, 6½x14¼x10½", latching cover, carrying handle. CRT harness, adapters below. Japan.

22 D 3212 X. Shpg. wt., 13 lbs.....44.95
22 D 3141 X. TV CRT Harness. 8 oz....4.50
22 D 3271 X. 110° Adapters. 3 oz.....4.50

Test Equipment and Panel Meters

SPECIAL-VALUE TEST EQUIPMENT



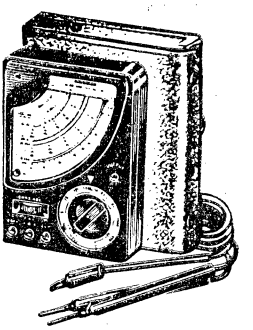
ACCURATE VOLT-OHM-MILLIAMMETER

- 30,000 Ohm/Volt DC
- 15,000 Ohm/Volt AC
- Wide, Easy-to-Read Scales

Features precision scale, recessed selector switch, D'Arsonval movement, precision resistors. 30,000 ohms/volt AC. DC voltage ranges: 0-3-12-60-300-600-1200. AC voltage ranges: 0-6-30-120-1200. DC current ranges: 0-30 μA-3 mA-300 mA. Ohms ranges: 0-16,000-160,000-1.6 meg. -16 meg. Decibel ranges: —20 dB to +63 dB (5 ranges) With batteries, test leads, leather carrying case, instruction manual. 5½x1⅜x3½". Japan. Wt., 3 lbs.

24 D 9372.....14.95

POCKET-SIZE VOLT-OHM-MILLIAMMETER

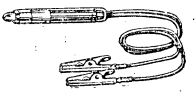


- 3½" Easy Reading Scale
- 20,000 Ohms/Volt DC
- For Transistor Work

Features 250 μA D'Arsonval movement, precision resistors, two-color scale, high readability on low ranges. Sensitivity: 20,000 ohms/volt DC, 10,000 ohms/volt AC. DC voltage ranges: 0-5-25-125-500-2500. AC voltages ranges: 0-10-50-250-1000. DC current ranges: 0-05 μA, 0-250 mA. Ohms ranges: 0-10,000 and 1 meg. Expanded low-ohm scale. DB, —20 to +22. With leather carrying case, test leads, manual, penlight battery. 4½x3¼x1". Japan. Wt., 1 lb.

24 D 9318.....8.95

AMF PRO-GLO CONTINUITY TESTER



Dim light indicates poor connection. No light when resistance exceeds 10 ohms. For dead circuits only. 5½x¾". With bulb; requires 2 penlight cells.

21 D 4370. Shpg. wt., 3 oz.....1.66

G-C NEON GLOW TESTER

Has neon glow lamp that varies in light intensity according to voltages. Indicates voltages from 60 V AC and 90 V DC to 550 V AC-DC. 5" leads.

21 D 4369. Shpg. wt., 3 oz.....44

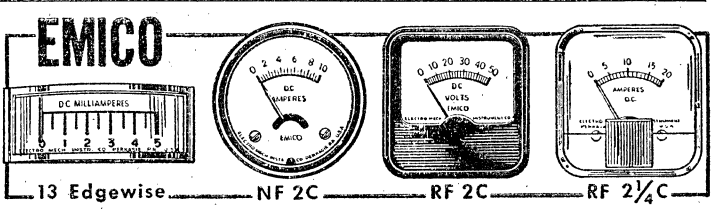
EMICO AC VOLTAGE TESTER

Plug-in type precision mechanism detects high or low line voltage. Two-prong male plug fits AC outlets. Convenient 90° swivel prongs provide easier reading from any position. Damped meter movement. 0-150 volt range, 2" meter. ±5% accuracy. Insulated plug and shockproof metal case.

21 D 4368. Wt., 8 oz.....3.38

5% PANEL METERS

DC meters have "HI TORK" magnetic movements. AC units are moving iron-vane type. All have 5% accuracy. Calibrated in steel cases. Sizes (depth and flange); NF-2C, 1¼x2¼"; RF-2C, 1⅝x2¼"; RF-2¼C, 1⅞6x2⅝6"; Model 13 (all plastic), ¾x1¹³⁄₁₆x2⅛". *Indicates unbreakable plexiglas front. Have screw-terminal binding posts and/or solder lugs. Complete with hardware. Av. shpg. wt., 9 oz.



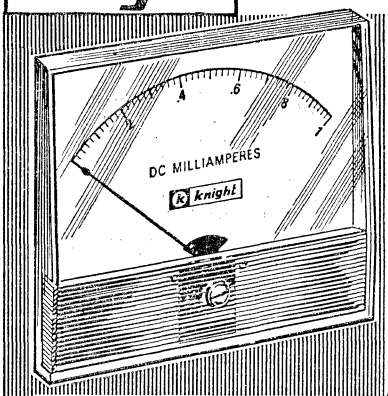
DC MILLIAMMETERS, AMMETERS AND VOLTMETERS

Range	Model 13 Edgewise Stock No.	EACH 1-24	25-49	50-99	Model NF-2C Stock No.	EACH 1-24	25-49	50-99	Model RF-2C Stock No.	EACH 1-24	25-49	50-99	*Model RF-2¼C Stock No.	EACH 1-24	25-49	50-99
0-1 mA	52 D 6023	4.05	3.65	3.44	52 D 7609	4.05	3.65	3.44	52 D 7614	4.05	3.65	3.44	52 D 8012	4.20	3.78	3.57
0-5 mA	52 D 6024	3.25	2.92	2.76	52 D 8970	3.00	2.70	2.55	52 D 8971	3.00	2.70	2.55	52 D 6022	3.15	2.85	2.68
0-10 mA	52 D 6025	3.10	2.80	2.64	52 D 7600	2.85	2.56	2.42	52 D 7615	2.85	2.56	2.42	52 D 8013	3.00	2.70	2.55
0-20 mA	52 D 6026	2.85	2.55	2.42	52 D 7601	2.50	2.25	2.13	52 D 7616	2.50	2.25	2.13	52 D 8014	2.75	2.47	2.35
0-30 mA	.....	.....	.....	.....	52 D 7602	2.50	2.25	2.13	52 D 7617	2.50	2.25	2.13	.....	.....	.....	.....
0-50 mA	52 D 6028	2.85	2.55	2.42	52 D 7603	2.50	2.25	2.13	52 D 7618	2.50	2.25	2.13	52 D 8016	2.75	2.47	2.35
0-100 mA	52 D 6029	2.85	2.55	2.42	52 D 7604	2.50	2.25	2.13	52 D 7619	2.50	2.25	2.13	52 D 8017	2.75	2.47	2.35
0-150 mA	52 D 6030	2.85	2.55	2.42	52 D 7605	2.50	2.25	2.13	52 D 7620	2.50	2.25	2.13	52 D 8018	2.75	2.47	2.35
0-200 mA	52 D 6031	2.85	2.55	2.42	52 D 7606	2.50	2.25	2.13	52 D 7621	2.50	2.25	2.13	52 D 8019	2.75	2.47	2.35
0-300 mA	52 D 6032	2.85	2.55	2.42	52 D 7607	2.50	2.25	2.13	52 D 7622	2.50	2.25	2.13	52 D 8020	2.75	2.47	2.35
0-500 mA	52 D 6033	2.85	2.55	2.42	52 D 7608	2.50	2.25	2.13	52 D 7623	2.50	2.25	2.13	52 D 8021	2.75	2.47	2.35
0-1 Amp	.....	.....	.....	.....	52 D 8972	2.40	2.15	2.05	52 D 8973	2.40	2.15	2.05	52 D 8025	2.85	2.55	2.42
0-5 Amp	.....	.....	.....	.....	52 D 8974	2.40	2.15	2.05	52 D 8975	2.40	2.15	2.05	52 D 6043	2.85	2.55	2.42
0-10 Amp	52 D 6070	2.85	2.55	2.42	52 D 7650	2.40	2.15	2.05	52 D 7656	2.40	2.15	2.05	52 D 6044	2.85	2.55	2.42
0-15 Amp	52 D 6073	2.85	2.55	2.42	52 D 6039	2.40	2.15	2.05	52 D 6041	2.40	2.15	2.05	52 D 6045	2.85	2.55	2.42
0-25 Amp	.....	.....	.....	.....	52 D 8976	2.40	2.15	2.05	52 D 8977	2.40	2.15	2.05	52 D 6046	2.85	2.55	2.42
0-30 Amp	52 D 6080	2.85	2.55	2.42	52 D 6040	2.40	2.15	2.05	52 D 6042	2.40	2.15	2.05	52 D 6047	2.85	2.55	2.42
3-0-3 Amp	.....	.....	.....	.....	52 D 7651	2.40	2.15	2.05	52 D 7657	2.40	2.15	2.05	.....	.....	.....	.....
20-0-20 Amp	52 D 6082	2.85	2.55	2.42	52 D 7652	2.40	2.15	2.05	.....	.....	.....	.....	52 D 8027	2.85	2.55	2.42
30-0-30 Amp	52 D 6083	2.85	2.55	2.42	52 D 7653	2.40	2.15	2.05	52 D 7659	2.40	2.15	2.05	52 D 8028	2.85	2.55	2.42
0-3 Volts	52 D 6168	2.85	2.55	2.42	52 D 7630	2.50	2.25	2.13	52 D 7635	2.50	2.25	2.13	52 D 8082	2.75	2.47	2.35
3-0-3 Volts	.....	.....	.....	.....	52 D 7631	2.50	2.25	2.13	52 D 7636	2.50	2.25	2.13	52 D 8083	2.75	2.47	2.35
0-10 Volts	52 D 6188	2.85	2.55	2.42	52 D 7632	2.50	2.25	2.13	52 D 7637	2.50	2.25	2.13	52 D 8084	2.75	2.47	2.35
0-15 Volts	52 D 6189	2.85	2.55	2.42	52 D 6090	2.50	2.25	2.13	52 D 6169	2.50	2.25	2.13	52 D 6092	2.75	2.47	2.35
0-20 Volts	52 D 6190	2.85	2.55	2.42	52 D 6091	2.50	2.25	2.13	52 D 6193	2.50	2.25	2.13	52 D 6093	2.75	2.47	2.35
0-30 Volts	52 D 6191	2.85	2.55	2.42	52 D 8980	2.50	2.25	2.13	52 D 8981	2.50	2.25	2.13	52 D 6096	2.75	2.47	2.35
0-50 Volts	52 D 6192	2.85	2.55	2.42	52 D 8982	2.50	2.25	2.13	52 D 8983	2.50	2.25	2.13	52 D 6097	2.75	2.47	2.35

AC VOLTMETERS, AMMETERS AND MILLIAMMETERS

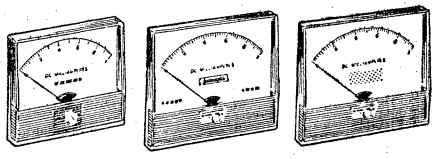
0-15 Volts	52 D 6034	4.00	3.60	3.40	52 D 7665	3.70	3.33	3.15	52 D 7670	3.70	3.33	3.15	52 D 8022	3.90	3.50	3.32
0-50 Volts	.....	.....	.....	.....	52 D 8978	3.70	3.33	3.15	52 D 8979	3.70	3.33	3.15	52 D 6038	3.90	3.50	3.32
0-150 Volts	52 D 6035	4.65	4.18	3.95	52 D 7666	4.25	3.80	3.60	52 D 7671	4.25	3.80	3.60	52 D 8023	4.60	4.15	3.90
0-300 Volts	52 D 6036	4.95	4.45	4.20	52 D 7667	4.80	4.30	4.08	52 D 7672	4.80	4.30	4.08	52 D 8024	5.10	4.60	4.35
0-1 Amp	.....	.....	.....	.....	52 D 8984	3.70	3.35	3.15	52 D 8985	3.70	3.35	3.15	.....	.....	.....	.....
0-5 Amp	52 D 6195	4.00	3.60	3.40	52 D 7646	3.70	3.35	3.15	52 D 7648	3.70	3.35	3.15	52 D 8085	3.90	3.50	3.30
0-10 Amp	.....	.....	.....	.....	52 D 7647	3.70	3.35	3.15	52 D 7649	3.70	3.35	3.15	52 D 8086	3.90	3.50	3.30
0-500 mA	52 D 6212	4.00	3.60	3.40	52 D 7640	3.70	3.35	3.15	52 D 7643	3.70	3.35	3.15	52 D 8029	3.90	3.50	3.30

Knight® "Clear View" Panel Meters



CUSTOM DESIGN YOUR OWN METERS

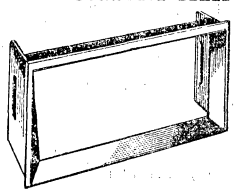
YOU CAN ORDER QUALITY KNIGHT PANEL METERS WITH DIAL FACES OF YOUR OWN DESIGN



HOW TO ORDER

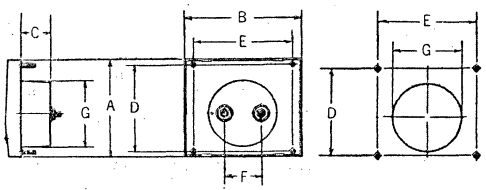
On orders for 25 or more of any one type of Knight meter shown on these pages, you can have your name or logo placed on the standard scale face. Extra charge for standard scale meters in quantities of 25-99, with your name or logo, $35.00. This is a one-time charge. No charge in quantities of 100 or more. For meters with scales in one color other than black, $60.00, 2 colors, $85.00, 3 colors, $110.00 Extra charges made one time only—no extra charges on subsequent orders with same meter face. To order, indicate Dept. 52 as Stock No., and also include meter range, size, and send logo or print of scale wanted.

COMPLETE BEZEL KIT



Includes Bezel, Brackets, Screws

Fits all 4½" Knight meters.
52 D 7333..... 2.05
As above, but for 3½" meters.
52 D 7334.....1.95



Dim.	2½"	3½"	4½"
A	2.38"	3.00"	4.00"
B	2.57"	3.44"	4.70"
C	1.06"	1.06"	1.06"
DxE	1.88" sq.	2.25" sq.	3.56" sq.
F	1.40"	1.40"	1.40"
G	2.18"	2.75"	2.75"

• Easy-to-Read Knife Edge Pointer

Wide selection of rugged, easy-to-read panel meters. Have 2% full scale accuracy. Feature spring back jewels and shielded meter movement—can be mounted on ferrous panels without loss of accuracy. Supplied with all necessary mounting and terminal hardware. All have ¼-28x.43" terminals.

• Full Scale Accuracy of 2%

All mounting studs are .52". Mounting studs: 2½" and 3½" Models, 4-40x.53"; 4½", 6-32x.53". *Rectifier type. For prices on order for 100 or more meters of any one type—with either Knight standard or "Custom-Design" scale faces—contact the Allied facility nearest you. Av. shpg. wt., 1 lb.

Range	Ohms	2½" METERS Stock No.	2½" METERS EACH 1-9	10-24	25-49	50-99	3½" METERS Stock No.	3½" METERS EACH 1-9	10-24	25-49	50-99	4½" METERS Stock No.	4½" METERS EACH 1-9	10-24	25-49	50-99
DC MICROAMMETERS																
25-0-25	3000	52 D 6725	17.75	16.00	15.10	14.20	52 D 7204	18.10	16.25	15.35	14.45	52 D 7208	19.55	17.55	16.60	15.60
0-50	3000	52 D 6726	17.65	15.90	15.00	14.15	52 D 7201	18.00	16.20	15.30	14.40	52 D 7205	19.40	17.45	16.45	15.50
50-0-50	2000	52 D 6727	16.10	14.50	13.70	13.00	52 D 7306	16.55	14.85	14.05	13.20	52 D 7320	18.45	16.60	15.65	14.75
0-100	2000	52 D 6728	15.70	14.15	13.35	12.55	52 D 7202	16.55	14.85	14.05	13.20	52 D 7206	18.35	16.50	15.55	14.65
100-0-100	600	52 D 6729	14.50	13.05	12.35	11.60	52 D 7307	16.15	14.50	13.70	12.90	52 D 7321	16.80	15.10	14.25	13.40
0-200	600	52 D 6730	14.40	13.00	12.25	11.50	52 D 7203	15.10	13.55	12.80	12.05	52 D 7207	16.55	14.85	14.05	13.20
DC MILLIAMMETERS																
0-1	14	52 D 6731	13.70	12.35	11.65	10.95	52 D 7209	14.15	12.70	12.00	11.30	52 D 7214	15.10	13.55	12.80	12.05
0-3	5	52 D 6732	13.70	12.35	11.65	10.95	52 D 7210	14.15	12.70	12.00	11.30	52 D 7215	15.10	13.55	12.80	12.05
0-10	5.0	52 D 6733	13.70	12.35	11.65	10.95	52 D 7308	14.15	12.70	12.00	11.30	52 D 7322	15.10	13.55	12.80	12.05
0-15	3.3	52 D 6734	13.70	12.35	11.65	10.95	52 D 7211	14.15	12.70	12.00	11.30	52 D 7216	15.10	13.55	12.80	12.05
0-20	2.5	52 D 6735	13.70	12.35	11.65	10.95	52 D 7309	14.15	12.70	12.00	11.30	52 D 7323	15.10	13.55	12.80	12.05
0-50	1.0	52 D 6736	13.90	12.50	11.80	11.10	52 D 7310	15.40	13.85	13.05	12.30	52 D 7324	15.70	14.10	13.30	12.55
0-100	.5	52 D 6737	13.90	12.50	11.80	11.10	52 D 7212	15.40	13.85	13.05	12.30	52 D 7217	15.70	14.10	13.30	12.55
0-200	.25	52 D 6738	13.90	12.50	11.80	11.10	52 D 7213	15.40	13.85	13.05	12.30	52 D 7218	15.70	14.10	13.30	12.55
DC AMMETERS																
0-1	.050	52 D 6739	13.90	12.50	11.80	11.10	52 D 7311	15.40	13.85	13.05	12.30	52 D 7325	15.70	14.10	13.30	12.55
0-5	.010	52 D 6740	13.90	12.50	11.80	11.10	52 D 7312	15.40	13.85	13.05	12.30	52 D 7326	15.70	14.10	13.30	12.55
0-10	.005	52 D 6741	13.90	12.50	11.80	11.10	52 D 7225	15.40	13.85	13.05	12.30	52 D 7227	15.70	14.10	13.30	12.55
0-15	.0033	52 D 6742	13.90	12.50	11.80	11.10	52 D 7226	15.40	13.85	13.05	12.30	52 D 7228	15.70	14.10	13.30	12.55
DC MILLIVOLTMETERS																
0-50	10	51 D 6743	13.80	12.40	11.75	11.05	52 D 7317	15.30	13.75	13.00	12.20	52 D 7331	15.70	14.10	13.30	12.55
0-100	20	51 D 6744	13.80	12.40	11.75	11.05	52 D 7318	15.30	13.75	13.00	12.20	52 D 7332	15.70	14.10	13.30	12.55
DC VOLTMETERS (1000 Ohms/Volt)																
0-10	.....	52 D 6745	14.50	13.05	12.35	11.60	52 D 7314	15.10	13.55	12.80	12.05	52 D 7328	16.55	14.85	14.05	13.20
0-15	.....	52 D 6746	14.50	13.05	12.35	11.60	52 D 7275	15.10	13.55	12.80	12.05	52 D 7276	16.55	14.85	14.05	13.20
0-30	.....	52 D 6747	14.50	13.05	12.35	11.60	52 D 7315	15.10	13.55	12.80	12.05	52 D 7329	16.55	14.85	14.05	13.20
0-50	.....	52 D 6748	14.50	13.05	12.35	11.60	52 D 7219	15.10	13.55	12.80	12.05	52 D 7222	16.55	14.85	14.05	13.20
0-100	.....	52 D 6749	14.50	13.05	12.35	11.60	52 D 7220	15.10	13.55	12.80	12.05	52 D 7223	16.55	14.85	14.05	13.20
0-150	.....	52 D 6750	14.50	13.05	12.35	11.60	52 D 7221	15.10	13.55	12.80	12.05	52 D 7224	16.55	14.85	14.05	13.20
0-300	.....	52 D 6751	14.50	13.05	12.35	11.60	52 D 7316	15.10	13.55	12.80	12.05	52 D 7330	16.55	14.85	14.05	13.20
AC VOLTMETERS (1000 Ohms/Volt)																
0-150*	.....	52 D 6752	17.40	15.65	14.80	13.90	52 D 7229	15.80	14.20	13.40	12.60	52 D 7231	16.70	15.00	14.15	13.35
0-300*	.....	52 D 6753	17.40	15.65	14.80	13.90	52 D 7230	15.80	14.20	13.40	12.60	52 D 7232	16.70	15.00	14.15	13.35
AC AMMETERS (3 Milliohms)																
0-5	.....	.....	.....	.....	.....	.....	52 D 7340	13.20	11.85	11.20	10.55	52 D 7342	15.35	13.80	13.05	12.25
0-10	.....	.....	.....	.....	.....	.....	52 D 7341	14.00	12.60	11.90	11.20	52 D 7343	15.35	13.80	13.05	12.25

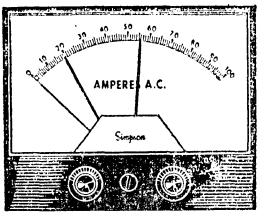
Knight Meters Are Available Only at Allied

Special-Purpose Panel Instruments

Simpson

CONTACTLESS METER RELAYS

- Rugged Seal® Construction
- In 3½", 4½" and 4x6" Sizes
- Single or Dual Control Points



These relays combine the functions of an indicator, switch, and ultra-high gain amplifier in one unit. Photoconductor system activates relays at pre-set point on meter. Dual control types activate circuit at both high and low limit points. For use where utmost reliability on small differential or small power is desired. Ideal for alarm control or limit applications on equipment designed for unattended operation. Use infinite-life lamps, photoconductor sensors, all solid-state circuit. Built-in output relays for each control point handle 10 amps at 115 VAC resistive on each contact (DPDT types handle 20 amps total per point.) Fail-safe—relays open in case of power failure. Continuous indication, regardless of control point settings. Meter movement is independent of control functions, for unimpaired accuracy. Indication accuracy, ±2% of full-scale; dead-band, 0.25%. Control points are adjusted by gear drive from front panel, indicated by separate lance pointers. Metal case has thick glass window, dust-moisture sealing. Single control point types have built-in power supply; double control types include external power supply module. For 115 V, 50-500 Hz AC. Av. shpg. wt., 1½ lbs.

METER DIMENSIONS

Model No.	Movement	Flange	Body Dia.	Depth
3323TXA	Taut-Band	3.25x3.25"	2.72"	5.05"
3323XA	Pivot/jewel	3.25x3.25"	2.72"	5.05"
3324TXA	Taut-Band	4.15x4.68"	2.72"	5.11"
3324XA	Pivot/jewel	4.15x4.68"	2.72"	5.11"
3344XA	Pivot/jewel	4.15x4.68"	2.72"	5.11"
3326TXA	Taut-Band	4.62x5.84"	2.72"	5.11"
3326XA	Pivot/jewel	4.62x5.84"	2.72"	5.11"

External power supply module (double control), 2.40x2.40x1.94".

MODEL 3323TXA 3½" TAUT-BAND

Range DC	Single Control (High Limit) Stock No.	EACH 1-9	10-24	25-49	Double Control (High/Low) Stock No.	EACH 1-9	10-24	25-49
0-10 μA	52 D 8129	134.70	121.23	114.50	52 D 8133	164.85	148.37	140.12
0-25 μA	52 D 8130	124.80	112.32	106.08	52 D 8134	154.95	139.46	131.71
0-50 μA	52 D 8131	119.85	107.87	101.88	52 D 8135	150.00	135.00	127.50
0-100 μA	52 D 8132	116.55	104.90	99.07	52 D 8136	146.70	132.30	124.70

MODEL 3323XA 3½" PIVOT-AND-JEWEL

0-50 μA	52 D 8137	116.55	104.90	99.07	52 D 8141	146.70	132.03	124.70
0-100 μA	52 D 8138	113.10	101.79	96.14	52 D 8142	143.25	128.93	121.76
0-1 mA	52 D 8139	111.90	100.71	94.52	52 D 8143	142.20	127.98	120.87
0-50 mV	52 D 8140	112.20	100.98	95.36	52 D 8144	142.50	128.25	121.13

MODEL 3324TXA 4½" TAUT-BAND

0-10 μA	52 D 8119	138.00	124.20	117.30	52 D 8123	168.15	151.34	142.93
0-25 μA	52 D 8120	128.10	115.29	108.89	52 D 8124	158.25	142.43	134.51
0-50 μA	52 D 8121	123.15	110.84	104.68	52 D 8125	153.30	137.97	130.31
0-100 μA	52 D 8122	119.80	107.82	101.83	52 D 8126	150.00	135.00	127.50

MODEL 3324XA 4½" PIVOT-AND-JEWEL

0-50 μA	52 D 8111	119.85	107.87	101.87	52 D 8115	150.00	135.00	127.50
0-100 μA	52 D 8112	116.40	104.76	98.94	52 D 8116	146.55	131.90	124.57
0-200 μA	52 D 8127	116.40	104.76	98.94	52 D 8128	146.55	131.90	124.57
0-500 μA	52 D 8113	116.40	104.76	98.94	52 D 8117	146.55	131.90	124.57
0-1 mA	52 D 8114	115.20	103.68	97.92	52 D 8118	145.50	130.95	123.68

MODEL 3344XA 4½" AC PIVOT-AND-JEWEL

0-5 A*	52 D 8620	127.05	114.35	108.00	52 D 8622	157.35	141.62	133.75
0-10 V*	52 D 8621	124.35	111.92	105.70	52 D 8623	154.50	139.05	131.33

*AC ranges.

MODEL 3326TXA 4x6" TAUT-BAND

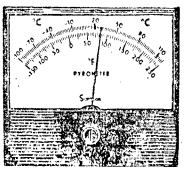
0-10 μA	52 D 8624	141.30	127.17	120.11	52 D 8628	171.45	154.31	145.73
0-25 μA	52 D 8625	131.40	118.26	111.69	52 D 8629	161.55	145.40	137.32
0-50 μA	52 D 8626	126.45	113.81	107.48	52 D 8630	156.60	140.94	133.11
0-100 μA	52 D 8627	123.00	110.70	104.55	52 D 8631	153.15	137.84	130.18

MODEL 3326XA 4x6" PIVOT-AND-JEWEL

0-50 μA	52 D 8760	123.15	110.84	104.68	52 D 8764	153.30	137.97	130.31
0-100 μA	52 D 8761	119.70	107.73	101.75	52 D 8765	149.85	134.80	127.37
0-1 mA	52 D 8762	118.50	106.65	100.73	52 D 8766	148.80	133.92	126.48
0-50 mV	52 D 8763	118.80	106.92	100.98	52 D 8767	149.10	134.19	126.74

PYROMETERS

- Two Models—Standard and Rugged Seal
- Easy-to-Read Scales, Precise Tracking
- Centigrade and Fahrenheit Graduations



Model 3324

Precision-engineered for a lifetime of accurate, dependable performance. Easy-to-read 4½" pyrometers feature high sensitivity, ruggedness and precise tracking. Both models are compensated for ambient temperature changes and include copper circuit compensation. Model 29 is standard type, 3324 is rugged seal type. All meter scales are marked with both Fahrenheit and Centrigrade graduations. Thermocouples listed in table are iron-constantan and calibrated to exactly 5 or 10 ohms, ±1% per table. Shpg. wt., 2 lbs.

MODEL 29

Stock No.	Range °F	Range °C	Ext. Ohms	Sens. in mA	EACH 1-9	10-24	25-49
52 D 8488	−150-+250	−100-+120	10	.40	36.30	32.67	30.86
52 D 8489	0-300	−20-+150	5	.40	36.30	32.67	30.86
52 D 8490	0-500	−20-+260	10	.35	36.30	32.67	30.86
52 D 8491	0-750	−20-+400	10	.30	36.30	32.67	30.86
52 D 8632	0-1000	−20-+540	10	.28	36.30	32.67	30.86
52 D 8634	0-1500	−20-+820	10	.42	33.75	30.38	28.69
52 D 8633	0-2000	−20-+1200	10	.43	33.75	30.38	28.69
52 D 8635	0-2500	−20-+1380	10	.40	33.75	30.38	28.69

MODEL 3324 RUGGED SEAL

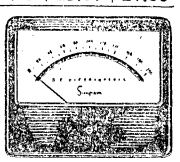
52 D 8492	−150-+250	−100-+120	10	.40	49.50	44.55	42.08
52 D 8493	0-300	−20-+150	5	.40	49.50	44.55	42.08
52 D 8494	0-500	−20-+260	10	.35	49.50	44.55	42.08
52 D 8495	0-750	−20-+400	10	.30	49.50	44.55	42.08
52 D 8636	0-1000	−20-+540	10	.28	49.50	44.55	42.08
52 D 8638	0-1500	−20-+820	10	.42	46.95	42.26	39.91
52 D 8637	0-2000	−20-+1200	10	.43	46.95	42.26	39.91
52 D 8639	0-2500	−20-+1380	10	.40	46.95	42.26	39.91

THERMOCOUPLES

*SS indicates Stainless Steel, GC indicates Glass Cloth.

Stock No.	Resis. (ohms)	Over-braid*	Lgth. (in.)	Gauge	EACH 1-9	10-24	25-49
52 D 8496	5	SS	162	20	14.10	12.69	12.00
52 D 8497	10	GC	137	24	4.95	4.41	4.21
52 D 8498	10	GC	34	30	4.20	3.78	3.57
52 D 8499	10	SS	325	20	25.65	23.09	21.80

1150 6" DC MICROAMMETERS

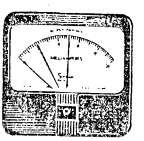


6" rectangular panel meters. Accuracy, of ±2%. Ranges 15 through 100 use high-flux movements designated as Model 1150H and cannot be calibrated for operation on steel panels. Ranges 200 through 500 use a 1⅜" shallow-core movement designated as Model 1150E. Shpg. wt., 2 lbs.

2% ACCURACY

Stock No.	Range, μA	EACH 1-9	10-24	25-49
52 D 6241	0-15	40.05	36.05	34.04
52 D 6242	0-25	35.85	32.27	30.47
52 D 6243	0-50	32.70	29.43	27.80
52 D 6244	0-100	31.35	28.22	26.65
52 D 6245	0-200	27.30	24.57	23.21
52 D 6246	0-500	26.70	24.03	22.70

29XA ADJUSTABLE METER RELAYS



Current or voltage actuated. Excellent for alarm, control, or limit-setting uses. Non-locking contacts can be positioned along scale arc with external control. Meter front is 4.66x4.20". Body dia., 2.75". Depth (body plus front), 1.66". Contact positioning control extends .34" from front. Shpg. wt., 1 lb.

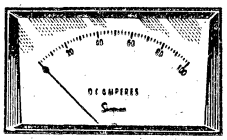
Stock No.	Type	Range	1-9, EA.	10-24, EA.	25-49, EA.
52 D 8951	DC μA	0-50	58.95	53.06	50.11
52 D 8952	DC μA	0-100	56.40	50.76	47.90
52 D 8953	DC μA	0-500	52.05	46.85	44.24
52 D 8954	DC mA	0-1	50.85	45.77	43.22
52 D 8955	DC mV	0-50	51.00	45.90	43.35

See pages 479 thru 486 for the entire line of Simpson panel meters. Allied can supply Simpson panel meters in quantities larger than those shown. Simply contact the Allied facility nearest you for complete information.

Simpson Easy-to-Read "Wide-Vue"® Panel Meters

FIVE SIZES:

- 1½"
- 2½"
- 3½"
- 4½"
- 8"



- Smart, Modern Look
- For 3½" and 4½" Meters

BEHIND-PANEL BEZEL MOUNTS

For modern, streamlined appearance on 3½" and 4½" "Wide-Vue" meters; also interchangeable with flush and recess meters of many popular styles. Behind panel mounting on thickness of ⅛" to 3/16". Black satin enamel finish. With bezel, brackets, screws, template, instructions. 8 oz.

Stock No.	Mfr's Type	Meter Size	EACH
52 D 8754	1253	3½"	2.25
52 D 8755	1123	4½"	2.25

SEE FACING PAGE FOR METER DIMENSIONS

Easy-to-read "Wide-Vue" panel meters with specially formulated plastic covers for wide-angle readability and maximum protection. Feature longer meter scales—3½" meters have scales ½" longer than conventional types. DC and AC-rectifier meters have "self-shielded" movement that is unaffected by steel panels or stray magnetic fields. AC milliammeters and ammeters (listed on the facing page) are calibrated for use on 25 Hz through 800 Hz. All other AC meters have iron-vane movement. All meters are furnished in black molded bakelite cases with recessed zero adjustments. Polished and spring-loaded jewels prevent damage from shock and vibration. Meter terminals are 8-32 studs with hex nuts. Meter accuracy is ±2% of full scale, except Model 1214 AC-rectifier types, ±3% of full scale. See opposite page for dimensions of meters below. Av. shpg. wt., 1 lb.

DC MILLIVOLTMETERS

Range	Model 1212—1½"				Model 1227—2½"				Model 1327—3½"				Model 1329—4½"			
	Stock No.	EACH 1-9	10-24	25-49	Stock No.	EACH 1-9	10-24	25-49	Stock No.	EACH 1-9	10-24	25-49	Stock No.	EACH 1-9	10-24	25-49
0-50	52 D 8543	16.95	15.26	14.41	.....	.....	.....	.....	52 D 8030	18.15	16.20	15.30	52 D 8031	19.65	17.69	16.70

DC VOLTMETERS

0-5	52 D 8522	16.95	15.26	14.41	52 D 8700	18.15	16.34	15.43	52 D 8991	18.90	17.00	16.07	52 D 8992	20.70	18.63	17.60
0-10	52 D 8523	16.95	15.26	14.41	52 D 8701	18.15	16.34	15.43	52 D 8149	18.90	17.00	16.07	52 D 8157	20.70	18.63	17.60
0-15	52 D 8524	16.95	15.26	14.41	52 D 8702	18.15	16.34	15.43	52 D 8150	18.90	17.00	16.07	52 D 8158	20.70	18.63	17.60
0-25	52 D 8525	16.95	15.26	14.41	52 D 8032	18.15	16.34	15.43	52 D 8034	18.90	17.00	16.07	52 D 8036	20.70	18.63	17.60
0-30	52 D 8526	16.95	15.26	14.41	52 D 8703	18.15	16.34	15.43	52 D 6870	18.90	17.00	16.07	52 D 6884	20.70	18.63	17.60
0-50	52 D 8527	16.95	15.26	14.41	52 D 8704	18.15	16.34	15.43	52 D 8151	18.90	17.00	16.07	52 D 8159	20.70	18.63	17.60
0-100	52 D 8528	16.95	15.26	14.41	52 D 8705	18.15	16.34	15.43	52 D 8152	18.90	17.00	16.07	52 D 8160	20.70	18.63	17.60
0-150	52 D 8529	16.95	15.26	14.41	52 D 8706	18.15	16.34	15.43	52 D 8153	18.90	17.00	16.07	52 D 8161	20.70	18.63	17.60
0-200	.....	.....	.....	.....	52 D 8707	18.15	16.34	15.43	52 D 8993	18.90	17.00	16.07	52 D 8994	20.70	18.63	17.60
0-300	52 D 8530	16.95	15.26	14.41	52 D 8708	18.15	16.34	15.43	52 D 8155	18.90	17.00	16.07	52 D 8163	20.70	18.63	17.60
0-500	52 D 8531	21.15	19.04	17.98	52 D 8033	18.90	17.00	16.07	52 D 8035	19.65	17.69	16.70	52 D 8037	21.30	19.17	18.11
0-750	.....	.....	.....	.....	52 D 8709	23.10	20.79	19.64	52 D 8905	19.65	17.69	16.70	52 D 8906	21.30	19.17	18.11
0-1000	.....	.....	.....	.....	52 D 8710	23.55	21.20	19.98	52 D 8995	24.45	22.00	20.78	52 D 8996	26.10	23.49	22.19

DC MICROAMMETERS

0-50	52 D 8544	21.30	19.17	18.11	52 D 8721	22.05	19.85	18.74	52 D 8192	22.50	20.25	19.13	52 D 8196	24.30	21.87	20.66
0-100	52 D 8545	19.05	17.15	16.19	52 D 8722	19.65	17.69	16.70	52 D 8193	20.70	18.63	17.60	52 D 8197	22.95	20.66	19.51
0-200	52 D 8546	17.25	15.53	14.66	52 D 8038	18.00	16.20	15.30	52 D 8040	18.90	17.00	16.07	52 D 8042	20.70	18.63	17.60
0-500	52 D 8547	16.95	15.26	14.41	52 D 8039	17.70	15.93	15.05	52 D 8041	18.60	16.74	15.81	52 D 8043	20.10	18.09	17.09
25-0-25	52 D 8548	21.45	19.31	18.23	.....	.....	.....	.....	52 D 7673	22.65	20.39	19.25	52 D 7674	24.45	22.00	20.78
50-0-50	52 D 8549	19.20	17.28	16.32	52 D 8723	20.10	18.09	17.09	52 D 8194	20.70	18.63	17.60	52 D 8198	23.10	20.79	19.64
100-0-100	52 D 8550	17.40	15.66	14.79	52 D 8724	18.15	16.34	15.43	52 D 8917	19.05	17.15	16.19	52 D 8918	21.00	18.90	17.85
500-0-500	52 D 8551	16.50	14.85	14.05	52 D 8725	17.25	15.53	14.66	52 D 8919	18.00	16.20	15.30	52 D 8920	19.05	17.15	16.19

DC MILLIAMMETERS

0-1	52 D 8532	16.35	14.72	13.90	52 D 8711	17.10	15.39	14.54	52 D 8181	17.70	15.93	15.05	52 D 8186	18.90	17.00	16.07
0-3	.....	.....	.....	.....	52 D 8712	17.10	15.39	14.54	52 D 7662	17.70	15.93	15.05	52 D 7663	18.90	17.00	16.07
0-5	52 D 8533	16.35	14.72	13.90	52 D 8044	17.10	15.39	14.54	52 D 8048	17.70	15.93	15.05	52 D 8052	18.90	17.00	16.07
0-10	52 D 8534	16.35	14.72	13.90	52 D 8713	17.10	15.39	14.54	52 D 8182	17.70	15.93	15.05	52 D 8187	18.90	17.00	16.07
0-15	52 D 8535	16.35	14.72	13.90	52 D 8714	17.10	15.39	14.54	52 D 8907	17.70	15.93	15.05	52 D 8908	18.90	17.00	16.07
0-20	.....	.....	.....	.....	52 D 8715	17.10	15.39	14.54	52 D 8969	17.70	15.93	15.05	52 D 8997	18.90	17.00	16.07
0-25	52 D 8536	16.95	15.26	14.41	52 D 8045	17.40	15.66	14.79	52 D 8049	18.15	16.34	15.43	52 D 8053	19.65	17.69	16.70
0-50	52 D 8537	16.95	15.26	14.41	52 D 8716	17.40	15.66	14.79	52 D 8183	18.15	16.34	15.43	52 D 8188	19.65	17.69	16.70
0-100	52 D 8538	16.95	15.26	14.41	52 D 8717	17.40	15.66	14.79	52 D 8184	18.15	16.34	15.43	52 D 8189	19.65	17.69	16.70
0-150	52 D 8539	16.95	15.26	14.41	52 D 8718	17.40	15.66	14.79	52 D 8185	18.15	16.34	15.43	52 D 8190	19.65	17.69	16.70
0-200	52 D 8540	16.95	15.26	14.41	52 D 8719	17.40	15.66	14.79	52 D 8909	18.15	16.34	15.43	52 D 8910	19.65	17.69	16.70
0-250	52 D 8541	16.95	15.26	14.41	52 D 8046	17.40	15.66	14.79	52 D 8050	18.15	16.34	15.43	52 D 8054	19.65	17.69	16.70
0-500	52 D 8542	16.95	15.39	14.54	52 D 8047	17.40	15.66	14.79	52 D 8051	18.15	16.34	15.43	52 D 8055	19.65	17.69	16.70
0-750	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8998	18.15	16.34	15.43	52 D 8999	19.65	17.69	16.70
0-1000	.....	.....	.....	.....	52 D 8720	17.40	15.66	14.79	52 D 7668	18.15	16.34	15.43	52 D 7669	19.65	17.69	16.70

DC AMMETERS (*Require shunts, see page 483)

0-1	52 D 8515	16.95	15.26	14.41	52 D 8726	17.40	15.66	14.79	52 D 8165	18.15	16.34	15.43	52 D 8173	19.65	17.69	16.70
0-1.5	.....	.....	.....	.....	52 D 8727	17.40	15.66	14.79	52 D 8911	18.15	16.34	15.43	.....	.....	.....	.....
0-2	52 D 8516	16.95	15.26	14.41	52 D 8056	17.40	15.66	14.79	52 D 8059	18.15	16.34	15.43	52 D 8078	19.65	17.69	16.70
0-3	52 D 8517	16.95	15.26	14.41	52 D 8057	17.40	15.66	14.79	52 D 8060	18.15	16.34	15.43	52 D 8079	19.65	17.69	16.70
0-5	52 D 8518	16.95	15.26	14.41	52 D 8728	17.40	15.66	14.79	52 D 8166	18.15	16.34	15.43	52 D 8174	19.65	17.69	16.70
0-10	52 D 8519	16.95	15.26	14.41	52 D 8729	17.40	15.66	14.79	52 D 8168	18.15	16.34	15.43	52 D 8176	19.65	17.69	16.70
0-15	52 D 8520	16.95	15.26	14.41	52 D 8730	17.40	15.66	14.79	52 D 8170	18.15	16.34	15.43	52 D 8178	19.65	17.69	16.70
0-25	.....	.....	.....	.....	52 D 8731	17.40	15.66	14.79	52 D 8171	18.15	16.34	15.43	52 D 8179	19.65	17.69	16.70
0-30	.....	.....	.....	.....	52 D 8732	17.40	15.66	14.79	52 D 8913	18.15	16.34	15.43	52 D 8914	19.65	17.69	16.70
0-50	52 D 8521	16.95	15.26	14.41	52 D 8058	17.40	15.66	14.79	52 D 8061	18.15	16.34	15.43	52 D 8080	19.65	17.69	16.70
*0-100	.....	.....	.....	.....	52 D 8733	17.40	15.66	14.79	52 D 8915	18.15	16.34	15.43	52 D 8916	19.65	17.69	16.70
*0-150	.....	.....	.....	.....	52 D 8734	17.40	15.66	14.79	52 D 8062	18.15	16.34	15.43	.....	.....	.....	.....
*0-200	.....	.....	.....	.....	52 D 8735	17.40	15.66	14.79	.....	.....	.....	.....	52 D 8069	19.65	17.69	16.70
*0-300	.....	.....	.....	.....	52 D 8736	17.40	15.66	14.79	52 D 8064	18.15	16.34	15.43	52 D 8070	19.65	17.69	16.70
*0-500	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8065	18.15	16.34	15.43	52 D 8071	19.65	17.69	16.70
15-0-15	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8066	19.20	17.28	16.32	.....	.....	.....	.....
30-0-30	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8067	19.20	17.28	16.32	.....	.....	.....	.....

Specify Stock No., Range and Model No. on Panel Meter Orders

"Wide-Vue" Panel Meters (Cont'd)

Simpson

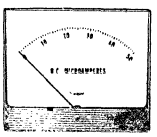
METER DIMENSIONS

Model No.	Flange	Body Dia.	Depth	Scale Length
1212	1.76x1.76"	1.5"	1.37"	1.5"
1227	2.47x2.47"	2.17"	1.06"	2.5"
1327	3.25x3.25"	2.73"	1.08"	3.14"
1329	4.00x4.68"	2.75"	1.08"	3.93"
1214	1.76x1.76"	1.5"	1.37"	1.5"
1247	2.47x2.47"	2.17"	1.06"	2.5"
1347	3.25x3.25"	2.73"	1.08"	3.14"
1349	4.00x4.68"	2.75"	1.08"	3.93"
728†	6.50x8.00"	3.00"	2.31"	6.9"
1257	2.47x2.47"	2.17"	1.15"	2.5"
1357	3.25x3.25"	2.73"	1.22"	3.14"
1359	4.00x4.68"	2.75"	1.20"	3.93"
1327T	3.25x3.25"	2.73"	1.08"	3.14"
1329T	4.00x4.68"	2.75"	1.08"	3.93"
1379	4.00x4.68"	2.75"	1.20"	3.93"

RECTIFIER-TYPE AC VOLTMETERS

Range	Model 1214—1½" Stock No.	EACH 1-9	10-24	25-49	Model 1247—2½" Stock No.	EACH 1-9	10-24	25-49	Model 1347—3½" Stock No.	EACH 1-9	10-24	25-49	Model 1349—4½" Stock No.	EACH 1-9	10-24	25-49
0-5	.....	.....	.....	.....	52 D 8748	21.75	19.58	18.49	52 D 8941	24.75	22.28	21.04	52 D 8942	27.45	24.70	23.33
0-10	52 D 8552	23.40	21.06	19.89	52 D 8749	21.75	19.58	18.49	52 D 8943	24.75	22.28	21.04	52 D 8944	27.45	24.70	23.33
0-50	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8945	24.75	22.28	21.04	52 D 8946	27.45	24.70	23.33
0-150	52 D 8553	23.40	21.06	19.89	52 D 8750	21.75	19.58	18.49	52 D 8087	24.75	22.28	21.04	52 D 8088	27.45	24.70	23.33
0-300	.....	.....	.....	.....	52 D 8751	21.75	19.58	18.49	52 D 8947	24.75	22.28	21.04	52 D 8948	27.45	24.70	23.33

8" TAUT-BAND DC MICROAMMETER



Sensitive DC microammeter boasts scale nearly 7" long. Offers exceptional readability, ±2% full-scale accuracy. Av. shpg. wt., 1 lb.

Model 728T—8"

Range	Stock No.	EACH 1-9	10-24	25-49
0-25	52 D 8089	40.05	36.05	34.04
0-50	52 D 8090	35.25	31.73	29.96
0-100	52 D 8091	34.05	30.65	28.94

AC VOLTMETERS

Range	Model 1257—2½" Stock No.	EACH 1-9	10-24	25-49	Model 1357—3½" Stock No.	EACH 1-9	10-24	25-49	Model 1359—4½" Stock No.	EACH 1-9	10-24	25-49
0-15	52 D 8737	16.50	14.85	14.03	52 D 8921	17.25	15.53	14.66	52 D 8922	19.35	17.42	16.45
0-50	52 D 8738	16.50	14.85	14.03	52 D 8923	17.25	15.53	14.66	52 D 8924	19.35	17.42	16.45
0-150	52 D 8739	17.25	15.53	14.66	52 D 8154	18.60	16.74	15.81	52 D 8162	19.65	17.69	16.70
0-300	52 D 8740	17.25	15.53	14.66	52 D 8156	18.60	16.74	15.81	52 D 8164	19.65	17.69	16.70

AC MILLIAMMETERS

0-50	52 D 8745	15.60	14.04	13.26	52 D 8925	16.50	14.85	14.00	52 D 8926	19.20	17.28	16.32
0-100	52 D 8746	15.60	14.04	13.26	52 D 8927	16.50	14.85	14.00	52 D 8928	19.20	17.28	16.32
0-500	52 D 8747	15.60	14.04	13.26	52 D 8929	16.50	14.85	14.00	52 D 8930	19.20	17.28	16.32

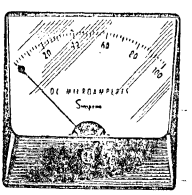
AC AMMETERS

0-5	52 D 8741	15.60	14.04	13.26	52 D 8167	16.50	14.85	14.03	52 D 8175	19.20	17.28	16.32
0-10	52 D 8742	15.60	14.04	13.26	52 D 8169	16.50	14.85	14.03	52 D 8177	19.20	17.28	16.32
0-25	52 D 8743	16.35	14.72	13.91	52 D 8076	17.10	15.39	14.54	52 D 8077	19.65	17.69	16.70
0-50	52 D 8744	16.35	14.72	13.91	52 D 8172	17.10	15.39	14.54	52 D 8180	19.65	17.69	16.70

TAUT-BAND DC MICROAMMETERS

"Wide-Vue" microammeters with sensitive taut band movement for greatly increased repeatability and lower resistance. Have 25% fewer parts than meters with core magnet movements. Meet rigid quality and performance standards. Black phenolic case, plastic cover. Dimensions above. Wt., 1 lb.

Range	Model 1327T—3½" Stock No.	EACH 1-9	10-24	25-49	Model 1329T—4½" Stock No.	EACH 1-9	10-24	25-49
0-10	52 D 8101	36.90	33.21	31.37	52 D 8106	39.90	35.91	33.92
0-15	52 D 8102	33.00	29.70	28.05	52 D 8107	36.00	32.40	30.60
0-25	52 D 8103	31.95	28.76	27.16	52 D 8108	34.65	31.19	29.45
0-50	52 D 8104	24.45	22.00	20.78	52 D 8109	26.25	23.63	22.31
0-100	52 D 8105	22.50	20.25	19.13	52 D 8110	24.75	22.28	21.04



SEGMENTAL VOLTMETERS

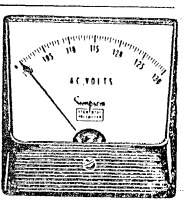
Types 1347, 1349. Indicate very small changes in input conditions—significant portion of voltage range is expanded to full scale. Measure voltage from 100-130 AC. Use for monitoring line voltage. Operating frequency range, 20-20,000 Hz. Accuracy, ±0.5% center scale at 25°C and 60 Hz sine wave. Dimensions: Frequency influence, less than 0.5%. Max. input, 150 Vrms. Model 1347, 3.25x 3.25x2.73" mtg. dia. Model 1349, 4.68x4.00x2.75" mtg. dia.

52 D 6081. Type 1347 3½" Meter. Shpg. wt., 1½ lbs..... **54.45**

52 D 6887. Type 1349 4½" Meter. Shpg. wt., 1½ lbs..... **54.75**

Type 1349 Multi-Range 4½" Meter. Expanded scale ranges of 100-130, 200-260, 400-520 AC volts. Operating range, 20-20,000 Hz. Accuracy, ±0.5% center scale. Frequency influence, less than 0.5%. Max. input, 150/300/600 Vrms. For use in line voltage monitoring. Dimensions, 4.28x4.00x2.75" mtg. dia. 1½ lbs.

52 D 6890 ..... **67.65**



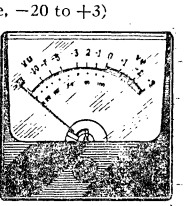
MODEL 1379 WIDE-VUE WATTMETERS

Dynamometer-type meters for measurement of DC and single-phase AC power with frequencies to 250 Hz. Feature easy-to-read "Wide-Vue" scales. All units can be used with power factors below 50% if maximum ratings are observed. All are calibrated for either magnetic or non-magnetic panels and for frequency range from 25 to 125 Hz. *In table below indicates compensated meter, accuracy ±3% of full scale reading. Others have accuracy of ±2% of full scale reading. Dimensions above. Av. shpg. wt., 1 lb.

Stock No.	Range Watts	Max. Amps	Max. Volts	EACH 1-9	10-24	25-49
52 D 8476	0-10*	.175	300	61.35	55.22	52.15
52 D 8477	0-20*	.400	300	61.35	55.22	52.15
52 D 8478	0-30*	.650	300	61.35	55.22	52.15
52 D 8479	0-75	1.0	150	45.90	41.31	39.02
52 D 8480	0-150	2.0	150	45.90	41.31	39.02
52 D 8481	0-300	4.0	150	45.90	41.31	39.02
52 D 8482	0-600	4.0	300	49.05	44.15	41.69
52 D 8483	0-750	10.0	150	45.90	41.31	39.02
52 D 8484	0-1500	10.0	300	49.05	44.15	41.69
52 D 8485	0-3000	20.0	300	49.05	44.15	41.69

"WIDE-VUE" VU METERS (Range, −20 to +3)

- Self-Shielded Annular Movement
- Not Affected by Magnetic Fields

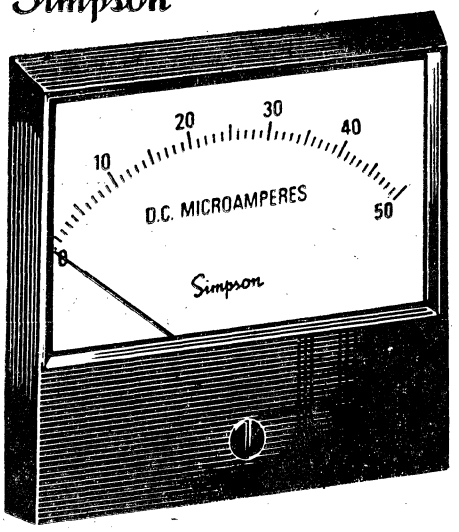


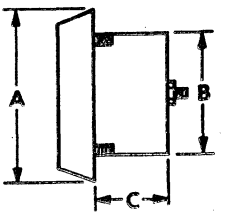
For broadcast and communications use. Have plastic covers for wide-angle readability; show volume level in both VU and percentage modulation. Type A scale stresses level in VU for monitoring wire lines. Type B scale stresses percentage use of transmitter output in radio communications. Dimensions above. Av. shpg. wt., 1½ lbs.

Model 1214—A Scale—1½" Stock No.	EACH 1-9	10-24	25-49	Stock No.	EACH 1-9	10-24	25-49
52 D 8554	26.10	23.49	22.19	.....	.....	.....	.....
Model 1347—A Scale—3½"				Model 1347—B Scale—3½"			
52 D 7950	29.55	26.60	25.12	52 D 7951	29.55	26.60	25.12
Model 1349—A Scale—4½"				Model 1349—B Scale—4½"			
52 D 8949	32.10	28.89	27.29	52 D 8950	32.10	28.89	27.29

Simpson Century Series Panel Meters

FEATURING EASY-TO-READ METER DESIGN CONCEPT





METER DIMENSIONS

Model	Front A	Body Dia. B	Depth C
2124-2124TB	4.20"	2.69"	1.34"
2134-2144	4.20"	2.69"	1.34"
2154-2174	4.20"	2.69"	1.34"
2123-2123TB	3.00"	2.69"	1.34"
2133-2143	3.00"	2.69"	1.34"
2153-2173	3.00"	2.69"	1.34"
2122-2122TB	2.38"	2.16"	1.34"
2132-2142	2.38"	2.16"	1.34"
2152	2.38"	2.16"	1.34"

- Lenses made of phenolic and glass
- AC meters magnetically damped
- DC meters self-shielded movements
- Longer scales than conventional types

Easy-to-read "Century" panel meters with specially formulated lenses of phenolic and glass for wide-angle readability and maximum protection. Feature longer meter scales—3½" meters have scales ½" longer than conventional types.

DC and AC-rectifier meters have "self-shielded" movements unaffected by steel panels or stray magnetic fields. All other AC meters have iron vane, magnetically damped movement. Recessed zero adjustments. Polished and spring-loaded jewels prevent damage from shock and vibration. Meter terminals are 8-32 size studs with hex type nuts. Suffix "TB" indicates Taut-Band construction.

Offer a meter accuracy that is ±2% of full scale reading. The AC rectifier types offer a meter accuracy that is ±3% of full scale. See chart and diagram at left for complete dimensions of meters below. Average shpg. wt. 1 lb.

DC MILLIAMMETERS

Range	Model 2122-2½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49	Model 2123-3½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49	Model 2124-4½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49
0-1	52 D 6754	18.90	17.01	16.07	52 D 5762	19.50	17.55	16.58	52 D 8796	20.85	18.77	17.72
0-3					52 D 5763	19.50	17.55	16.58				
0-5	52 D 6755	18.90	17.01	16.07	52 D 8788	19.50	17.55	16.58	52 D 8797	20.85	18.77	17.72
0-10	52 D 6756	18.90	17.01	16.07	52 D 8789	19.50	17.55	16.58	52 D 8798	20.85	18.77	17.72
0-25	52 D 6757	19.20	17.28	16.32	52 D 8790	20.10	18.09	17.09				
0-50	52 D 5758	19.20	17.28	16.32	52 D 8791	20.10	18.09	17.09	52 D 8799	21.75	19.58	18.49
0-100	52 D 5759	19.20	17.28	16.32	52 D 8792	20.10	18.09	17.09	52 D 8800	21.75	19.58	18.49
0-200	52 D 5760	19.20	17.28	16.32	52 D 8793	20.10	18.09	17.09				
0-300					52 D 8794	20.10	18.09	17.09				
0-500	52 D 5761	19.20	17.28	16.32	52 D 8795	20.10	18.09	17.09	52 D 8802	21.75	19.58	18.49

DC VOLTMETERS

0-5	52 D 8804	20.10	18.09	17.09	52 D 8828	20.85	18.77	17.72				
0-10	52 D 8808	20.10	18.09	17.09	52 D 8830	20.85	18.77	17.72	52 D 8850	22.80	20.52	19.38
0-15	52 D 8809	20.10	18.09	17.09	52 D 8832	20.85	18.77	17.72	52 D 8852	22.80	20.52	19.38
0-25	52 D 8816	20.10	18.09	17.09	52 D 8836	20.85	18.77	17.72				
0-30	52 D 8817	20.10	18.09	17.09	52 D 8838	20.85	18.77	17.72	52 D 8854	22.80	20.52	19.38
0-50	52 D 8820	20.10	18.09	17.09	52 D 8840	20.85	18.77	17.72	52 D 8856	22.80	20.52	19.38
0-100	52 D 8822	20.10	18.09	17.09	52 D 8842	20.85	18.77	17.72	52 D 8858	22.80	20.52	19.38
0-150	52 D 8824	20.10	18.09	17.09	52 D 8844	20.85	18.77	17.72	52 D 8860	22.80	20.52	19.38
0-300	52 D 8826	20.10	18.09	17.09	52 D 8846	20.85	18.77	17.72				
0-500					52 D 8848	21.75	19.58	18.49				

DC MILLIVOLTMETERS

0-50	52 D 8768	19.20	17.28	16.32					52 D 8769	21.75	19.58	18.48

‡Use external portable shunts

DC AMMETERS

0-1					52 D 8776	20.10	18.09	17.09	52 D 8785	21.75	19.58	18.49
0-3	52 D 8770	19.20	17.28	16.32	52 D 8777	20.10	18.09	17.09				
0-5	52 D 8771	19.20	17.28	16.32	52 D 8778	20.10	18.09	17.09	52 D 8786	21.75	19.58	18.49
0-10	52 D 8772	19.20	17.28	16.32	52 D 8779	20.10	18.09	17.09	52 D 8787	21.75	19.58	18.49
0-15	52 D 8773	19.20	17.28	16.32	52 D 8780	20.10	18.09	17.09	52 D 6764	21.75	19.58	18.49
0-25	52 D 8774	19.20	17.28	16.32	52 D 8781	20.10	18.09	17.09				
‡0-50	52 D 8775	19.20	17.28	16.32	52 D 8782	20.10	18.09	17.09	52 D 6765	21.75	19.58	18.49
‡0-100					52 D 8783	20.10	18.09	17.09	52 D 6766	21.75	19.58	18.49
‡0-200					52 D 8784	20.10	18.09	17.09				

TB-Taut Band

DC MICROAMMETERS

0-10TB					52 D 6774	40.65	36.59	34.55	52 D 6790	43.95	39.56	37.36
0-15TB					52 D 6775	36.30	32.67	30.86	52 D 6791	39.60	35.64	33.66
0-25TB	52 D 6767	33.60	30.24	28.56	52 D 6776	35.25	31.73	29.96	52 D 6792	38.25	34.43	32.52
0-50	52 D 6768	24.30	21.87	19.66	52 D 6777	24.75	23.28	21.04	52 D 6793	26.85	24.17	22.82
0-50TB					52 D 6778	27.00	24.30	22.95	52 D 6794	28.95	26.06	24.61
0-100TB					52 D 6779	24.75	23.28	21.04	52 D 6795	27.30	24.57	23.21
0-100	52 D 6769	24.00	21.60	20.40	52 D 6780	22.80	20.52	19.38	52 D 6797	25.35	22.82	21.55
0-200	52 D 6770	22.50	20.25	19.13	52 D 6781	20.85	18.77	17.72				
0-200TB									52 D 6798	25.80	23.22	21.93
0-500	52 D 6771	19.50	17.55	16.58	52 D 6782	20.85	18.77	17.72	52 D 6799	22.20	19.98	18.87
25-0-25					52 D 6783	25.05	22.55	21.29	52 D 6800	27.00	24.30	22.95
50-0-50	52 D 6772	22.20	19.98	18.87	52 D 6784	22.80	20.52	19.38	52 D 6802	15.50	13.95	13.18
100-0-100	52 D 6773	20.10	18.09	17.09	52 D 6785	21.00	18.90	17.85	52 D 6804	23.10	20.79	19.64
500-0-500					52 D 6786	19.80	17.82	16.83	52 D 6805	21.00	18.90	17.85

CENTURY SERIES PANEL METERS CONTINUED ON NEXT PAGE

Panel Meters, Shunts and Transformers

Simpson

CENTURY SERIES PANEL METERS (Cont'd)

AC VOLTMETERS

Range	Model 2152-2½" Stock No.	EACH 1-9	10-24	25-49	Model 2153-3½" Stock No.	EACH 1-9	10-24	25-49	Model 2154-4½" Stock No.	EACH 1-9	10-24	25-49
0-10	52 D 8894	18.15	16.34	15.43	52 D 8897	19.05	17.15	16.19	.....	.....	.....	.....
0-15	.....	.....	.....	.....	52 D 8898	19.05	17.15	16.19	.....	.....	.....	.....
0-150	52 D 8895	19.05	17.15	16.19	52 D 8899	20.55	18.50	17.47	52 D 8902	21.75	19.58	18.49
0-250	.....	.....	.....	.....	52 D 8900	20.55	18.50	17.47	52 D 8903	21.75	19.58	18.49
0-300	52 D 8896	19.05	17.15	16.19	52 D 8901	20.55	18.50	17.47	52 D 8904	21.75	19.58	18.49

AC AMMETERS

0-1	52 D 8862	17.25	15.53	14.66	52 D 8872	18.15	16.34	15.43	.....	.....	.....	.....
0-2	.....	.....	.....	.....	52 D 8874	18.15	16.34	15.43	.....	.....	.....	.....
0-3	.....	.....	.....	.....	52 D 8876	18.15	16.34	15.43	.....	.....	.....	.....
0-5	52 D 8863	17.25	15.53	14.66	52 D 8877	18.15	16.34	15.43	52 D 6813	19.35	17.42	16.45
0-10	52 D 8864	17.25	15.53	14.66	52 D 6806	18.15	16.34	15.43	52 D 6814	19.35	17.42	16.45
0-15	52 D 8866	17.25	15.53	14.66	52 D 6807	18.15	16.34	15.43	52 D 6815	19.35	17.42	16.45
0-25	52 D 8868	18.00	16.20	15.30	52 D 6809	18.90	17.01	16.07	52 D 6817	19.35	17.42	16.45
0-50	52 D 8870	18.00	16.20	15.30	52 D 6810	18.90	17.01	16.07	52 D 8880	20.10	18.09	17.09
0-75	.....	.....	.....	.....	52 D 6811	18.15	16.34	15.43	.....	.....	.....	.....
0-100	.....	.....	.....	.....	52 D 6812	18.15	16.34	15.43	.....	.....	.....	.....
0-200	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8881	19.35	17.42	16.45
0-300	.....	.....	.....	.....	.....	.....	.....	.....	52 D 8882	19.35	17.42	16.45

AC RECTIFIER VOLTMETERS

Range	Model 2142-2½" Stock No.	EACH 1-9	10-24	25-49	Model 2143-3½" Stock No.	EACH 1-9	10-24	25-49	Model 2144-4½" Stock No.	EACH 1-9	10-24	25-49
0-150	.....	.....	.....	.....	52 D 8883	27.30	24.57	23.21	52 D 8884	30.30	27.27	25.76

SEGMENTAL VOLTMETERS

Accuracy is 0.5% in percent of center scale

100-130	.....	.....	.....	.....	52 D 8885	60.00	54.00	51.00	52 D 8886	60.30	54.27	51.26

VU METER (Range −20 to +3 dB)

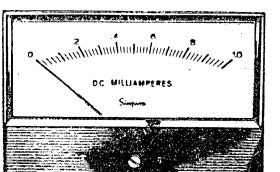
"A" Scale	58 D 8888	31.80	28.62	27.03	52 D 8890	32.55	29.30	27.67	52 D 8892	35.40	31.86	29.99

DESIGNER SERIES® PANEL METERS

Designer Series meters made to provide enhanced appearance, easy-to-read scales, and low height design for use in modern electronic equipment. Feature spring-loaded jewel movements, glass windows. Bright red knife-edge pointers. DC types have "self-shielded" meter movements—unaffected by stray magnetic fields. AC types have sensitive iron vane meter movement. ±2% full-scale accuracy. Black phenolic cases and covers. Scale numbers are black on white background for easy readability. With mounting hardware. See table at right for dimensions. Av. shpg wt., 1 lb.

METER DIMENSIONS

Model No.	Flange	Body Dia.	Depth	Scale Length
523	2.67x3.95"	2.16"	2.86"	3.129"
543	2.67x3.95"	2.16"	2.86"	3.129"
553	2.67x3.95"	2.16"	2.86"	2.822"
524	2.90x4.50"	2.16"	2.86"	3.510"
544	2.90x4.50"	2.16"	2.86"	3.510"
554	2.90x4.50"	2.16"	2.86"	3.160"



DC MICROAMMETERS

Range	Model 523—3½" Stock No.	EACH 1-9	10-24	25-49	Model 524—4½" Stock No.	EACH 1-9	10-24	25-49
0-25	52 D 8560	30.75	27.68	26.14	52 D 8573	33.90	30.51	28.82
0-50	52 D 8561	24.75	22.28	21.04	52 D 8574	26.85	24.17	22.82
0-100	52 D 8562	22.80	20.52	19.38	52 D 8575	25.35	22.82	21.55
0-200	52 D 8563	20.85	18.77	17.72	52 D 8576	22.80	20.52	19.38
50-0-50	52 D 8564	22.80	20.52	19.38	52 D 8577	25.50	22.95	21.68
100-0-100	52 D 8565	21.00	18.90	17.85	52 D 8578	23.10	20.79	19.64

DC MILLIAMMETERS

	Model 523—3½"				Model 524—4½"			
0-1	52 D 8566	19.50	17.55	16.58	52 D 8579	20.85	18.77	17.72
0-100	52 D 8567	20.10	18.09	17.09	52 D 8580	21.75	19.58	18.49

DC AMMETERS

	Model 523—3½"				Model 524—4½"			
0-10	52 D 8568	20.10	18.09	17.09	52 D 8581	21.75	19.58	18.49

DC VOLTMETERS

Range	Model 523—3½" Stock No.	EACH 1-9	10-24	25-49	Model 524—4½" Stock No.	EACH 1-9	10-24	25-49
0-15	52 D 8569	20.85	18.77	17.72	52 D 8582	22.80	20.52	19.38
0-30	52 D 8570	20.85	18.77	17.72	52 D 8583	22.80	20.52	19.38
0-50	52 D 8571	20.85	18.77	17.72	52 D 8584	22.80	20.52	19.38
0-150	52 D 8572	20.85	18.77	17.72	52 D 8585	22.80	20.52	19.38

AC AMMETERS

	Model 553—3½"				Model 554—4½"			
0-5	52 D 8586	18.15	16.34	15.43	52 D 8591	21.15	19.04	17.98
0-10	52 D 8587	18.15	16.34	15.43	52 D 8592	21.15	19.04	17.98
0-50	52 D 8588	18.15	16.34	15.43	52 D 8593	21.75	19.58	18.49

AC VOLTMETERS

	Model 553—3½"				Model 554—4½"			
0-150	52 D 8589	20.55	18.50	17.47	52 D 8594	21.75	19.58	18.49
0-300	52 D 8590	20.55	18.50	17.47	52 D 8595	21.75	19.58	18.49

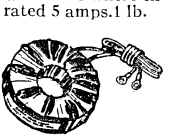
VU METER (Range −20 to +3 db)

	Model 543—3½" A Scale				Model 544—4½" A Scale			
A Scale	52 D 8596	29.55	26.60	25.12	52 D 8597	32.10	28.89	27.29

CURRENT TRANSFORMERS

Inserted one turn primary type for use with switchboard and panel AC ammeters where external transformers are required. High-dielectric insulation. Secondary rated 5 amps. 1 lb.

Amps	Stock No.	Mfr's Type	EACH	Amps	Stock No.	Mfr's Type	EACH
50	52 D 7952	1293	27.00	250	52 D 7956	1313	14.55
75	52 D 7953	1306	19.80	300	52 D 7957	1300	16.35
100	52 D 7954	1297	16.35	400	52 D 7958	1305	18.15
150	52 D 7955	1298	14.55	500	52 D 7959	1301	19.80

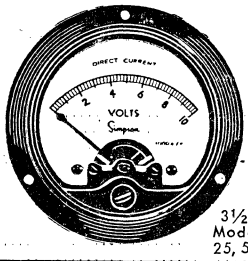


PORTABLE SHUNTS FOR DC AMMETERS

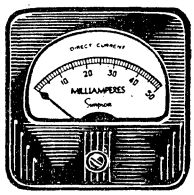
Amps	Stock No.	Mfr's Type	EACH 1-9	10-24	25-49
50	52 D 6921	6709	11.10	9.99	9.44
75	52 D 6919	6711	11.10	9.99	9.44
100	52 D 6922	6713	11.10	9.99	9.44
150	52 D 6939	6714	11.10	9.99	9.44
200	52 D 6941	6715	11.10	9.99	9.44

Specify Stock No., Range and Model No. on All Meter Orders

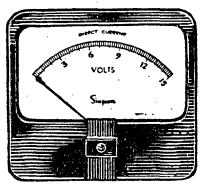
Simpson Round and Rectangular Panel Meters



3½" Models 25, 55



4½" Models 29, 39, 59



2½" Models 127, 157
3½" Models 27, 37, 57

±2% accuracy. AC meters have iron-van movements, 25-125 Hz, except AC mill ammeters, ammeters, 25-800 Hz. Bakelit cases. *Depth behind panel. 1 lb.

METER DIMENSIONS

Model	Front	Body Dia.	Depth*	Scale Length
25	3.50"	2.75"	1.31"	2.5"
27, 37	3.12x3.00"	2.75"	1.36"	2.56"
29, 39	4.20x4.66"	2.75"	1.00"	3.91"
55	3.50"	2.75"	1.41"	2.3"
57	3.12x3.00"	2.75"	1.45"	2.56"
59	4.20x4.66"	2.75"	1.09"	3.91"
127, 157	2.37x2.37"	2.17"	1.45"	1.88"

DC MILLIAMMETERS

Range	Model 127 2½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 25 3½" Rnd.	Model 27 3½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 29 4½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49
0-1	52 D 8817	17.10	15.39	14.54	52 D 8400	52 D 7520	17.70	15.93	15.05	52 D 7420	18.90	17.00	16.07
0-5	52 D 8823	17.10	15.39	14.54	52 D 8403	52 D 7521	17.70	15.93	15.05	52 D 7421	18.90	17.00	16.07
0-10	52 D 8825	17.10	15.39	14.54	52 D 8404	52 D 7522	17.70	15.93	15.05	52 D 7422	18.90	17.00	16.07
0-50	.....	.....	.....	.....	52 D 8407	52 D 7524	18.15	16.34	15.43	52 D 7424	19.65	17.69	16.70
0-100	52 D 8833	17.40	15.66	14.79	52 D 8409	52 D 7525	18.15	16.34	15.43	52 D 7425	19.65	17.69	16.70
0-500	52 D 8839	17.40	15.66	14.79	52 D 8414	52 D 7528	18.15	16.34	15.43	52 D 7428	19.65	17.69	16.70

DC VOLTMETERS

†Have external multiplier resistors. 1.5-300 volt units are 1000 ohms/volt; 500-5000 volt units are 2000 ohms/volt.

0-3	52 D 8841	18.15	16.34	15.43	52 D 8417	52 D 7515	18.90	17.00	16.07	52 D 7415	20.70	18.63	17.60
0-5	52 D 8843	18.15	16.34	15.43	52 D 8418	52 D 7516	18.90	17.00	16.07	52 D 7416	20.70	18.63	17.60
0-10	52 D 8845	18.15	16.34	15.43	52 D 8420	.....	18.90	17.00	16.07	52 D 7402	20.70	18.63	17.60
0-15	52 D 8847	18.15	16.34	15.43	52 D 8421	52 D 7502	18.90	17.00	16.07	52 D 7403	20.70	18.63	17.60
0-25	52 D 8849	18.15	16.34	15.43	52 D 8422	.....	18.90	17.00	16.07	52 D 7417	20.70	18.63	17.60
0-50	52 D 8851	18.15	16.34	15.43	52 D 8423	52 D 7518	18.90	17.00	16.07	52 D 7418	20.70	18.63	17.60
0-100	52 D 8853	18.15	16.34	15.43	52 D 8424	52 D 7507	18.90	17.00	16.07	52 D 7405	20.70	18.63	17.60
0-150	52 D 8855	18.15	16.34	15.43	52 D 8425	52 D 7504	18.90	17.00	16.07	52 D 7406	20.70	18.63	17.60
0-250	52 D 8857	18.15	16.34	15.43	52 D 8427	.....	18.90	17.00	16.07	52 D 7407	20.70	18.63	17.60
0-300	.....	.....	.....	.....	52 D 8428	52 D 7508	18.90	17.00	16.07	52 D 7408	20.70	18.63	17.60
0-500	52 D 8861	18.90	17.00	16.07	52 D 8429	52 D 7509	19.65	17.69	16.70	52 D 7409	21.30	19.17	18.11
†0-1000	.....	.....	.....	.....	52 D 8430	52 D 7510	24.45	22.00	20.78	52 D 7410	26.10	23.49	22.19
†0-1500	.....	.....	.....	.....	.....	52 D 7514	24.75	22.28	21.04	52 D 7411	26.40	23.76	22.44
†0-5000	.....	.....	.....	.....	.....	52 D 7513	26.70	24.03	22.70	52 D 7414	28.35	25.52	24.10

DC MILLIVOLTMETERS

0-50	52 D 7562	17.25	15.53	14.60	52 D 7563	.....	18.00	16.20	15.30	52 D 7576	19.65	17.69	16.70

DC AMMETERS

‡ Use external portable shunts listed on page 474.

0-2	52 D 8867	17.40	15.66	14.79	52 D 8432	52 D 7536	18.15	16.34	15.43	52 D 7436	19.65	17.69	16.70
0-3	52 D 8869	17.40	15.66	14.79	52 D 8433	52 D 7537	18.15	16.34	15.43	52 D 7437	19.65	17.69	16.70
0-5	52 D 8871	17.40	15.66	14.79	52 D 8434	52 D 7538	18.15	16.34	15.43	52 D 7438	19.65	17.69	16.70
0-10	52 D 8873	17.40	15.66	14.79	52 D 8435	52 D 7539	18.15	16.34	15.43	52 D 7439	19.65	17.69	16.70
0-25	52 D 8877	17.40	15.66	14.79	.....	52 D 7540	18.15	16.34	15.43	52 D 7440	19.65	17.69	16.70
‡0-50	52 D 8879	17.40	15.66	14.79	52 D 8438	52 D 7542	18.15	16.34	15.43	52 D 7442	19.65	17.69	16.70

DC MICROAMMETERS

Range	Model 127 2½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 25 3½" Rnd.	Model 27 3½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 29 4½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49
0-50	52 D 8887	22.05	19.85	18.74	52 D 8444	52 D 7545	22.50	20.25	19.13	52 D 7445	24.30	21.87	20.66
0-100	52 D 8889	19.65	17.69	16.70	52 D 8445	52 D 7546	20.70	18.63	17.60	52 D 7446	22.95	20.65	19.51
0-200	52 D 8891	18.00	16.20	15.30	52 D 8446	52 D 7547	18.90	17.00	16.07	52 D 7447	20.70	18.63	17.60
0-500	52 D 8893	17.70	15.93	15.05	52 D 8447	52 D 7548	18.60	16.74	15.81	52 D 7448	20.10	18.09	17.09
25-0-25	.....	.....	.....	.....	.....	52 D 7684	22.65	20.39	19.25	52 D 7691	24.45	22.00	20.78
50-0-50	.....	.....	.....	.....	52 D 8449	52 D 7685	20.70	18.63	17.60	52 D 7692	23.10	20.79	19.64
100-0-100	.....	.....	.....	.....	52 D 8450	52 D 7686	19.05	17.15	16.10	52 D 7693	21.00	18.90	17.85
500-0-500	.....	.....	.....	.....	.....	52 D 7687	18.00	16.20	15.30	52 D 7694	19.05	17.15	16.19

AC MILLIAMMETERS

Range	Model 157 2½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 55 3½" Rnd.	Model 57 3½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 59 4½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49
0-100	52 D 7023	15.60	14.04	13.26	52 D 8453	52 D 7566	16.50	14.85	14.00	52 D 7466	19.20	17.28	16.32
0-250	52 D 7024	15.60	14.04	13.26	.....	52 D 7567	16.50	14.85	14.00	52 D 7467	19.20	17.28	16.32
0-500	52 D 7025	15.60	14.04	13.26	52 D 8455	52 D 7568	16.50	14.85	14.00	52 D 7468	19.20	17.28	16.32

AC VOLTMETERS

0-5	.....	.....	.....	.....	52 D 8458	52 D 7559	17.25	15.53	14.66	52 D 7459	19.35	17.42	16.45
0-10	52 D 7029	16.50	14.85	14.03	52 D 8459	.....	17.25	15.53	14.66	52 D 7451	19.35	17.42	16.45
0-15	52 D 7030	16.50	14.85	14.03	.....	52 D 7552	17.25	15.53	14.66	52 D 7452	19.35	17.42	16.45
0-25	52 D 7031	16.50	14.85	14.03	52 D 8461	52 D 7560	17.25	15.53	14.66	52 D 7460	19.35	17.42	16.45
0-50	52 D 7032	16.50	14.85	14.03	52 D 8462	52 D 7553	17.25	15.53	14.66	52 D 7453	19.35	17.42	16.45
0-150	52 D 7033	17.25	15.53	14.66	52 D 8463	52 D 7555	18.60	16.74	15.81	52 D 7455	19.65	17.69	16.70
0-250	52 D 7034	17.25	15.53	14.66	52 D 8464	52 D 7561	18.60	16.74	15.81	52 D 7461	19.65	17.69	16.70
0-300	52 D 7035	17.25	15.53	14.66	52 D 8465	52 D 7556	18.60	16.74	15.81	52 D 7456	19.65	17.69	16.70
0-500	.....	.....	.....	.....	52 D 8466	52 D 7557	23.55	21.20	20.00	52 D 7457	25.20	22.68	21.42

AC AMMETERS

Range	Model 157 2½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 55 3½" Rnd.	Model 57 3½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49	Model 59 4½" Rect.	EACH 1-9	EACH 10-24	EACH 25-49
0-1	52 D 7037	15.60	14.04	13.26	52 D 8467	52 D 7575	16.50	14.85	14.00	52 D 7475	19.20	17.28	16.32

ADDITIONAL LISTINGS ON FACING PAGE

Space-Saving Panel Meters

Simpson

AC AMMETERS (Cont'd)

Range	Model 157 2½" Rect.	EACH 1-9	10-24	25-49	Model 55 3½" Rnd.	Model 57 3½" Rect.	EACH 1-9	10-24	25-49	Model 59 4½" Rect.	EACH 1-9	10-24	25-49
0-3	52 D 7038	15.60	14.04	13.26	52 D 8468	52 D 7577	16.50	14.85	14.00	52 D 7477	19.20	17.28	16.32
0-5	52 D 7039	15.60	14.04	13.26	52 D 8469	52 D 7578	16.50	14.85	14.00	52 D 7478	19.20	17.28	16.32
0-10	52 D 7040	15.60	14.04	13.26	52 D 8470	52 D 7579	16.50	14.85	14.00	52 D 7479	19.20	17.28	16.32
0-15	52 D 7041	15.60	14.04	13.26	52 D 8471	52 D 7582	16.50	14.85	14.00	52 D 7482	19.20	17.28	16.32
0-25	52 D 7042	16.35	14.72	13.91	52 D 8472	52 D 7580	17.10	15.39	14.54	52 D 7480	19.65	17.69	16.70
0-30	52 D 7048	16.35	14.72	13.91	52 D 8473	52 D 7612	17.10	15.39	14.54	52 D 7613	19.65	17.69	16.70
0-50	52 D 7043	16.35	14.72	13.91	52 D 8474	52 D 7581	17.10	15.39	14.54	52 D 7481	19.65	17.69	16.70
0-75	.....	.....	.....	.....	52 D 8475	52 D 8810	16.50	14.85	14.00	52 D 8811	19.20	17.28	16.32

RF AMMETERS

Internal thermocouple type. Self-shielding meter movment. Have ±2% accuracy full scale. Simpson external magnet meter movement and calibrated for non-magnetic panel. Model 37: mounting flange, 2/10"; depth, 1²³⁄₆₄"; body dia., 2¾". Model 39: mounting flange, 6/10"; depth, 1"; body dia., 2¾".

Range	Model 37 3½" Rect.	EACH 1-9	10-24	25-49	Model 39 4½" Rect.	EACH 1-9	10-24	25-49
0-1	.....	.....	.....	.....	52 D 7485	24.00	21.60	20.40
0-2	52 D 7587	21.00	18.90	17.85	.....	.....	.....	.....
0-3	52 D 7588	21.00	18.90	17.85	52 D 7488	24.00	21.60	20.40
0-5	52 D 7589	21.00	18.90	17.85	52 D 7489	24.00	21.60	20.40

MODEL 79 WATTMETERS

(Not illus.) Flange, 4.2x4.66"; 2" dia.; 1.68" dp. Av. wt., 1 lb.

Stock No.	Range Watts	Max. Amps	Max. Volts	EACH 1-9	10-24	25-49
52 D 8752	0-50	2.0	150	61.35	55.22	52.15
52 D 8812	0-75	1.0	150	45.90	41.31	39.02
52 D 8753	0-750	10.0	150	45.90	41.31	39.02
52 D 8814	0-1500	10.0	300	49.05	44.15	41.69

MODEL 47 AND 142 VU METERS

Volume level indicators for use in broadcasting and communications. Show level both in VU and percentage modulation. VU scale A, —20 to +3. 3900-ohm internal impedance across 600-ohm lines (zero reference, 1 mW). Meets all electrical and ballistic specifications of ASA and Bell Laboratories. Model 47: Flange, 3½" nom.; depth, 1²³⁄₆₄"; body dia., 2¾". Model 142: Flange, 4½"; depth, 1"; dia., 3¼". *Illuminated. Shpg. wt., 1 lb.

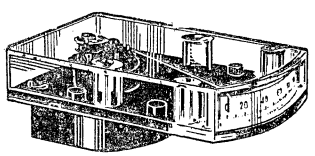
Stock No.	Model	EACH 1-9	10-24	25-49
52 D 7597	47	29.55	26.60	25.12
52 D 7598	142	32.10	28.89	27.29
52 D 7599	142*	35.10	31.59	29.84

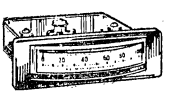
MODEL 27 DC GALVANOMETERS

Accurate indication of small currents. D'Arsonval movements. Resistance: 500-0-500 μamp meter, 46 ohms; 75-0-75 μamp, 2000 ohms. 3½" rectangular case. Body dia., 2¾"; depth, 1.36".

Stock No.	Range	1-9, EACH	10-24, EACH	25-49, EACH
52 D 7591	500-0-500	18.00	16.20	15.30
52 D 7592	75-0-75	20.10	18.09	17.09

1½", 2½" EDGEWISE PANEL METERS





- Save Panel Space
- Simple Installation

Compact meter panels featuring "self-shielded" core magnet meter movements—calibrations remain unaffected by stray magnetic fields. Meter accuracy is ±2% of full scale reading. DC voltmeters have 1000 ohms/volt sensitivity (except *2000 ohms/volt). In dust-proof molded lucite cases. Solder lug terminals, except 0-5 DC ammeter (Type 1522), stud-type terminals. Standard scales with black numbers on white background Shipped with bezel and two speed nuts. Av. shpg. wt., 12 oz.

METER DIMENSIONS

Model No.	Flange with Bezel	Height, Barrel	Depth (Total)	Scale Length
1521	0.75x2.25"	1.13"	2.00"	1.375"
1522	1.00x3.25"	1.22"	3.50"	1.875"
1542	1.00x3.25"	1.22"	3.50"	1.875"

TYPE 1521 1½" METERS

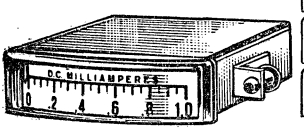
Stock No.	Mfr's Type	Range	EACH 1-9	10-24	25-49
52 D 7710	1521	0-50 DC Voltmeter	18.15	16.34	15.43
52 D 7711	1521	0-150 DC Voltmeter	18.15	16.34	15.43
52 D 7712	1521	*0-500 DC Voltmeter	18.45	16.61	15.68
52 D 7713	1521	0-1 DC Milliammeter	18.00	16.20	15.30
52 D 7714	1521	0-10 DC Milliammeter	18.00	16.20	15.30
52 D 7715	1521	0-100 DC Milliammeter	18.75	16.88	15.94
53 D 7716	1521	0-500 DC Milliammeter	18.75	16.88	15.94
52 D 7717	1521	0-50 DC Microammeter	24.15	21.74	20.53
52 D 7718	1521	0-100 DC Microammeter	21.30	19.17	18.11

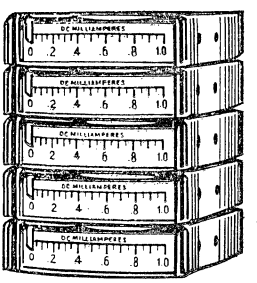
TYPES 1522 AND 1542 2½" METERS

52 D 7677	1522	0-50 DC Voltmeter	20 10	18 09	17.09
52 D 7678	1522	0-150 DC Voltmeter	20.10	18.09	17.09
52 D 7679	1522	*0-500 DC Voltmeter	20.40	18.36	17.34
52 D 7681	1522	0-5 DC Ammeter	21.15	19.04	17.98
52 D 7683	1522	0-1 DC Milliammeter	19.80	17.82	16.83
52 D 7688	1522	0-10 DC Milliammeter	19.80	17.82	16.83
52 D 7689	1522	0-100 DC Milliammeter	20.70	18.63	17.60
52 D 7690	1522	0-500 DC Milliammeter	20.70	18.63	17.60
52 D 7695	1522	0-50 DC Microammeter	25.95	23.36	22.06
52 D 7696	1522	0-100 DC Microammeter	23.40	21.06	19.89
52 D 7697	1542	VU Meter "A" Scale	33.00	29.70	28.05

STACKING EDGEWISE PANEL METERS

- Miniature Size
- Easy-to-Mount
- ±2% Accuracy





Miniature meters for easy installation in panels, modern streamlined appearance for equipment. Boast "self-shielded" core magnet movement that eliminates protruding barrel. Meter scale extends to nearly full width and height of meter—no wasted space. Accuracy, ±2% of full scale reading. Type 1921: scale length, 1.37"; panel cutout, .525x1.718"; depth behind panel, 2.3". Type 1622: scale length, 1.85"; panel cutout, .562x2.312"; depth behind panel, 2.3". Av. shpg. wt., ¾ lb.

TYPE 1921 1½" METERS

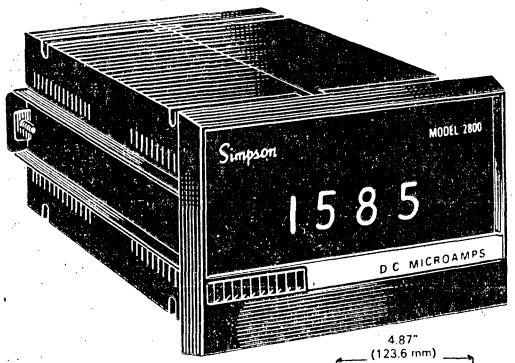
Stock No.	Range	EACH 1-9	10-24	25-49
52 D 7700	0-15 DC Voltmeter	21.30	19.17	18.10
52 D 7701	0-25 DC Voltmeter	21.30	19.17	18.10
52 D 7702	0-150 DC Voltmeter	21.30	19.17	18.10
52 D 7703	0-1 DC Milliammeter	21.00	18.90	17.85
52 D 7704	0-25 DC Milliammeter	22.05	19.85	18.74
52 D 7705	0-50 DC Milliammeter	22.05	19.85	18.74
52 D 7706	0-500 DC Milliammeter	22.05	19.85	18.74
52 D 7707	0-50 DC Millivoltmeter	22.35	20.12	19.00
52 D 7708	0-50 DC Microammeter	27.15	24.44	23.08
52 D 7709	0-500 DC Microammeter	21.75	19.58	18.49

TYPE 1622 2½" METERS

52 D 7730	0-15 DC Voltmeter	22.65	20.39	19.25
52 D 7731	0-25 DC Voltmeter	22.65	20.39	19.25
52 D 7732	0-150 DC Voltmeter	22.65	20.39	19.25
52 D 7733	0-1 DC Milliammeter	22.50	20.25	19.13
52 D 7734	0-25 DC Milliammeter	23.40	21.06	19.89
52 D 7735	0-50 DC Milliammeter	23.40	21.06	19.89
52 D 7736	0-500 DC Milliammeter	23.40	21.06	19.89
52 D 7737	0-50 DC Millivoltmeter	23.70	21.33	20.15
52 D 7738	0-50 DC Microammeter	28.35	25.52	24.11
52 D 7739	0-500 DC Microammeter	22.95	20.66	19.51

Simpson Panel Meters

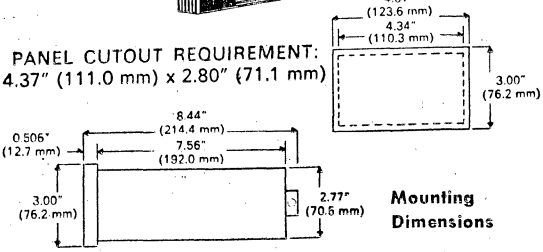
MODEL 2800 DIGITAL PANEL METERS



- Advanced Solid-State Design with Integrated Circuits
- Linear 15% Underrange Permits Reading Negative Values
- 100% Overrange Capability for Increased Versatility

Digital readout panel meters provide accurate numerical indications of voltage and current. Feature easy-to-read non-blinking display, front panel zero adjustment. Advanced solid-state circuit with integrated circuits for outstanding reliability. 100% overrange capability, flashing "1" lights to the left of other digits to indicate overrange. Reverse polarity is indicated by a light to the right of other digits; linear 15% underrange permits reading complements of negative values. Storage circuitry holds indication until input changes. Common mode rejection: greater than 90 dB at 60 Hz with 1000-ohm unbalance. Series mode rejection: greater than 35 dB. Ambient temperature range: +15° to +35° C for rated accuracy of ±0.1%, ±1 digit. Cold-gas glow readout tubes have 200,000 hour life. Three full-time readout digits. Compact styling, see dimensions at left. 117 V, 60 Hz AC. 3½ lbs.

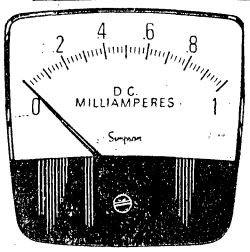
PANEL CUTOUT REQUIREMENT:
4.37" (111.0 mm) x 2.80" (71.1 mm)



Mounting Dimensions

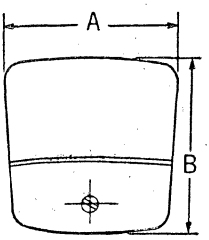
Stock No.	Range DC	Maximum Indication (With Overrange)	Input Impedance *Voltage Drop	EACH
52 D 8931 T	00.0-99.9 mV	199.9 mV	10K ohms	295.00
52 D 8932 T	.000-.999 V	1.999 V	100K ohms	295.00
52 D 8933 T	0.00-9.99 V	19.99 V	1 megohm	295.00
52 D 8934 T	00.0-99.9 V	199.9 V	1 megohm	295.00
52 D 8935 T	000.-999. V	1010. V	1 megohm	295.00
52 D 8936 T	0.00-9.99 μA	19.99 μA	50 mV*	295.00
52 D 8937 T	00.0-99.9 μA	199.9 μA	50 mV*	295.00
52 D 8938 T	.000-.999 mA	1.999 mA	50 mV*	295.00
52 D 8939 T	0.00-9.99 mA	19.99 mA	50 mV*	295.00
52 D 8940 T	00.0-99.9 mA	199.9 mA	50 mV*	295.00

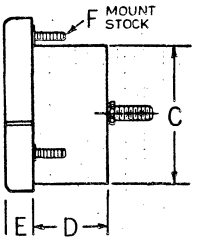
2½" AND 3½" "BOLD-VUE" PANEL METERS



- Three-Hole Mounting for Simplified Installation
- Contemporary Styling, Easy-to-Read Numerals
- Annular Taut-Band DC Movements
- Damped Iron-Vane AC Movements

Specially designed three-hole mount meters with modern styling and bold numerals for easy reading. Self-shielded meter movements are unaffected by steel panels or stray magnetic fields. All have ±2% full-scale accuracy. DC meters have annular taut-band movements; AC types have magnetically damped iron-vane movements. All have molded black phenolic cases with high-temperature plastic covers. Red tapered lance pointer. Recessed zero adjustments. Scale Lengths: 1222, 2.2"; 1223, 3.0"; 1252, 2.2"; 1253, 3.0". See mounting dimensions in table below, left. Supplied with necessary mounting and terminal hardware. Av. shpg. wt., 2½" meters, 11 oz.; 3½" meters, 13 oz.





MOUNTING DIMENSIONS

Dim.	2½"	3½"
A	2¾"	3½"
B	2 1/16"	3½"
C	2.17"	2.75"
D	1.19"	1.19"
E	.47"	.47"
F	#4-40	#6-32

DC VOLTMETERS

Range	Model 1223—3½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49	Model 1222—2½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49
0-10	52 D 6931	20.85	18.77	17.72	52 D 6936	20.10	18.09	17.09
0-15	52 D 6932	20.85	18.77	17.72	52 D 6936	20.10	18.09	17.09
0-30	52 D 6933	20.85	18.77	17.72	52 D 6938	20.10	18.09	17.09
0-50	52 D 6934	20.85	18.77	17.72	52 D 6940	20.10	18.09	17.09
0-100	52 D 6935	20.85	18.77	17.72				

DC MICROAMMETERS

0-50	52 D 6918	24.75	22.28	21.04	52 D 6925	24.30	21.87	20.66
0-100	52 D 6920	22.80	20.52	19.38	52 D 6926	21.75	19.58	18.49
0-200	52 D 6921	20.85	18.77	17.72				
50-0-50	52 D 6924	22.80	20.52	19.38	52 D 6927	22.20	19.98	18.87

DC MILLIAMMETERS

0-1	52 D 6928	19.50	17.55	16.58	52 D 6909	18.90	17.01	16.07
0-50	52 D 6929	19.50	17.55	16.58				
0-100	52 D 6930	20.10	18.09	17.09				
0-500	52 D 6908	20.10	18.09	17.09				

DC AMMETERS

0-1	52 D 6910	20.10	18.09	17.09				
0-5	52 D 6911	20.10	18.09	17.09	52 D 6913	19.20	17.28	16.32
0-10	52 D 6912	20.10	18.09	17.09	52 D 6914	19.20	17.28	16.32

AC AMMETERS

Range	Model 1253—3½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49	Model 1252—2½" Stock No.	EACH 1-9	EACH 10-24	EACH 25-49
0-5	52 D 6915	18.15	16.34	15.43	52 D 6901	17.25	15.53	14.66
0-10	52 D 6916	18.15	16.34	15.43	52 D 6902	17.25	15.53	14.66
0-15	52 D 6917	18.15	16.34	15.43	52 D 6903	17.25	15.53	14.66
0-25	52 D 6900	18.90	17.01	16.07	52 D 6904	18.00	16.20	15.30

AC VOLTMETERS

0-150	52 D 6905	20.55	18.50	17.47	52 D 6907	19.05	17.15	16.19
0-300	52 D 6906	20.55	18.50	17.47				

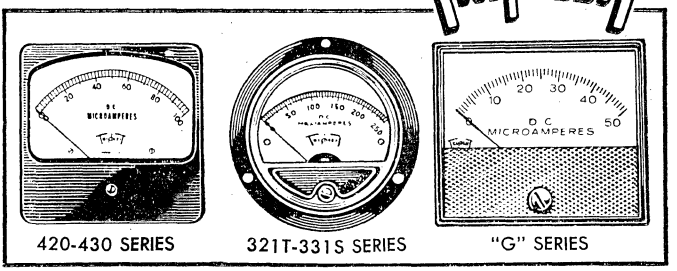
Make Allied Your Headquarters for Everything in Electronics

Standard and Edgewise Panel Meters

TRIPLETT

DC meters are D'Arsonval type with bar-ring self-shielded magnets and 1-piece die-cast frame. AC meters are air-damped, moving iron-vane type. Bakelite cases, ±2% accuracy. With mounting templates. Specify Model, Range and Stock No. Shpg. wt., ½ lb.

Model	Flange	Dia.	Depth	Scale
321T	3½"	2¾"	1 5/16"	2.49"
331S	3½"	2¾"	1 5/16"	2.22"
420	4 5/8 x 4 3/16"	2¾"	2 7/32"	4.04"
430	4 5/8 x 4 3/16"	2¾"	3 1/32"	3.6"
120	33/64 x 1 39/64"	1 27/64"	1 59/64"	1¼"
220G	2 51/64 x 2 25/64"	2 13/16"	1 25/64"	2.48"
320G	3½ x 3"	2¾"	1 25/64"	3.16"
230G	2 51/64 x 2 25/64"	2 13/16"	1 25/64"	2.48"
330G	3½ x 3"	2¾"	1 25/64"	3.16"



420-430 SERIES | 321T-331S SERIES | "G" SERIES

DC MILLIAMMETERS

Range	321T 3½" Rnd.	EACH 1-9	10-24	25-49	420 4½" Rect.	EACH 1-9	10-24	25-49
0-1	52 D 6100	17.50	15.75	14.88	52 D 6136	18.50	16.66	15.73
0-5	.....	.....	.....	.....	52 D 6137	18.50	16.66	15.73
0-10	52 D 6103	17.50	15.75	14.88	52 D 6138	18.50	16.66	15.73
0-100	52 D 6107	17.50	15.75	14.88	52 D 6142	18.50	16.66	15.73
0-300	52 D 6111	17.50	15.75	14.88	52 D 6146	18.50	16.66	15.73
0-500	52 D 6112	17.50	15.75	14.88	52 D 6147	18.50	16.66	15.73

DC MILLIVOLTMETERS

0-50	52 D 6088	18.00	16.20	15.30	52 D 6098	19.00	17.10	16.15
0-100	52 D 6089	18.00	16.20	15.30	52 D 6099	19.00	17.10	16.15

DC MICROAMMETERS

0-50	52 D 6050	22.50	20.25	19.13	.....	.....	.....	.....
0-100	52 D 6051	21.00	18.90	17.85	52 D 6067	22.00	19.80	18.70
0-500	52 D 6053	18.50	16.65	15.73	52 D 6069	19.50	17.55	16.58

ZERO-CENTER DC MICROAMMETERS

50-0-50	52 D 6084	22.50	20.25	19.13	.....	.....	.....	.....

DC AMMETERS

0-1	52 D 6440	18.00	16.20	15.30	.....	.....	.....	.....
0-5	52 D 6441	18.00	16.20	15.30	52 D 6461	19.00	17.10	16.15
0-10	52 D 6442	18.00	16.20	15.30	52 D 6462	19.00	17.10	16.15
0-50	52 D 6562	18.00	16.20	15.30	52 D 6467	19.00	17.10	16.15
0-100	52 D 6563	27.40	24.60	23.29	52 D 6468	28.40	25.56	24.14
0-200	52 D 6564	27.40	24.60	23.29	.....	.....	.....	.....

DC VOLTMETERS

1000 ohms per volt. Carbon film-type resistors. For use where high humidity is not encountered.

Range	321T 3½" Rnd.	EACH 1-9	10-24	25-49	420 4½" Rect.	EACH 1-9	10-24	25-49
0-15	52 D 6964	19.00	17.10	16.15	52 D 6984	20.00	18.00	17.00
0-25	52 D 6965	19.00	17.10	16.15	52 D 6985	20.00	18.00	17.00
0-50	52 D 6966	19.00	17.10	16.15	52 D 6986	20.00	18.00	17.00
0-150	52 D 6968	19.00	17.10	16.15	52 D 6988	20.00	18.00	17.00
0-300	52 D 6971	19.00	17.10	16.15	52 D 6991	20.00	18.00	17.00

AC AMMETERS

Range	331S 3½" Rnd.	EACH 1-9	10-24	25-49	430 4½" Rect.	EACH 1-9	10-24	25-49
0-1	52 D 6300	17.00	15.30	14.45	52 D 6330	18.00	16.20	15.30
0-2	52 D 6301	17.00	15.30	14.45	52 D 6331	18.00	16.20	15.30
0-5	52 D 6303	17.00	15.30	14.45	52 D 6333	18.00	16.20	15.30
0-10	52 D 6304	17.00	15.30	14.45	52 D 6334	18.00	16.20	15.30
0-15	52 D 6308	17.00	15.30	14.45	52 D 6338	18.00	16.20	15.30
0-25	52 D 6305	17.00	15.30	14.45	52 D 6335	18.00	16.20	15.30
0-50	52 D 6306	17.00	15.30	14.45	52 D 6336	18.00	16.20	15.30

AC MILLIAMMETERS

0-10	52 D 6470	17.00	15.30	14.45	52 D 6496	18.00	16.20	15.30
0-25	52 D 6476	17.00	15.30	14.45	52 D 6447	18.00	16.20	15.30
0-50	52 D 6472	17.00	15.30	14.45	52 D 6448	18.00	16.20	15.30
0-100	52 D 6473	17.00	15.30	14.45	52 D 6497	18.00	16.20	15.30
0-200	.....	.....	.....	.....	52 D 6449	18.00	16.20	15.30
0-500	52 D 6475	17.00	15.30	14.45	52 D 6499	18.00	16.20	15.30

AC VOLTMETERS

†Has external resistors.

0-10	52 D 6201	17.00	15.30	14.45	52 D 6231	18.00	16.20	15.30
0-15	52 D 6202	17.00	15.30	14.45	52 D 6232	18.00	16.20	15.30
0-100	52 D 6205	17.00	15.30	14.45	52 D 6235	18.00	16.20	15.30
0-150	52 D 6206	18.00	16.20	15.30	52 D 6236	19.00	17.10	16.15
0-250	.....	.....	.....	.....	52 D 6240	19.00	17.10	16.15
0-300	52 D 6207	18.00	16.20	15.30	52 D 6237	19.00	17.10	16.15
0-500†	52 D 6208	23.50	21.15	19.95	52 D 6238	24.50	22.05	20.83

"G" SERIES WIDE-ANGLE PANEL METERS

DC VOLTMETERS

Range	220-G 2½" Rect.	EACH 1-9	10-24	25-49	320-G 3½" Rect.	EACH 1-9	10-24	25-49
0-15	52 D 6643	18.00	16.20	15.30	52 D 6651	19.00	17.10	16.15
0-30	52 D 6644	18.00	16.20	15.30	52 D 6652	19.00	17.10	16.15
0-50	52 D 6625	18.00	16.20	15.30	52 D 6627	19.00	17.10	16.15
0-150	52 D 6626	18.00	16.20	15.30	52 D 6628	19.00	17.10	16.15

DC MICROAMMETERS

0-50	52 D 6629	21.50	19.35	18.28	52 D 6632	22.50	20.25	19.13
0-100	52 D 6630	20.00	18.00	17.00	52 D 6633	21.00	18.90	17.85
0-200	52 D 6631	18.50	16.65	15.70	52 D 6634	19.50	17.55	16.58

DC MILLIAMMETERS

0-1	52 D 6635	16.50	14.85	14.03	52 D 6636	17.50	15.75	14.88
0-10	52 D 6645	16.50	14.85	14.03	52 D 6653	17.50	15.75	14.88

DC AMMETERS

0-5	52 D 6646	17.00	15.30	14.45	52 D 6654	18.00	16.20	15.30
0-10	52 D 6647	17.00	15.30	14.45	52 D 6655	18.00	16.20	15.30

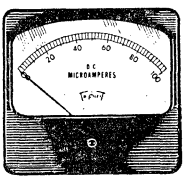
AC VOLTMETERS

Range	230-G—2½" Rect.				330-G—3½" Rect.			
0-150	52 D 6637	17.00	15.30	14.45	52 D 6638	18.00	16.20	15.30
0-300	52 D 6648	17.00	15.30	14.45	52 D 6656	18.00	16.20	15.30

AC AMMETERS

0-5	52 D 6639	16.00	14.40	13.60	52 D 6641	17.00	15.30	14.45
0-10	52 D 6649	16.00	14.40	13.60	52 D 6657	17.00	15.30	14.45
0-25	52 D 6640	16.00	14.40	13.60	52 D 6642	17.00	15.30	14.45
0-50	52 D 6650	16.00	14.40	13.60	52 D 6658	17.00	15.30	14.45

MODEL 420 TAUT-BAND DC MICROAMMETERS



Suspension-type microammeters with high shock-resistance. Have no pivots, jewels or hairsprings and no rolling friction. Leaf type spring-anchors absorb shock from any direction and maintain band suspension. Accuracy, ±2%. Flange, 4 15/32 x 2 15/16". Body diameter, 2 13/64". Scale length, 3.456".

Stock No.	Range	EACH 1-9	10-24	25-49
52 D 7121	0-5	43.50	39.15	36.98
52 D 7122	0-10	37.50	33.75	31.88
52 D 7123	0-20	32.50	29.25	27.63
52 D 7124	0-50	26.00	23.40	22.10
52 D 7125	100-0-100	22.50	20.25	19.13

MODEL 120 MINIATURE EDGEWISE PANEL METERS

Require cutout of 9/16 x 1 11/16". D'Arsonval movement (AC units rectifier type). Self-shielded Bar-Ring magnets. Horizontal mounting. Accuracy: DC, ±2%, AC, ±3%.

Stock No.	Range	EACH 1-9	10-24	25-49
52 D 6394	0-1 DC Milliammeter	16.50	14.85	14.03
52 D 6398	0-100 DC Milliammeter	16.50	14.85	14.03
52 D 6402	0-500 DC Milliammeter	16.50	14.85	14.03
52 D 6404	0-10 DC Voltmeter	18.00	16.20	15.30
52 D 6405	0-50 DC Voltmeter	18.00	16.20	15.30
52 D 6407	0-50 DC Microammeter	21.50	19.35	18.28
52 D 6408	0-100 DC Microammeter	20.00	18.00	17.00
52 D 6410	0-150 AC Voltmeter	25.00	22.50	21.25
52 D 6412	"A" Scale VU Meter	29.00	26.10	24.65

Weston Panel Meters

MODEL 1290 DIGITAL PANEL METERS

Highly accurate, front-mounting panel meter converts analog input to digital display. Offers precise operation with true buffered storage display, easy reading with polarized viewing window. Takes only 7 sq. in. of panel space. Top rated components, including plug-in sockets with Burroughs Nixie readouts. Circuit boards are not potted, can be repaired. Minimum full scale range: 0-100.0 mV DC. Maximum full scale range: 0-1000 volts DC. Accuracy: ±0.1%, ±1 digit. Sensitivity: 100 mV, 10K ohms; 1 V, 100K ohms; 10 V to 1000 V, 1 megohm. Rejection: common mode, 80 dB with 1000 ohm unbalance; normal mode, 35 dB. Reading rate: 6 per second. Response time: less than 1 second. Has 1-2-4-8 buffered BCD positive output logic. 100% over-range capability (except on 1000-volt range) with flashing indicator. Dual slope integration with sensing intervals related to line frequency. Includes self-adjusting hardware, bezel front. Overall size, 4x1¾x4¼". For 117 volts, ±10%, 60-400 Hz AC. Av. shpg. wt., 1½ lbs.

Stock No.	DC Range	Over-Range	EACH 1-4	EACH 5-9
52 D 6012	0-100.0 mV	199.9 mV	272.00	258.40
52 D 6011	0-1.000 V	1.999 V	272.00	258.40
52 D 6013	0-10.00 V	19.99 V	272.00	258.40
52 D 6014	0-100.0 V	199.9 V	272.00	258.40
52 D 6015	0-1000 V	.....	272.00	258.40
52 D 6016	0-10.00 μA	19.99 μA	272.00	258.40
52 D 6017	0-100.0 μA	199.9 μA	272.00	258.40
52 D 6018	0-1.000 mA	1.999 mA	272.00	258.40
52 D 6019	0-10.00 mA	19.99 mA	272.00	258.40
52 D 6020	0-100.0 mA	199.9 mA	272.00	258.40

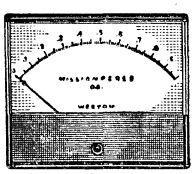
MODEL 1316 OPTICAL RIBBON INDICATORS

Electrically driven optical ribbon indicator permits quick scanning of many parameters at one time. Ideal for temperature display, medical applications, liquid levels, machine monitoring, etc. Optical projection eliminates parallax problems; scale can be changed without exposing mechanism. Flat, self-shielded design permits side-by-side mounting for group display. Accuracy: 1% full-scale. Scale length: 4½". Scale color: white figures and divisions on black background, with red ribbon. Lamp: No. 561 for 11 volts at 0.8 amps, AC/DC. Size, 2.27x6.00x7.20" behind panel; mounts vertically in 5.50x 1.857" hole. Av. shpg. wt., 2 lbs.

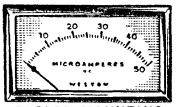
OPTICAL DC MILLIAMMETERS

Stock No.	DC Range	Resis., Ohms	EACH 1-9	EACH 10-24	EACH 25-49
52 D 6295	0-1 mA	13.8	77.50	69.75	65.88
52 D 6296	0-10 mA	5	77.50	69.75	65.88
52 D 6297	0-25 mA	2	77.50	69.75	65.88
52 D 6298	0-50 mA	1	77.50	69.75	65.88
52 D 6299	0-100 mA	0.5	77.50	69.75	65.88
52 D 6302	0-500 mA	0.1	77.50	69.75	65.88

1 and 2% TAUT-BAND PANEL METERS

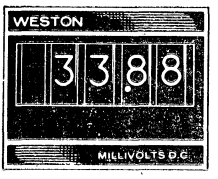


SURFACE MOUNTED TYPE



RECESS MOUNTING
(Plastic Fronts Only)

MODEL 1280 DIGITAL PANEL METERS



Compact four-digit panel meters offering extremely high accuracy and solid-state reliability. Converts analog input to digital display, producing a 1.5-volt pulse as conversion is completed, which can be used as a command to print. Remote command is possible by external contact closure, or application of 5-volt pulse. Dual, decimal-number Nixie tubes (four 9's) can be replaced from front of panel. Magnetic nameplate is removable, providing easy access to all calibration adjustments. Has circularly polarized window filter to eliminate glare. Accuracy: 0.05% full-scale, ±1 digit. Resolution: 1 part in 10,000 (10 μV on 100 mV range). Rejection: common mode, 80 dB with 1000 ohms unbalance; series mode, 35 dB at 60 Hz. Sample rate: 1 per second. Response time: 2 seconds, approx. Over-Range: 20%, approx. Temperature effect: ±0.05%, ±1 digit, per 10° C (reference 25° C) at 1 volt full-scale; 10 μV/° C at 100 mV full-scale. Output: 1-2-4-8 BCD. Temperature range: +15° to +35° C. Size, 3⅝6x4⅛x1⅛" in front of panel, 4⅝6x6¼x4½" behind panel. For 117 volts, ±10%, 50/60/400 Hz AC. Av. wt., 3 lbs.

Stock No.	DC Range	At Ohms or Volts	Max. Volts	EACH 1-4	EACH 5-9
52 D 6285 T	0-100 mV	10K	100	480.00	456.00
52 D 6286 T	0-1.00 V	100K	300	480.00	456.00
52 D 6287 T	0-10.00 V	1 meg	1000	480.00	456.00
52 D 6288 T	0-100 V	1 meg.	1000	480.00	456.00
52 D 6289 T	0-1000 V	1 meg.	1100	480.00	456.00
52 D 6290 T	0-10 μA	100 mV	.....	480.00	456.00
52 D 6291 T	0-100 μA	100 mV	.....	480.00	456.00
52 D 6292 T	0-1 mA	100 mV	.....	480.00	456.00
52 D 6293 T	0-10 mA	100 mV	.....	480.00	456.00
52 D 6294 T	0-100 mA	100 mV	.....	480.00	456.00

OPTICAL DC MICROAMMETERS

Stock No.	DC Range	Resis., Ohms	EACH 1-9	EACH 10-24	EACH 25-49
52 D 6307	0-20 μA	8350	85.00	76.50	72.25
52 D 6309	0-50 μA	2300	79.00	71.10	67.15
52 D 6310	0-100 μA	640	78.00	70.20	66.30
52 D 6314	0-200 μA	415	78.00	70.20	66.30
52 D 6315	0-500 μA	88	78.00	70.20	66.30

OPTICAL DC VOLTMETERS

52 D 6316	0-1 Volt	1000/V	78.50	70.65	66.73
52 D 6417	0-5 Volts	1000/V	78.50	70.65	66.73
52 D 6320	0-10 Volts	1000/V	78.50	70.65	66.73
52 D 6321	0-20 Volts	1000/V	78.50	70.65	66.73
52 D 6322	0-50 Volts	1000/V	78.50	70.65	66.73
52 D 6323	0-100 Volts	1000/V	78.50	70.65	66.73
52 D 6324	0-200 Volts	1000/V	78.50	70.65	66.73
52 D 6325	0-300 Volts	1000/V	78.50	70.65	66.73
52 D 6326	0-500 Volts	1000/V	78.50	70.65	66.73

1% AND 2% TAUT-BAND PANEL METERS

High-sensitivity taut-band meters with plastic fronts, 100° scales and zero adjusts. Available in 1% and 2% accuracy types. The 1% types feature knife-edge pointer and mirrored scale. Sizes: all 1941T types, 4½x4"; 1931T 2% types, 3½x3". All have 2¾" body diameter. All require ½" in front of panel, 1 23/32" behind panel. Milliammeters with ranges of 50 milliamps or higher are shunted and have 100-millivolt drop. Ammeters have a drop of about 50 millivolts. Av. shpg. wt., ½ lb.

Mounting Bezels for Taut-Band Meters. For plastic fronts. Fits panels ⅛" to 1/16" thick. Black enamel finish. With mtg. hardware and drilling template. 8 oz.

52 D 7368. Half Bezel for Model 1931T.
1-9.....Each 1.65
10-24.....Each 1.49
25-49.....Each 1.32

52 D 7369. Half Bezel for Model 1941T.
1-9.....Each 1.70
10-24.....Each 1.53
25-49.....Each 1.36

±2% ACCURACY TAUT-BAND METERS

Meter Range	Type 1931T 3½x3"	EACH 1-9	EACH 10-24	EACH 25-49	Type 1941T 4½x4"	EACH 1-9	EACH 10-24	EACH 25-49
0-50 μA	52 D 6213	24.75	22.28	19.80	52 D 6318	26.00	23.40	20.80
0-100 μA	52 D 6214	23.25	20.93	18.60	52 D 6319	24.25	21.83	19.40
0-200 μA	52 D 6215	22.00	19.80	17.60	52 D 6329	23.50	21.15	18.80
0-1 mA	52 D 6217	19.50	17.55	15.60	52 D 6349	20.75	18.68	17.64
0-50 mA	52 D 6249	19.50	17.55	15.60	.....	.....	.....	.....
0-500 mA	.....	.....	.....	.....	52 D 6555	20.75	18.68	16.60
0-10 Amps	52 D 6281	19.50	17.55	15.60	52 D 6559	20.75	18.68	16.60
0-15 Volts	52 D 6311	20.50	18.45	16.40	52 D 6578	21.75	19.58	17.40
0-30 Volts	52 D 6312	20.50	18.45	16.40	.....	.....	.....	.....
0-50 Volts	52 D 6313	20.50	18.45	16.40	52 D 6588	21.75	19.58	17.40

±1% TAUT-BAND METERS

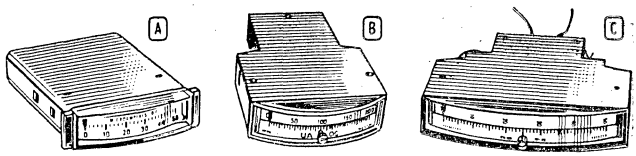
Range	1941T 4½x4"	EACH 1-9	EACH 10-24	EACH 25-49
0-100 μA	52 D 7370	31.50	28.35	25.20
0-200 μA	52 D 7371	31.00	27.90	24.80
0-1 mA	52 D 7373	28.00	25.20	22.40
0-10 mA	52 D 7374	28.00	25.20	22.40
0-50 mA	52 D 7375	28.00	25.20	22.40
0-5 Amps	52 D 7377	28.00	25.20	22.40
0-10 Amps	52 D 7378	28.00	25.20	22.40
0-15 Volts	52 D 7379	29.00	26.10	23.20
0-30 Volts	52 D 7380	29.00	26.10	23.20
0-50 Volts	52 D 7381	29.00	26.10	23.20

Specify Stock No., Range and Model No. on Meter Orders

Weston and API Panel Meters

WESTON THIN-LINE EDGEWISE PANEL METERS

Space-saving edgewise meters are completely flat, can be stacked side-by-side. Self-shielded Cormag® mechanism, shock-absorbing jewel movement. Meet ASA C39.1 specifications. In-line red pointer and scale to eliminate parallax, front-mounted zero corrector (except Model 111). AC voltmeters are 2000 ohms/volt. Horizontal mounting; clips fasten to meter behind panel. Accuracy: 2% of full-scale reading on DC meters, 3% on AC. Scale length: 1½" size, 1.24"; 2½" size, 1.875"; 3½" size, 2.75". Av. wt., ¼ lb.



A MODEL 111 1½" METERS

MODEL 111 1½" DC VOLTMETERS

Stock No.	Range	EACH 1-9	10-24	25-49
52 D 6216	0-10 V	18.25	16.43	15.51
52 D 6218	0-25 V	18.25	16.43	15.51
52 D 6219	0-50 V	18.25	16.43	15.51
52 D 6220	0-100 V	18.25	16.43	15.51
52 D 6221	0-150 V	18.25	16.43	15.51
52 D 6222	0-300 V	18.25	16.43	15.51

1½" SELF-CONTAINED DC AMMETER

52 D 6223	0-1 amp	18.25	16.43	15.51

MODEL 111 1½" DC MILLIAMMETERS

52 D 6224	0-1 mA	17.50	15.75	14.88
52 D 6225	0-25 mA	18.25	16.42	15.51
52 D 6226	0-100 mA	18.25	16.42	15.51
52 D 6227	0-500 mA	18.25	16.42	15.51

MODEL 111 1½" DC MICROAMMETERS

52 D 6228	0-50 μA	22.50	20.25	19.13
52 D 6229	0-100 μA	19.25	17.33	16.36
52 D 6230	0-500 μA	17.75	15.98	15.09
52 D 6233	50-0-50 μA	19.25	17.33	16.36

MODEL 112 RECTIFIER AC VOLTMETERS

52 D 6234	0-150 V	23.25	20.93	19.76
52 D 6239	0-300 V	23.25	20.93	19.76

B MODEL 121 2½" METERS

MODEL 121 2½" DC VOLTMETERS

Stock No.	Range	EACH 1-9	10-24	25-49
52 D 6247	0-10 V	20.75	18.68	17.64
52 D 6248	0-25 V	20.75	18.68	17.64
52 D 6250	0-50 V	20.75	18.68	17.64
52 D 6251	0-100 V	20.75	18.68	17.64
52 D 6252	0-150 V	20.75	18.68	17.64
52 D 6253	0-300 V	20.75	18.68	17.64

2½" SELF-CONTAINED DC AMMETER

52 D 6254	0-1 amp	20.75	18.68	17.64

MODEL 121 2½" DC MILLIAMMETERS

52 D 6255	0-1 mA	19.75	17.78	17.69
52 D 6256	0-25 mA	20.75	18.68	17.64
52 D 6257	0-100 mA	20.75	18.68	17.64
52 D 6258	0-500 mA	20.75	18.68	17.64

MODEL 121 2½" DC MICROAMMETERS

52 D 6259	0-50 μA	25.00	22.50	21.25
52 D 6260	0-100 μA	21.50	19.35	18.28
52 D 6261	0-500 μA	20.00	18.00	17.00
52 D 6262	50-0-50 μA	21.50	19.35	18.28

MODEL 122 RECTIFIER AC VOLTMETERS

52 D 6263	0-150 V	25.50	22.95	21.68
52 D 6264	0-300 V	25.50	22.95	21.68

C MODEL 131 3½" METERS

MODEL 131 3½" DC VOLTMETERS

Stock No.	Range	EACH 1-9	10-24	25-49
52 D 6265	0-10 V	23.00	20.70	19.55
52 D 6267	0-25 V	23.00	20.70	19.55
52 D 6268	0-50 V	23.00	20.70	19.55
52 D 6270	0-100 V	23.00	20.70	19.55
52 D 6271	0-150 V	23.00	20.70	19.55
52 D 6272	0-300 V	23.00	20.70	19.55

3½" SELF-CONTAINED DC AMMETER

52 D 6273	0-1 amp	23.00	20.70	19.55

MODEL 131 3½" DC MILLIAMMETERS

52 D 6274	0-1 mA	22.00	19.80	18.70
52 D 6275	0-25 mA	23.00	20.70	19.55
52 D 6276	0-100 mA	23.00	20.70	19.55
52 D 6277	0-500 mA	23.00	20.70	19.55

MODEL 131 3½" DC MICROAMMETERS

52 D 6278	0-50 μA	27.25	24.53	23.16
52 D 6279	0-100 μA	23.75	21.38	20.19
52 D 6280	0-500 μA	22.50	20.25	19.13
52 D 6281	50-0-50 μA	23.75	21.38	20.19

MODEL 132 RECTIFIER AC VOLTMETERS

52 D 6282	0-150 V	28.00	25.20	23.80
52 D 6283	0-300 V	28.00	25.20	23.80

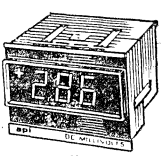
API DIGITAL PANEL METERS

MODEL 4301 3-DIGIT PANEL METERS

Stock No.	DC Range	Input Imp., Ohms	Max. Input Volts	EACH 1-9	10-24
52 D 6500 T	0-99 mV	100 meg.	250	175.00	166.25
52 D 6501 T	0-999 mV	1000 meg.	250	175.00	166.25
52 D 6502 T	0-9.99 V	10 meg.	1000	175.00	166.25
52 D 6503 T	0-99.9 V	10 meg.	1000	175.00	166.25
52 D 6504 T	0-999 V	10 meg.	1000	175.00	166.25
52 D 6505 T	0-9.99 μA	10,000	.....	175.00	166.25
52 D 6523 T	0-99.9 μA	1000	.....	175.00	166.25
52 D 6524 T	0-999 μA	100	.....	175.00	166.25
52 D 6533 T	0-9.99 mA	10	.....	175.00	166.25
52 D 6534 T	0-99.9 mA	1	.....	175.00	166.25

MODEL 4304 3½-DIGIT PANEL METERS

52 D 6535 T	0-199.9 mV	100 meg.	250	195.00	185.25
52 D 6536 T	0-1.999 V	1000 meg.	250	195.00	185.25
52 D 6537 T	0-19.99 V	10 meg.	1000	195.00	185.25
52 D 6538 T	0-199.9 V	10 meg.	1000	195.00	185.25
52 D 6539 T	0-19.99 μA	10,000	.....	195.00	185.25
52 D 6540 T	0-199.9 μA	1000	.....	195.00	185.25
52 D 6546 T	0-1.999 mA	100	.....	195.00	185.25
52 D 6547 T	0-19.99 mA	10	.....	195.00	185.25
52 D 6548 T	0-199.9 mA	1	.....	195.00	185.25



MODEL 4301 AND 4304. Digital panel meters have ⅞" high seven-bar segmented display for excellent readability. Choice of 3-digit (Model 4301) or 3½-digit (Model 4304) models, for front or rear panel mounting. Require only 1½" behind panel, with remotely mounted power supply. Standard features include autopolarity and T²L/DTL compatible BCD output with printed circuit connector. Offer repeatability, resolution, and freedom from reading errors. Accuracy: 0.1% of reading, ±1 digit. Rejection: 100 dB common mode, 30 dB normal mode. Over-Range: Model 4301, 30%; Model 4304, 100%. Resolution: Model 4301, 0.1%; Model 4304, 0.05%. Input impedance: up to 1000 megohms, as shown in tables at left. Input connections by screw terminals or standard printed circuit card connector. Order connectors below. With front panel mounting hardware. 4½" w. x 3" h. x 3⅝" d. behind panel. 1½ lbs.

CONNECTORS AND ACCESSORIES

TYPE 345-215 INPUT CONNECTOR.
52 D 6395. Shpg. wt., 3 oz. 3.50

TYPE 345-207 BCD CONNECTOR.
52 D 6399. Shpg. wt., 3 oz. 3.50

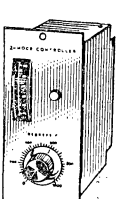
INTERCONNECTING CABLE. 24" long. For remote mounting of power supply. Has Amphenol connectors 143-010-01 and 133-010-21.
52 D 6396. Shpg. wt., 8 oz. 8.50

MOUNTING BEZEL. With hardware, for mounting meter behind panel.
52 D 6397. Shpg. wt., 4 oz. 1.50

API 2-MODE PROPORTIONAL TEMPERATURE CONTROLLERS

MODEL 227 SOLID-STATE CONTROLLERS

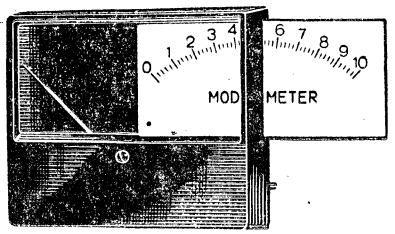
Stock No.	Temperature Range	Thermocouple	EACH
52 D 6386 T	0-250° F	Type J	176.00
52 D 6387 T	0-300° F	Type J	176.00
52 D 6388 T	100-400° F	Type J	176.00
52 D 6389 T	0-500° F	Type J	176.00
52 D 6390 T	0-800° F	Type J	176.00
52 D 6391 T	0-1000° F	Type J	176.00
52 D 6392 T	500-1500° F	Type K	176.00



Low-cost proportional output controller with automatic reset to eliminate process "droop." For resistive loads to 10 amps at 120 or 240 VAC. Maintains 1° F straight line control. Temperature is set on calibrated dial. Control function independent of meter indication. Accuracy, ±1%, with 5% proportional band. Reset, fixed at 5 minutes per reset (field-changeable). Calibrated for iron-constantan or chromel-alumel thermocouples; handles up to 100-ohm thermocouple without adjustment. Electrical cold junction compensation, thermocouple break protection. Size, 6¾x2¾x7". Av. shpg. wt., 8 lbs.

Specify Stock No., Range and Model No. When Ordering Meters

api Mod-Meters, VU Meters, Controllers



- Change Scales Quickly, Accurately, Safely
- No Dirt, No Bent Pointers • Cut Inventory
- Eliminate Mod Center Cost, Delivery Delay
- 1% Tracking, Taut-Band Meter Movements

Features 1% tracking movments in DC ranges, Taut-Band construction, black phenolic cases and glass windows. Scales are positioned to within 0.25%. Detailed lettering instructions included with each meter. Stocked with 100-division blank scales; will operate with any scale listed. Built-in mirror plate for use with slotted scales. Use multipliers, shunts or transformers for infinite variety with just a few Mod-Meters. For donut current transformers, see page 483. Shpg. wt., 1 lb.

SEE PAGE 483 FOR AMMETER SHUNTS

DATAK 968 DIAL MARKING SET

Contains 12 dry transfer sheets in black, white and red, with designs, letters and numerals for meters, dials, panels etc.
23 D 7456. Wt., 4 oz. 4.95

MOD-METER CHANGEABLE-SCALE METERS

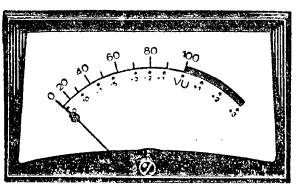
See page 491 for dimensions for 503-S and 603-S Mod-Meters. Av. shpg. wt., 2 lbs.

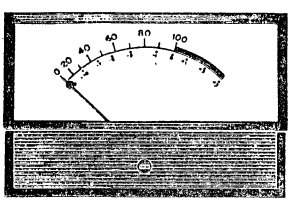
Range	MODEL 503-S			MODEL 603-S		
	Stock No.	1-9	10-24	Stock No.	1-9	10-24
0-1 mA DC	52 D 7750	30.25	25.71	52 D 7762	32.00	27.20
500-0-500 μA DC	52 D 7751	31.00	36.35	52 D 7763	31.50	26.78
0-1 mA AC	52 D 7752	34.50	29.32	52 D 7764	36.00	30.60
0-50 mV DC	52 D 7753	36.50	26.78	52 D 7765	33.00	28.05
50-0-50 mV DC	52 D 7754	32.00	27.20	52 D 7766	33.50	28.48
0-10 mV DC	52 D 7755	36.50	31.03	52 D 7767	38.00	32.30
0-47 mA AC	52 D 7756	35.00	29.75	52 D 7768	36.00	30.60
0-100 μA DC	52 D 7757	31.50	26.78	52 D 7769	33.00	28.05
50-0-50 μA DC	52 D 7758	32.00	27.20	52 D 7770	33.50	28.48
0-50 μA DC	52 D 7759	33.00	28.05	52 D 7771	34.50	29.33
0-10 μA DC	52 D 7760	53.00	45.05	52 D 7772	54.50	46.33
10-0-10 μA DC	52 D 7761	39.50	33.58	52 D 7773	40.50	34.43

PLAIN AND MIRRORED SCALES FOR MOD-METERS Av. shpg. wt., 4 oz.

Divisions	For Model 503-S		For Model 603-S		EACH	
	Plain Scale Stock No.	Mirrored Scale Stock No.	Plain Scale Stock No.	Mirrored Scale Stock No.	1-9	10-24
40	52 D 7775	52 D 7825	52 D 7785	52 D 7835		
50	52 D 7776	52 D 7826	52 D 7786	52 D 7836		
60	52 D 7777	52 D 7827	52 D 7787	52 D 7837		
70	52 D 7778	52 D 7828	52 D 7788	52 D 7838		
75	52 D 7779	52 D 7829	52 D 7789	52 D 7839		
80	52 D 7780	52 D 7830	52 D 7790	52 D 7840	Plain Scales	
100	52 D 7781	52 D 7831	52 D 7791	52 D 7841	1.50	1.28
150	52 D 7782	52 D 7832	52 D 7792	52 D 7842		
Blank	52 D 7783	52 D 7833	52 D 7793	52 D 7843	Mirrored Scales	
ARC Only	52 D 7784	52 D 7834	52 D 7794	52 D 7844	2.00	1.70
20-0-20	52 D 7979	52 D 7987	52 D 7975	52 D 7983		
25-0-25	52 D 7980	52 D 7988	52 D 7976	52 D 7984		
30-0-30	52 D 7981	52 D 7989	52 D 7977	52 D 7985		
50-0-50	52 D 7982	52 D 7990	52 D 7987	52 D 7986		

DELUXE HIGH-ACCURACY VU METERS





SLIM-BEZEL "STYLIST" VU METERS

For a wide variety of audio uses. Conform to all specifications of ASA C16.5 (1954). Mount through rectangular panel cutout. Only the slim bezel can be seen. Easily illuminated from behind panel through lucite window at top of case. 6-volt illumination bracket. Scale A is for recording applications; Scale B emphasizes percent modulation for broadcast uses. Model 561, 5x3", 4 13/16 x 2 3/4" cutout; 361, 3 1/2 x 2", for 3 11/32 x 1 7/8" cutout. Shpg. wt., 1 1/2 lbs.

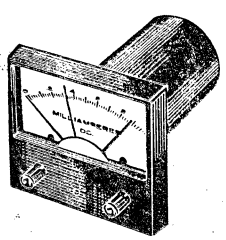
Stock No.	Model	Scale	EACH 1-9	EACH 10-24
52 D 7795	561	A	33.60	28.56
52 D 7796	561	B	33.60	28.56
52 D 7797	361	A	34.00	28.90
52 D 7798	361	B	34.00	28.90

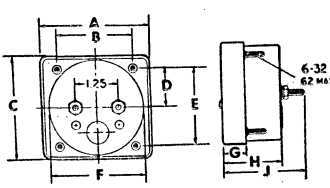
LONG-SCALE "STYLIST" VU METERS

As above, for measuring amplitude of audio signals. Meter scale is roughly equivalent to that of a conventional 4 1/2" meter, yet height of dial area is that of a 3 1/2" meter. Black phenolic case with glass windows. Designed for mounting either in panel cutout with bezel showing or behind panel with lower portion of case recessed. Especially recommended for rack-mount panels. Scale A type is used for general-purpose recording applications; Scale B emphasizes percent modulation for broadcast use. 4 1/2 x 3 x 2 1/2", for 2 3/16" dia. cutout. 1 1/2 lbs.

Stock No.	Model	Scale	EACH 1-9	EACH 10-24
52 D 6350	426	A	32.25	27.41
52 D 6351	426	B	32.25	27.41

"ULTIMETER" SOLID-STATE METER-RELAY CONTROLLERS





Model 503-X. Relay control independent of meter movement, yet control point is set with familiar red pointer. Solid-state, with integrated circuits used for comparison functions. Wired failsafe, automatic reset. Relay output, SPDT, 5A at 115 VAC resistive. ±1% F. S. accuracy. Model 603 X temperature controllers have cold junction compensation and thermocouple break protection.

TABLE OF DIMENSIONS IN INCHES

Type	A	B	C	D	E	F	G	H	J
503	4.71	4.00	4.27	2.02	3.56	2.79	0.761	1.95	2.62
603	5.75	5.25	4.36	2.15	3.00	2.79	0.761	1.95	2.62

MODEL 503 X Shpg. wt., 1 1/2 lbs.

DC Range	Imp. Ohms	Single Set-Point, EA. Stock No.	1-9	10-24	Double Set-Point, EA. Stock No.	1-9	10-24
0-1 μA	10K	52 D 6352	135.00	121.50	52 D 6353	155.00	134.50
0-10 μA	1000	52 D 6354	112.00	100.80	52 D 6355	132.00	118.80
0-50 μA	200	52 D 6356	112.00	100.80	52 D 6357	132.00	118.80
50-0-50 μA	100	52 D 6358	122.00	109.80	52 D 6359	142.00	127.80
0-100 μA	100	52 D 6360	112.00	100.80	52 D 6361	132.00	118.80
0-1 mA	10	52 D 6362	112.00	100.80	52 D 6364	132.00	118.80
0-10 mV	10K	52 D 6365	112.00	100.80	52 D 6367	132.00	118.80
0-50 mV	50K	52 D 6368	112.00	100.80	52 D 6369	132.00	118.80

MODEL 603 X (*Thermocouple) Shpg. wt., 1 1/2 lbs.

Range °F	*	Single Set-Point, EA. Stock No.	1-9	10-24	Double Set-Point, EA. Stock No.	1-9	10-24
0-150	I/C	52 D 6370	155.00	139.50	52 D 6371	175.00	157.50
0-300	I/C	52 D 6372	135.00	121.50	52 D 6373	155.00	139.50
0-500	I/C	52 D 6374	135.00	121.50	52 D 6375	155.00	139.50
0-750	I/C	52 D 6376	135.00	121.50	52 D 6377	155.00	139.50
0-1000	I/C	52 D 6378	135.00	121.50	52 D 6379	155.00	139.50
0-1500	C/A	52 D 6380	135.00	121.50	52 D 6382	155.00	139.50
0-2500	C/A	52 D 6383	135.00	121.50	52 D 6385	155.00	139.50

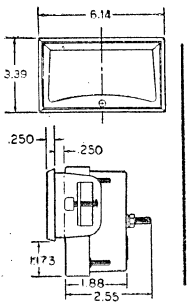
Super-Calibrated Panel Meters

TAUT-BAND 0.5% AND 1% PANEL METERS

1% meters priced comparable to most 2% Taut-Band meters; 0.5% tracking types slightly higher. Sensitive, shielded taut-band meter movements are interchangeable between steel and aluminum panels.

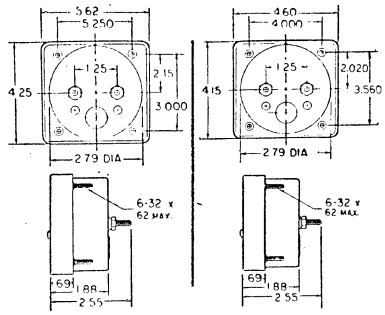
Frictionless movements have near-perfect repeatability of 0.2%. Choice of Class II super-calibrated meters with 0.5% tracking (linearity) or Class I with 1% accuracy. All ranges have mirrored scales.

STYLIST BEZEL KIT

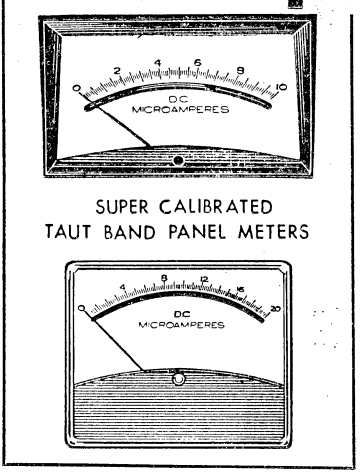


MODEL 1602 MODEL 1502

PANELIST METERS



MODEL 602 MODEL 502



STYLIST PANEL METER

Crisp, clean lines of bezel improve panel appearance. By adding a bezel kit to the Panelist meter, the bottom third of the meter is hidden behind the bezel for 30% more dial area in 15% less space. Installation is simple. Add bezel kit to Panelist meter converting it to Stylist. See right of page for Stylist Bezel Conversion Kits.

0.5% 602-II PANELIST CLASS II — 0.5% 502-II PANELIST CLASS II

DC Range	Ohms (±20 @)	602-II Stock No.	602-II EACH 1-9	602-II EACH 10-24	502-II Stock No.	502-II EACH 1-9	502-II EACH 10-24
0-10 μA	4300	52 D 7921	56.00	47.60	52 D 7911	54.50	46.33
0-20 μA	2900	52 D 7901	41.00	34.85	52 D 7912	39.50	33.58
0-50 μA	1000	52 D 7902	35.00	29.75	52 D 7913	33.50	28.48
0-100 μA	1050	52 D 7903	33.50	28.48	52 D 7914	32.00	27.20
0-500 μA	210	52 D 7904	32.25	27.40	52 D 7915	31.00	26.35
5-0-5 μA	4300	52 D 7905	56.50	48.03	.....	.....	.....
50-0-50 μA	1050	52 D 7906	34.00	28.90	52 D 7917	32.50	27.63
500-0-500 μA	100	52 D 7910	33.00	28.05	52 D 7916	31.50	26.78
0-1 mA	100	52 D 7907	32.25	27.41	52 D 7918	31.00	26.35
0-10mV	40	52 D 7908	38.50	32.73	.....	.....	.....
0-50mV	50	52 D 7909	33.50	38.48	.....	.....	.....

1% 602-I PANELIST CLASS I — 1% 502-I PANELIST CLASS I

0-10 μA	4300	52 D 7922	51.00	43.35	52 D 7933	49.50	42.08
0-20 μA	2900	52 D 7923	36.00	30.60	52 D 7934	34.50	29.33
0-50 μA	1000	52 D 7924	30.00	25.50	52 D 7935	28.50	24.23
0-100 μA	1050	52 D 7925	28.50	24.22	52 D 7936	27.00	22.95
0-500 μA	210	52 D 7926	27.50	23.38	.....	.....	.....
5-0-5 μA	4300	52 D 7927	51.50	43.78	52 D 7938	50.00	42.50
50-0-50 μA	1050	52 D 7928	29.00	24.60	52 D 7939	27.50	23.38
0-1 mA	100	52 D 7929	27.50	23.38	52 D 7940	26.00	22.10
0-10 mV	40	52 D 7930	33.50	28.48	52 D 7941	32.00	27.20
0-50 mV	50	52 D 7931	28.50	24.23	.....	.....	.....
5-0-5 mV	40	52 D 7932	33.50	28.48	.....	.....	.....

MODEL 503 PYROMETER—2% ACCURACY

Thermocouple-actuated with copper error-compensation. Automatic bimetal cold-junction correction. External resistor adjusts for thermocouples up to 10 ohms. Mirrored F° and C° scales. Knife-edge pointers. I/C for Iron-Constantan; C/A for Chromel-Alumel; Cu/C, Copper Constantan. Phenolic case. Scale arc, 4". 2 lbs.

Stock No.	Temperature Range °F	Temperature Range °C	Thermocouple	EACH 1-9	EACH 10-24
51 D 5500	−200/+100	−130/+40	Cu/C	46.00	39.10
51 D 5344	−75/+225	−60/+110	I/C	40.50	34.48
51 D 5345	0/300	0/150	I/C	39.50	33.58
51 D 5346	0/500	0/260	I/C	37.50	31.88
51 D 5347	0/750	0/400	I/C	37.50	31.88
51 D 5348	0/1000	0/500	I/C	37.00	31.45
51 D 5349	0/1500	0/800	C/A	37.00	31.45
51 D 5350	0/2000	0/1100	C/A	32.50	27.63
51 D 5351	0/2500	0/1650	C/A	32.50	27.63

MODEL 603-I PYROMETER—1% ACCURACY

Same as Model 503 above, but offer 1% accuracy. Scale arc 5".

51 D 5819	0/300	0/150	I/C	50.50	42.95
51 D 5820	0/500	0/260	I/C	49.00	41.65
51 D 5821	0/750	0/400	I/C	49.00	41.65
51 D 5822	0/1000	0/500	I/C	48.50	41.23
51 D 5823	0/1500	0/800	C/A	48.50	41.23
51 D 5824	0/2000	0/1100	C/A	44.00	37.40
51 D 5825	0/2500	0/1370	C/A	44.00	37.40
51 D 5826	0/3000	0/1650	PLT 13%	49.00	41.65

PANELIST PANEL METER

Sturdy plastic case is treated to repel dust and eliminate static. Meter dimensions are standardized for easy interchangeability with other makes.

CLASS II SUPER-CALIBRATED 0.5% PANEL METERS

0.5% tracking (linearity); 2% full scale accuracy. For adjustable circuit applications where zero and full scale are electrically adjustable (VTVM, thermistor-bridge, etc.). When used with this type of circuit, 0.5% readout accuracy is allowed. See above for dimensions. Wt., 2 lbs.

CLASS I SUPER-CALIBRATED 1% PANEL METERS

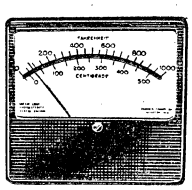
A long needed stock item; 1% accuracy full scale meters at a low price. Ideal for use with non-adjustable circuits measuring absolute values such as an ammeter or voltmeter. All have 100 division scales. For Class I and Class II; Model 602 scale arc, 4.85"; Model 502 scale arc, 4". Wt., 2 lbs.

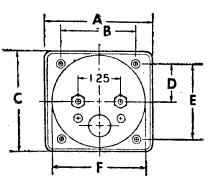
STYLIST BEZEL CONVERSION KITS

To convert Panelist meter to Stylist meter, specify range, model and stock number of Panelist meter. Then add model and stock number for 1602 or 1502, below. 12 oz.

52 D 7919. Model 1602. For 602-II... 1.75

52 D 7920. Model 1502. For 502-II... 1.50



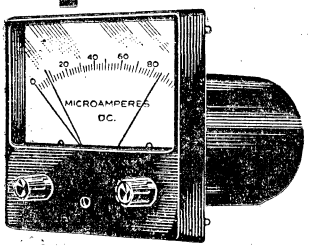


Adjustable External Resistor Compensates Up to 10 Ohms

TABLE OF DIMENSIONS IN INCHES

Type	A	B	C	D	E	F	G	H	J
503	4.71	4.00	4.27	2.02	3.56	2.79	0.76	1.95	2.62
603	5.75	5.25	4.36	2.15	3.00	2.79	0.76	1.95	2.62

api "Compack I" Optical Meter-Relay Controllers



CONTACTLESS ADJUSTABLE SET-POINT INDICATING METER RELAY CONTROLLERS

Monitor or Control Any Signal Measurable on a Panel Meter:

- Motor Load, rpm
- Voltage
- Inductance
- Phase
- Resistance
- Current
- Pressure, Temp.
- Vacuum

Below set point: (on a high set point meter) light is focused on photocell keeping load relay coil energized (fail safe). At or above set point: light is abruptly cut off from photocell, instantly de-energizing coil and closing contacts. Operation unaffected by ambient light. Double set point units energize both relay coils when signal is between the two set points. Shpg. wt., 3 lbs.

OPTICAL METER RELAY FEATURES

Taut-Band Construction for Sensitive Meter Ranges . . . Continuous Reading Above and Below Set Point . . . Advanced Solid-State Circuitry, Wired Fail-Safe.

"COMPACK" CONTROL CIRCUITS

ON-OFF CONTROLS

Models 503-KH (Single Set Point) and 503-KD (Double Set Point). Complete control package contains power supply, control circuitry and load relay coupled to Optical Meter-Relay. Connections are made to terminals in rear of meter barrel as shown above. Control circuit is simple phase-sensitive AC bridge which triggers an SCR on or off as the photocell changes resistance. The SCR "on" energizes the load relay coil. All circuit components are normally energized below set point, keeping the system fail-safe. May easily be converted to a push-button reset latching circuit. SPDT (Form C) relay contacts rated 5 amps at 115 VAC resistive. Scale arc length, 4". *Indicates taut-band meter movement.

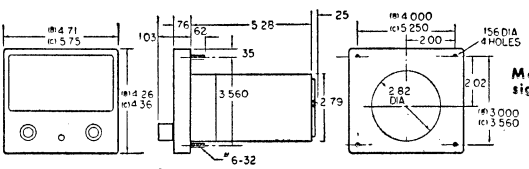
†AC Load Meter. Range 0-47 mA AC to match secondary of current transformers listed. Dial reads 0-150% of motor load. May be used with any transformer listed, to monitor or control motor load. When ordering AC Load Meter, order transformer appropriate to your application.

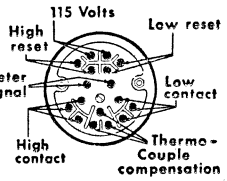
ON-OFF TEMPERATURE CONTROLS

Models 603-KH (Single Set Point) and 603-KD (Double Set Point). Medium resistance, thermocouple actuated pyrometers with electrical cold junction and copper error compensation; automatic thermocouple break protection. Mirrored scales calibrated in °F and °C. Adjustable for thermocouples up to 10 ohms. May be used for control or alarm applications. Scale arc approx. 5". All have taut-band movements.

TIME PROPORTIONING TEMP. CONTROLS

Model 603-KTP. Same compensation and thermocouple break protection as temperature controls above, but with proportional control from relay output. Ratio of relay "on" time to "off" time proportional to deviation from set point. Has approx. 3% PR band. Capable of straight line temperature control as close as ±1°F. Has adjustable time cycle and PR band. Taut-band meter.





Model 503 is (B) Dimension — Model 603 is (C) Dimension

Range DC	Model 503-KH Single Set Point Stock No.	EACH 1-9	10-24	25-49	Model 503-KD Double Set Point Stock No.	EACH 1-9	10-24	25-49
0-10 μA*	51 D 5544	139.00	125.00	118.00	51 D 5553	164.00	149.60	139.40
0-20 μA*	51 D 5545	127.00	114.30	107.95	51 D 5554	152.00	136.80	129.20
0-50 μA*	51 D 5546	121.00	108.90	102.27	51 D 5555	146.00	131.40	124.10
0-100 μA*	51 D 5547	116.00	104.40	98.60	51 D 5556	141.00	126.90	119.85
50-0-50 μA*	.....	.....	.....	.....	51 D 5557	141.00	126.90	119.85
5-0-5 μA*	.....	.....	.....	.....	51 D 5558	164.00	147.60	139.40
0-1 mA	51 D 5548	109.00	98.10	92.65	51 D 5559	134.00	120.60	113.90
0-10 mV*	51 D 5549	120.00	108.00	102.00	51 D 5560	145.00	130.50	123.25
0-50 mV	51 D 5550	111.00	99.90	94.35	51 D 5561	136.00	122.40	115.60
0-1 mA AC	51 D 5551	113.00	101.70	96.05	51 D 5562	138.00	124.20	117.80
†AC Load	51 D 5552	114.00	102.60	96.90	51 D 5563	139.00	125.10	118.15

TRANSFORMERS AVAILABLE FOR AC LOAD METER (†)—SPECIFY RANGE

Stock No.	Primary Range (Amps) Specify Choice	EACH
51 D 5522 C	3, 5, 7.5, 10, 15, 25, 30, 50	5.00

Temp. Range °F	Thermo-couple	Model 603-KH Single Set Pt. Stock No.	EACH 1-9	10-24	25-49	Model 603-KD Double Set Pt. Stock No.	EACH 1-9	10-24	25-49
0/300	I/C	51 D 5565	138.00	124.20	117.30	51 D 5572	162.00	146.70	138.55
0/500	I/C	51 D 5566	135.00	121.50	114.75	51 D 5573	160.00	144.00	136.00
0/750	I/C	51 D 5567	135.00	121.50	114.75	51 D 5574	160.00	144.00	136.00
0/1000	I/C	51 D 5501	135.00	121.50	114.75	51 D 5502	160.00	144.00	136.00
0/1500	C/A	51 D 5568	132.00	118.80	112.20	51 D 5575	157.00	141.30	133.45
0/2500	C/A	51 D 5569	132.00	118.80	112.20	51 D 5576	157.00	141.30	133.45

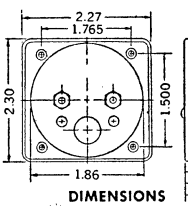
MODEL 603-KTP TIME PROPORTIONING TEMPERATURE CONTROL

Stock No.	Temperature Range °F	°C	Thermo-couple	EACH 1-9	10-24	25-49
51 D 5578	0-300	0-150	I/C	166.00	149.40	141.10
51 D 5579	0-500	0-260	I/C	164.00	147.60	139.90
51 D 5580	0-750	0-400	I/C	164.00	147.60	139.90
51 D 5581	0-1000	0-500	I/C	164.00	147.60	139.90
51 D 5582	0-1500	0-800	C/A	161.00	144.90	136.85
51 D 5583	0-2500	0-1370	C/A	161.00	144.90	136.85

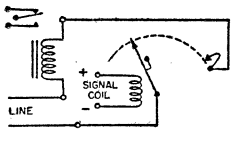
LOW-COST ALARM METER-RELAY

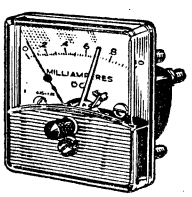
- Indicating Meter, As Well As Alarm
- Full-Scale Adjustable Alarm Pointer
- Sensitivities to 100 Microamps

Used for monitoring motor load, gas content, overvoltage, current leakage, etc. Allows direct alarm action from meter relay contacts without need for a special DC power supply or amplifier. The indicating meter pointer carries a gold plated steel contact and the adjustable alarm pointer carries 2 small gold plated magnets for a contact. When the indicating pointer reaches an alarm setting, the magnet positively locks the contacts together, closing the alarm circuit. Operate reliably on as little as 6 volts, AC or DC, and will handle up to 115 volts, 100 mA. Manually reset. *Coil resistance, 2.5K. †AC Load Alarm, high set point. †† AC Load Alarm, low set point. Range, 0-47 mA to match current transformers listed in table above. When ordering, specify transformer primary range amps to match your application. Shpg. wt., 8 oz.



DIMENSIONS





Stock No.	Range	1-9, EACH	10-24, EACH	25-49, EACH
51 D 5584	0-1 mA DC	37.00	33.30	31.45
51 D 5585	0-1 mA AC	41.00	36.90	34.88
51 D 5586	0-100 μA DC*	43.50	39.15	36.98
51 D 5587	0-50 mV DC	37.00	33.30	31.45
51 D 5588	AC Load†	41.00	36.90	34.88
51 D 5817	AC Load††	41.00	36.90	34.88

Specify Stock No., Range and Model No. on All Meter-Relay Orders

Attractive Quality-Built Metal Products by BUD

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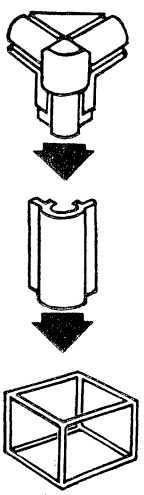
BUD IMLOK® SYSTEM OF METAL ENCLOSURES FOR ELECTRONICS

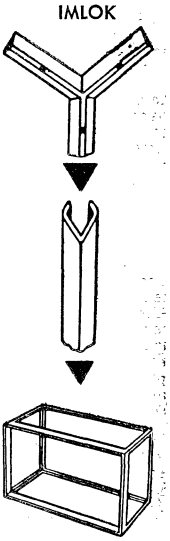
- Make Housings Quickly and Economically, Using Only Screwdriver and Hacksaw
- Ideal for Electronic Prototype Equipment, Research, and Short Production Runs
- Panels of Any Desired Material Can Easily Be Fitted to the Framework

Standard IMLOK

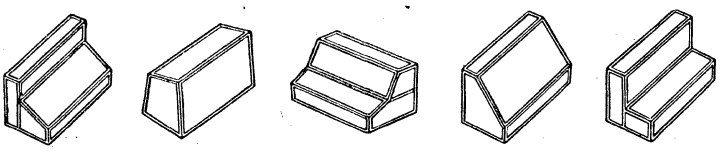


Solves a ticklish problem when you need a cabinet of special design to house prototype or production equipment on which the run is small. Eliminates the need for expensive tools and dies and reduces fabrication cost to a bare minimum. The Bud Imlok system features a large variety of corner connectors and interlocking extrusions. Using only the simplest of tools (a screwdriver and hacksaw), you can assemble precision cases, cabinets, and racks. Any complex design you need can be achieved. Corner connectors govern the general shape of the enclosure; the framework is formed by the extrusions, held in place by the corner connectors. The connectors and extrusions are made of aluminum alloy to rigidly controlled specifications. The parts fit together beautifully to make a professionally-finished, solidly-built enclosure, yet they are simplicity itself to assemble. Extrusions fit snugly against the fully radiused corners of the connectors to make a neat, inconspicuous corner appearance. Connector arms are long, so that they form a strong joint with the interlocking extrusions. The whole appearance of the framework indicates its solidness and strength. Standard Imlok components are large and rugged for use in large round-corner enclosures. For smaller enclosures where a square appearance is preferred or required, use Slimline Imlok System components.

Slimline IMLOK

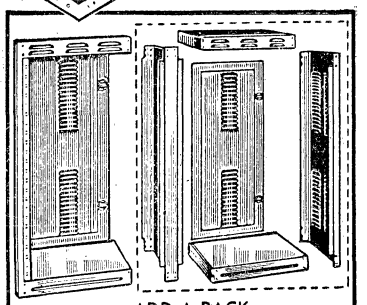


SOME STRUCTURES MADE BY THE IMLOK SYSTEM

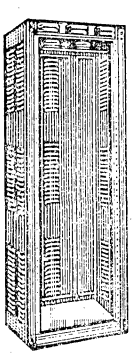


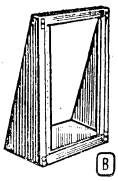
Contact the Nearest Allied Facility for Imlok Engineering Catalogs

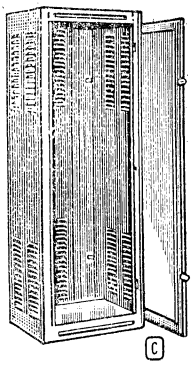
Bud Relay Racks, Rack Cabinets

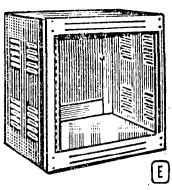


ADD-A-RACK









A DELUXE ENCLOSED RELAY RACKS

Top and bottom have chrome trim. Doors have 2 snap-action catches. 16-gauge steel with 7/64" panel supports. Casters can be mounted on base. For 19" panels—24" width available on Special Order. *CR-2072, CR-2073 in gray hammertone only.

SPECIFY GRAY HAMMERTONE, GRAY WRINKLE, OR BLACK WRINKLE FINISH

Stock No.	Mfr's Type	Overall Size	Panel Ht.	Wt., Lbs.	EACH 1-9	10-14	15-19	20-24
42 D 7500 CL2Z	CR-1774	42 1/16x22x17 1/8"	36 3/4"	82	61.50	55.40	49.20	46.20
42 D 7501 CL2Z	CR-1771	47 5/16x22x17 1/8"	42"	92	69.70	62.80	55.80	52.30
42 D 7502 CL2Z	CR-1772	66 9/16x22x17 1/8"	61 1/4"	115	87.20	78.50	69.70	65.40
42 D 7503 CL2Z	CR-1780	75 5/16x22x17 1/8"	70"	125	89.40	80.50	71.50	67.10
42 D 7504 CL2Z	CR-1773	82 5/16x22x17 1/8"	77"	135	100.40	90.30	80.30	75.30
42 D 7505 L2Z	*CR-2072	66 9/16x22x22 1/8"	61 1/4"	137	106.70	96.00	85.40	80.00
42 D 7507 CL2Z	CR-2075	75 5/16x22x22 1/8"	70"	148	108.70	97.80	87.00	81.50
42 D 7506 L2Z	*CR-2073	82 5/16x22x22 1/8"	77"	159	126.70	114.00	101.30	95.00

ADD-A-RACK SERIES FOR ABOVE

Permit above racks to be assembled into banks of two or more. Four sections: top, bottom, door and coupling panel. Replace either side of rack with coupling panel; add new top and bottom; attach side to new top and bottom; attach new door. For 19" panel —24" width available on Special Order. *AR-2276, 2277 in gray hammertone only.

SPECIFY GRAY HAMMERTONE, GRAY WRINKLE, OR BLACK WRINKLE FINISH

Stock No.	Mfr's Type	Used With	Wt., Lbs.	EACH 1-9	10-14	15-19	20-24
42 D 7508 CL2ZF	AR-1775	CR-1771	74	64.30	57.90	51.40	48.20
42 D 7509 CL2ZF	AR-1776	CR-1772	100	79.90	71.90	63.90	59.90
42 D 7511 CL2ZF	AR-1779	CR-1780	107	84.50	76.10	67.60	63.40
42 D 7510 CL2ZF	AR-1777	CR-1773	113	98.20	88.40	78.60	73.60
42 D 7512 CL2ZF	AR 1778	CR-1774	70	60.50	54.40	48.40	45.30
42 D 7513 L2ZF	*AR-2276	CR-2072	110	96.90	87.20	77.50	72.60
42 D 7515 CL2ZF	AR-2279	CR-2075	120	98.90	89.00	79.10	74.10
42 D 7514 L2ZF	*AR-2277	CR-2073	130	117.90	106.10	94.30	88.40

B DESK-TYPE RELAY RACKS

Chassis-type base. Supporting angles assure steadiness. Choice of finishes.

Gray Hammertone	Black Wrinkle	Mfr's Type	Overall Size	Panel Ht.	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7309 CX	42 D7395CX	RR-1248	24x20 3/8x12"	21"	15	12.20	11.00	9.80	9.10
42 D 7311 CX	42 D7396CX	RR-1249	31x20 3/8x12"	28"	18	14.40	12.90	11.50	10.80

C SUPER-DELUXE ENCLOSED 2-DOOR CABINET RACKS

Like deluxe racks (Fig. A.), but panel supports adjustable 1-6" at 1" intervals. Takes casters. 16-ga. steel. For 19" panel—24" width available on Special Order.

SPECIFY GRAY HAMMERTONE, GRAY WRINKLE OR BLACK WRINKLE FINISH

Stock No.	Mfr's Type	Overall Size	Panel Ht.	Wt., Lbs.	EACH 1-9	10-14	15-19	20-24
42 D 7522 CL2ZF	CR-2174	42 1/16x22x17 1/8"	36 3/4"	102	82.60	74.30	66.10	61.90
42 D 7523 CL2ZF	CR-2171	47 5/16x22x17 1/8"	42"	114	89.20	80.30	71.30	66.90
42 D 7524 CL2ZF	CR-2172	66 9/16x22x17 1/8"	61 1/4"	138	115.10	103.60	92.10	86.30
42 D 7526 CL2ZF	CR-2175	75 5/16x22x17 1/8"	70"	150	123.70	114.40	99.00	92.80
42 D 7525 CL2ZF	CR-2173	82 5/16x22x17 1/8"	77"	163	138.10	124.30	110.50	103.60

D OPEN-TYPE RELAY RACKS

Chassis-type base, except*, has base of 1/4" iron angles and brackets. For 19" panel—24" width available on Special Order. †RR-1265 in black wrinkle only.

SPECIFY GRAY HAMMERTONE OR BLACK WRINKLE FINISH

Stock No.	Mfr's Type	Overall Size	Panel Ht.	Wt., Lbs.	EACH 1-9	10-14	15-19	20-24
42 D 7516 CL2Z	RR-1263	35 39/64x20x22"	31 1/2"	35	27.10	24.40	21.70	20.40
42 D 7517 CL2Z	RR-1363	40 55/64x20x22"	36 3/4"	37	26.20	23.60	21.00	19.70
42 D 7518 CL2Z	RR-1264	70 39/64x20x22"	66 1/2"	46	31.10	28.00	24.80	23.30
42 D 7519 L2Z	*†RR-1265	72 1/4x20 3/8x13"	66 1/2"	68	72.20	65.00	57.80	54.20
42 D 7520 CL2Z	RR-1364	75 55/64x20x22"	71 3/4"	48	32.60	29.40	26.10	24.50
42 D 7521 CL2Z	RR-1366	81 7/64x20x22"	77"	50	35.70	32.20	28.60	26.80
42 D 7539 C2Z	RR-1369	80 3/8x20 7/8x20 7/8"	77"	105	61.80	55.60	49.40	46.30

E HEAVY-DUTY CABINET RACKS AND ADD-A-CABS

Use where more strength and depth is needed; clear inside depth, 16 1/16"; 22" wide. Hinged removable rear door. Louvered sides and 2 1/2x17 1/2" rear bottom vent. Consist of top, bottom, back and one side. Use one common side. Write for prices in quantities of 50-99. 24" width available for CR rack only on Special Order.

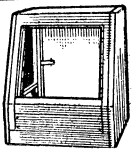
SPECIFY GRAY HAMMERTONE, BLACK OR GRAY WRINKLE

HEAVY-DUTY CABINET RACKS

Stock No.	Type CR-	Ht.	Panel Ht.	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7527 CL2Z	1736	24 1/2"	19 1/4"	50	33.80	30.40	27.10	25.40
42 D 7528 CL2Z	1737	31 1/2"	26 1/4"	57	36.30	32.70	29.10	27.20
42 D 7529 CL2Z	1738	40 1/4"	35"	70	43.30	38.90	34.60	32.40

ADD-A-CABS FOR ABOVE

Stock No.	Type ACR-	Used With	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7530 CL2ZF	1936	CR-1736	42	33.70	30.30	26.90	25.20
42 D 7531 CL2ZF	1937	CR-1737	52	41.30	37.20	33.10	31.00
42 D 7532 CL2ZF	1938	CR-1738	57	42.70	38.40	34.10	32.00



SERIES SIXTY CONVERTIBLES

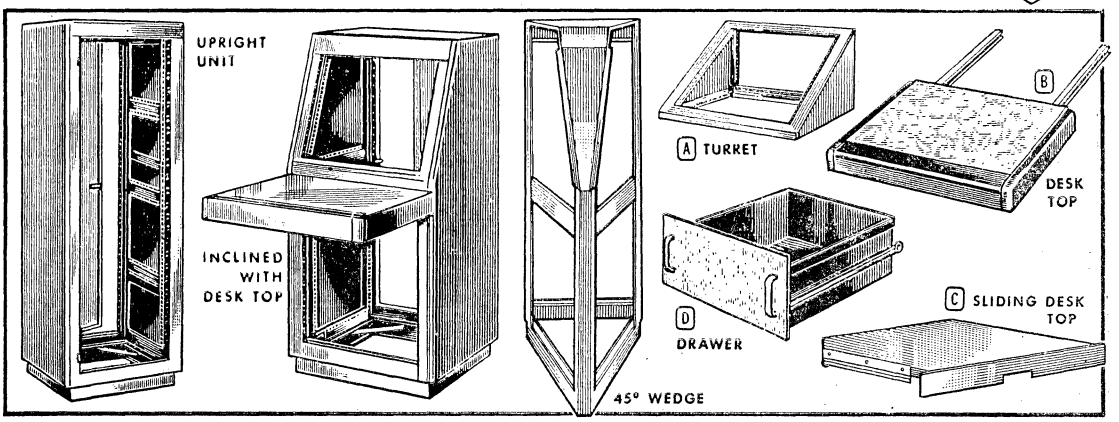
Rugged housing for delicate instruments and systems. Provide correct viewing angle. Allow maximum access to equipment. *Plain sides. **Louvered sides. †Plain rear door. ††Louvered rear door. Vertical panel space, 3 1/2". Outside depth, 22". Inside depth, 20 1/4". For 19" panel. BLUE OR GRAY. Av., 100 lbs.

Stock No.	Type 60-	Size HxW	EACH 1-3	4-6	7-9	10-14
42 D 8777 CF	4600*†	22 11/16x24 1/16"	192.50	173.20	154.00	144.40
42 D 8778 CF	4601*†	27 5/8x24 1/16"	194.70	175.20	155.80	146.00
42 D 8779 CF	4602*†	29 3/8x24 1/16"	197.10	177.40	157.60	147.80
42 D 8780 CF	4700**†	22 11/16x24 1/16"	200.50	180.40	160.40	150.40
42 D 8781 CF	4701**†	27 5/8x24 1/16"	204.00	183.60	163.20	153.00
42 D 8782 CF	4702**†	29 3/8x24 1/16"	206.20	185.60	165.00	154.70
42 D 8783 CF	4800*††	22 11/16x24 1/16"	197.10	177.40	157.60	147.80
42 D 8784 CF	4801*††	27 5/8x24 1/16"	199.30	179.40	159.50	119.35
42 D 8785 CF	4802*††	29 3/8x24 1/16"	201.70	181.50	161.30	120.75
42 D 8786 CF	4900**††	22 11/16x24 1/16"	202.20	182.00	161.80	151.70
42 D 8787 CF	4901**††	27 5/8x24 1/16"	204.80	184.30	163.90	153.60
42 D 8788 CF	4902**††	29 3/8x24 1/16"	207.20	186.40	165.70	155.40

When Ordering, Please Specify Stock No. and Mfr's Type No.

Metal Racks, Accessories and Wedges

SERIES 60 CABINET RACKS AND ACCESSORIES



UPRIGHT CABINET RACKS

Welded frame of 14-gauge steel. Sides and rear door of 16-gauge steel. Door mounts to open from either left or right. Adjustable vertical panel-mounting rails. Front rails are drilled and tapped at 10-32 W.E. spacing; rear rails are drilled with universal spacing. 24 1/16" wide, 23 3/4" deep inside, except †20 1/4". Top opening 18 1/2" wide, 17" deep on types having 22" outside depth, 20 1/2" deep on others. *Panel space. Depth, 25 1/2", except §22". SPECIFY GRAY OR BLUE FINISH.

Stock No.	Type 60-	Ht. In.	P.S.* In.	Wt., Lbs.	EACH 1-3	4-6	7-9	10-14
42 D 8700 CZF	2300†	29 5/8§	21	126	122.80	110.50	98.30	92.10
42 D 8701 CZF	2301†	40 1/8§	31 1/2	156	152.00	136.80	121.60	114.00
42 D 8702 CZF	2302†	50 5/8§	42	176	168.80	151.90	135.00	126.60
42 D 8703 CZF	2303†	61 1/8§	52 1/2	197	187.50	168.70	150.00	140.60
42 D 8704 CZF	2304†	69 7/8§	61 1/4	220	208.30	187.50	166.70	156.20
42 D 8705 CZF	2305†	78 5/8§	70	235	231.50	208.30	185.20	173.60
42 D 8707 CZF	2307	29 5/8	21	156	145.00	130.50	116.00	108.80
42 D 8708 CZF	2308	40 1/8	31 1/2	176	168.50	151.70	134.80	126.40
42 D 8709 CZF	2309	50 5/8	42	185	187.20	168.50	149.80	140.40
42 D 8710 CZF	2310	61 1/8	52 1/2	211	207.80	187.00	166.30	155.90
42 D 8711 CZ	2311	69 7/8	61 1/4	240	231.00	207.90	184.80	173.20
42 D 8712 CZ	2312	78 5/8	70	256	256.60	230.90	205.30	192.40
42 D 8713 CZF	2313	87 3/8	78 3/4	257	280.10	252.10	224.00	210.00

PERFORATED TOPS (Specify Smooth Blue or Smooth Gray) Av., 18 lbs.

Stock No.	Type 60-	WxD	Fits Rack with overall depth of	EACH 1-3	4-6	7-9	10-14
42 D 8716 CF	2370	21 15/16x17"	22"	7.50	6.80	6.00	5.60
42 D 8717 CF	2371	21 15/16x20 1/2"	25 1/2"	7.90	7.10	6.30	5.90

FULLY ASSEMBLED INCLINED PANEL RACKS

Accept 19" panel and optional desk top. Front rails drilled and tapped at 10-32 W.E. spacing. Welded frame of 14-gauge steel; sides and door of 16-gauge steel. Inclined panel slanted 20°. 50 5/8" high, 24 1/16" wide, 22" deep outside, 20 1/4" deep inside. *Inclined top panel height; †Vertical bottom panel height. SPECIFY GRAY OR BLUE FINISH. Wt., 165 lbs.

Stock No.	Type 60-	I.P.* In.	V.P.† In.	EACH 1-3	4-6	7-9	10-14
42 D 8674 CZF	2330	10 1/2	29 3/4	184.10	165.70	147.30	138.10
42 D 8675 CZF	2331	15 3/4	24 1/2	195.10	175.60	156.10	146.40
42 D 8676 CZF	2332	17 1/2	22 3/4	195.10	175.60	156.10	146.40

SERIES 60 WEDGES

Standard 45° wedge units designed to create custom consoles or any configuration with Series 60 Panel Cabinet Racks. SPECIFY GRAY OR BLUE FINISH. Av. shpg. wt., 125 lbs.

45° WEDGES FOR SERIES 60 UPRIGHT RACKS

Stock No.	Type 60-	Panel Space	Depth	Wedge Width	EACH 1-3	4-6	7-9	10-14
42 D 8587 CF	8400	21"	22"	18 9/32"	88.80	79.90	71.00	66.60
42 D 8588 CF	8401	31 1/2"	22"	18 9/32"	102.80	92.50	82.20	77.10
42 D 8589 CF	8402	42"	22"	18 9/32"	112.00	100.80	89.60	84.00
42 D 8590 CF	8403	52 1/2"	22"	18 9/32"	121.20	109.10	97.00	90.90
42 D 8591 CF	8404	61 1/4"	22"	18 9/32"	137.40	123.70	110.00	103.10
42 D 8592 CF	8405	70"	22"	18 9/32"	150.40	135.30	120.30	112.80
42 D 8593 CF	8406	78 3/4"	22"	18 9/32"	162.80	146.50	130.30	122.10
42 D 8594 CF	8407	21"	25 1/2"	20 61/64"	97.40	87.60	77.90	73.00
42 D 8595 CF	8408	31 1/2"	25 1/2"	20 61/64"	113.60	102.30	90.90	85.20
42 D 8596 CF	8409	42"	25 1/2"	20 61/64"	126.60	113.90	101.30	94.90
42 D 8597 CF	8410	52 1/2"	25 1/2"	20 61/64"	137.40	123.70	110.00	103.10
42 D 8598 CF	8411	61 1/4"	25 1/2"	20 61/64"	152.10	136.80	121.60	114.00
42 D 8599 CF	8412	70"	25 1/2"	20 61/64"	169.90	152.90	135.90	127.40
42 D 8600 CF	8413	78 3/4"	25 1/2"	20 61/64"	188.30	169.50	150.60	141.20

45° Wedges For Series 60 Inclined Panel Racks. Av. shpg. wt., 125 lbs.

Stock No.	Type 60-	Panel Space	Wedge Width	EACH 1-3	4-6	7-9	10-14
42 D 8601 CF	8430	29 3/4"	18 9/32"	130.40	117.40	104.30	97.80
42 D 8602 CF	8431	24 1/2"	18 9/32"	139.60	125.70	117.70	104.70
42 D 8603 CF	8432	22 3/4"	18 9/32"	139.60	125.70	117.70	104.70

SERIES 60 ACCESSORIES

A **Steel Turrets.** Fit 19" rack panels. 16-ga. steel. Mtg. rails have universal hole spacing. Panel space (front, bottom, rear): Type 2364—17 1/2", 14", 8 3/4"; Type 2365—12 1/4", 10 1/2", 7"; Type 2366—21", 17 1/2", 10 1/2". Panel spaces recessed 3/8". Type 2364, 17 lbs.; Type 2365, 14 1/2 lbs.; Type 2366, 20 lbs.

SPECIFY GRAY OR BLUE FINISH

Stock No.	Type 60-	Outside Size H	W	D	EACH 1-3	4-6	7-9	10-14
42 D 8150 CX	2364	12 5/16"	22 1/16"	17 7/8"	39.10	35.20	31.30	29.30
42 D 8151 CX	2365	10 3/16"	22 1/16"	14 3/8"	32.60	29.40	26.10	24.50
42 D 8152 CX	2366	14 3/8"	22 1/16"	20 13/16"	41.10	37.00	32.90	30.80

B **Desk Tops.** Light-gray wood-grained formica top. Metal sides and cowl. Support over 200 lbs. 3 1/16x24 1/16" wide. Choice of Gray or Blue finish. Shpg. wt., 22 lbs.

SPECIFY GRAY OR BLUE FINISH

Stock No.	Mfr's Type	Depth	EACH 1-3	4-6	7-9	10-14
42 D 8680 CL2	60-2360	22"	39.70	35.80	31.80	29.80
42 D 7572 CL2	60-2362	25 1/2"	41.00	36.90	32.80	30.70

C **Sliding Desk Tops.** Light-gray formica surface. Support 75 lbs. Need only 1 3/4" panel height. SPECIFY SMOOTH GRAY OR SMOOTH BLUE FINISH. Shpg. wt., 8 lbs.

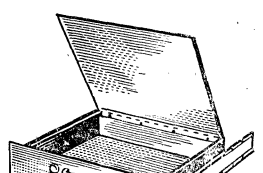
Stock No.	Mfr's Type	Width	Depth	Panel	EACH 1-3	4-6	7-9	10-14
42 D 8715 CF	60-2361	16 7/8"	15 1/8"	19x1 1/4"	22.00	19.80	17.60	16.50

D **Type 60-2368 Drawer.** Roll-out drawer slides out 16 inches on friction-free nylon rollers. 16-gauge steel with 11-gauge 19" panel and brackets. Safety drawer stops. Shipped completely assembled. Silver-anodized aluminum handles. Inside dimensions, 6 3/8x16 5/8x19 1/4". Requires 8 3/4" vertical space. Choice of Gray or Blue finish. Shpg. wt., 28 lbs.

SPECIFY GRAY OR BLUE FINISH

42 D 8682 CU. 1-3.....Each 35.70 4-6.....Each 32.10
7-9.....Each 28.50 10-14.....Each 26.70

DESK TOP DRAWER

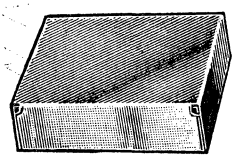


Type 60-2363. Spacious drawer for small tools and components, circuit designs, and manuals. Designed for use with Bud Series 60 cabinets. Hinged desk-top made of formica bonded to aluminum, has piano-type hinge. Latch locks and releases drawer and top. Slides travel quietly on nylon rollers. Front panel is 3 1/2x19". Inside dimensions, 16 5/8x3 1/4x15". Shpg. wt., 19 lbs. Specify smooth gray or blue finish.

42 D 7573 CX. 1-3....Each 61.30 4-6.....Each 55.20
7-9.....Each 49.00 10-14.....Each 46.00

High-Quality Aluminum Products

ALUMINUM CHASSIS BASES



Construction and design same as the steel chassis bases on the facing page. Each made from one piece of sheet metal. Bases are welded on Government-approved spot-welders specially developed for aluminum. Assures strength and long lasting qualities. Natural finish aluminum alloy 5005 H-14. All are 18 ga., except †16 ga. and *14 ga. ‡Punched for chassis mounting brackets.

Stock No.	Mfr's Type	Size DxWxH	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7903	AC-431	4x6x2″	½	1.60	1.40	1.30	1.20
42 D 7904	AC-430	4x6x3″	½	1.80	1.60	1.40	1.30
42 D 7341	AC-432†	4x17x3″	1¼	3.10	2.80	2.50	2.30
42 D 7846	AC-402	5x7x2″	½	1.70	1.50	1.30	1.30
42 D 7905	AC-429	5x7x3″	¾	1.90	1.70	1.50	1.40
42 D 7847	AC-403	5x9½x2″	½	1.80	1.70	1.50	1.40
42 D 7848	AC-421	5x9½x3″	¾	2.20	2.00	1.70	1.60
42 D 7855	AC-404	5x10x3″	¾	2.20	2.00	1.70	1.60
42 D 7906	AC-422	5x13x3″	¾	2.50	2.30	2.00	1.90
42 D 7339	AC-433†	6x17x3″	1¼	3.70	3.30	2.90	2.80
42 D 7849	AC-405	7x7x2″	½	1.80	1.70	1.50	1.40
42 D 7850	AC-406	7x9x2″	½	1.90	1.70	1.50	1.40
42 D 7851	AC-407	7x11x2″	¾	2.20	2.00	1.70	1.60
42 D 7852	AC-408	7x12x3″	1	2.70	2.40	2.10	2.00
42 D 7853	AC-409	7x13x2″	¾	2.30	2.00	1.80	1.70
42 D 7340	AC-411†	7x15x3″	1½	3.70	3.30	2.90	2.80
42 D 7342	AC-423†	7x17x3″	1¾	3.70	3.30	2.90	2.80
42 D 7907	AC-424†	8x12x3″	1½	3.20	2.90	2.50	2.40
42 D 7345	AC-425†	8x17x2″	1½	3.30	3.00	2.70	2.50
42 D 7257	AC-412†‡	8x17x3″	1¾	3.80	3.40	3.00	2.80
42 D 7854	AC-413†	10x12x3″	1½	3.80	3.40	3.00	2.80
42 D 7908	AC-414†	10x14x3″	1¾	3.80	3.40	3.00	2.80
42 D 7346	AC-415†‡	10x17x2″	1¼	3.70	3.30	2.90	2.80
42 D 7347	AC-416†‡	10x17x3″	2	4.30	3.80	3.40	3.20
42 D 7261	AC-427*‡	10x17x4″	3½	6.00	5.40	4.80	4.50
42 D 7258 X	AC-426*‡	11x17x2″	2¼	4.60	4.10	3.70	3.40

ALUMINUM CHASSIS BASES (Cont'd)

Stock No.	Mfr's Type	Size DxWxH	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7259 X	AC-417*‡	11x17x3″	2¾	5.30	4.80	4.30	4.00
42 D 7263 X	AC-418*‡	12x17x3″	2¾	5.40	4.90	4.30	4.10
42 D 7348 X	AC-419*‡	13x17x2″	2½	4.80	4.30	3.80	3.60
42 D 7260 X	AC-420*‡	13x17x3″	2¾	5.70	5.10	4.50	4.30
42 D 7262 X	AC-428*‡	13x17x4″	3¾	7.00	6.30	5.60	5.30
42 D 7125	AC-1401	2½x4½x1″	⅛	1.30	1.10	1.00	.90
42 D 7126	AC-1402	3½x4½x1″	⅛	1.30	1.20	1.10	1.00
42 D 7127	AC-1403	3½x5½x1″	¼	1.30	1.20	1.10	1.00
42 D 7128	AC-1404	4x5x2″	¼	1.60	1.40	1.30	1.20
42 D 7129	AC-1405	4x6x1½″	¼	1.40	1.30	1.10	1.10
42 D 7130	AC-1406	4x8x2″	⅜	1.80	1.70	1.50	1.40
42 D 7131	AC-1407	4½x8x1½″	⅜	1.60	1.40	1.30	1.20
42 D 7132	AC-1408	5x9x1½″	⅜	1.60	1.40	1.30	1.20
42 D 7133	AC-1409	5x9½x1½″	⅜	1.70	1.50	1.30	1.30
42 D 7134	AC-401	5x9½x2½″	1	2.10	1.90	1.70	1.60
42 D 7135	AC-1410	5x13½x2½″	¾	2.10	1.90	1.70	1.60
42 D 7136	AC-1411	5½x5½x1″	¼	1.50	1.40	1.20	1.10
42 D 7137	AC-1412	5½x9½x1½″	½	1.70	1.50	1.30	1.30
42 D 7138	AC-1413	6x8x2″	½	1.80	1.70	1.50	1.40
42 D 7139	AC-1414†	6x14x3″	1	3.30	2.90	2.60	2.40
42 D 7140	AC-1415‡	7x15x2″	1	2.90	2.60	2.30	2.20
42 D 7141	AC-1416†	7x17x2″	1	3.30	3.00	2.70	2.50
42 D 7142	AC-1417†	7x17x2½″	1½	3.40	3.10	2.70	2.60
42 D 7143	AC-1418	8x10x2½″	1	2.80	2.50	2.20	2.10
42 D 7144	AC-1419†	8x12x2½″	1	3.30	2.90	2.60	2.40
42 D 7145	AC-1420†	8½x15x3″	1½	3.50	3.20	2.80	2.60
42 D 7146	AC-1421†	9x15x3″	1½	4.00	3.60	3.20	3.00
42 D 7147 X	AC-1422†	10x17x5″	2½	8.70	7.80	6.90	6.50
42 D 7148 X	AC-1423*	10x23x3″	3	6.30	5.60	5.00	4.70
42 D 7149	AC-1424†	12x12x3″	1¾	3.80	3.50	3.10	2.90
42 D 7150 X	AC-1425†	12x17x2″	1½	4.80	4.40	3.90	3.60
42 D 7151 X	AC-1426*	13x17x5″	3½	9.50	8.60	7.60	7.10
42 D 7152 X	AC-1427*	14x17x3″	3	6.80	6.10	5.40	5.10
42 D 7153 X	AC-1428*	15x17x4″	3½	9.50	8.60	7.60	7.10
42 D 7154 X	AC-1429*	15x17x6″	3¾	13.00	11.70	10.40	9.80
42 D 7155 X	AC-1430*	17x17x3″	3¾	8.00	7.20	6.40	6.00
42 D 7156 X	AC-1431*	17x17x4″	4	11.30	10.10	9.00	8.50

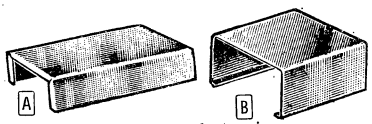
BOTTOM PLATES FOR CHASSIS BASES ABOVE

Shields wires and components against dust and dirt. Embossed feet at each corner prevent sharp edges from damaging table tops and other surfaces. Lightweight, natural finish gives a handsome appearance. Drilled for No. 6 self-tapping screws.

Stock No.	Mfr's Type	Size WxL	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7157	BPA-1501	2½x4½″	⅛	.70	.60	.50	.40
42 D 7158	BPA-1502	3½x4½″	⅛	.80	.70	.60	.45
42 D 7159	BPA-1503	3½x5½″	⅛	.80	.70	.60	.45
42 D 7160	BPA-1504	4x5″	⅛	.80	.70	.60	.45
42 D 7161	BPA-1505	4x6″	⅛	.80	.80	.70	.50
42 D 7162	BPA-1506	4x8″	⅛	1.00	.90	.80	.60
42 D 7163	BPA-1532	4x17″	¾	1.00	.90	.80	.60
42 D 7164	BPA-1507	4½x8″	⅛	1.10	1.00	.90	.65
42 D 7694	BPA-1589	5x7″	⅛	.90	.80	.70	.55
42 D 7165	BPA-1508	5x9″	⅛	.90	.80	.70	.55
42 D 7695	BPA-1590	5x9½″	¼	.90	.80	.70	.55
42 D 7696	BPA-1591	5x10″	¼	.90	.80	.70	.55
42 D 7166	BPA-1509	5x13″	½	1.40	1.30	1.10	.85
42 D 7167	BPA-1510	5x13½″	¼	1.40	1.30	1.10	.85
42 D 7168	BPA-1511	5½x5½″	⅛	.90	.80	.70	.55
42 D 7169	BPA-1512	5½x9½″	¼	1.00	.90	.80	.60
42 D 7170	BPA-1513	6x8″	7/16	1.10	1.00	.90	.65
42 D 7171	BPA-1514	6x14″	⅜	1.40	1.30	1.10	.85
42 D 7172	BPA-1515	6x17″	7/16	1.80	1.60	1.40	1.05
42 D 7697	BPA-1592	7x7″	⅓	.90	.80	.70	.55
42 D 7698	BPA-1593	7x9″	⅓	1.00	.90	.80	.60

Stock No.	Mfr's Type	Size WxL	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7699	BPA-1594	7x11″	⅓	1.10	1.00	.90	.65
42 D 7700	BPA-1595	7x12″	½	1.30	1.10	1.00	.75
42 D 7701	BPA-1596	7x13″	½	1.40	1.30	1.10	.85
42 D 7173	BPA-1516	7x15″	7/16	1.60	1.40	1.30	.95
42 D 7174	BPA-1517	7x17″	7/16	1.60	1.40	1.30	.95
42 D 7175	BPA-1518	8x10″	⅜	1.50	1.40	1.20	.90
42 D 7176	BPA-1519	8x12″	⅜	1.80	1.70	1.50	1.10
42 D 7177	BPA-1520	8x17″	9/16	1.90	1.70	1.50	1.15
42 D 7178	BPA-1521	8½x15″	½	2.20	2.00	1.70	1.30
42 D 7179	BPA-1522	9x15″	½	2.30	2.00	1.80	1.35
42 D 7180	BPA-1523	10x12″	½	1.80	1.70	1.50	1.10
42 D 7181 X	BPA-1524	10x14″	5/8	1.80	1.70	1.50	1.10
42 D 7702	BPA-1597	10x17″	¾	1.80	1.70	1.50	1.10
42 D 7182 X	BPA-1525	10x23″	15/16	2.70	2.40	2.10	1.60
42 D 7183	BPA-1526	11x17″	1	2.00	1.80	1.60	1.20
42 D 7184	BPA-1527	12x12″	5/8	2.00	1.80	1.60	1.20
42 D 7185	BPA-1528	12x17″	¾	2.40	2.20	1.90	1.45
42 D 7703	BPA-1598	13x17″	¾	2.60	2.30	2.10	1.55
42 D 7186	BPA-1529	14x17″	15/16	2.60	2.30	2.10	1.55
42 D 7187 X	BPA-1530	15x17″	1	3.50	3.20	2.80	2.10
42 D 7188 X	BPA-1531	17x17″	1 1/16	3.60	3.20	2.90	2.15

ALUMINUM OPEN END CHASSIS



A

B

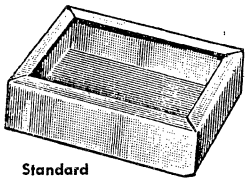
A Heavy-Gauge. U-shaped construction with ends folded over ⅜″ for added strength and durability. Provide excellent protection for delicate electronic components. Available in a wide variety of sizes for every requirement. Natural aluminum finish (.040″ thick). Av. shpg. wt., 1 lb.

Stock No.	Mfr's Type	Size H x W x D	EACH 1-24	25-49	50-99	100-149
42 D 7801	CB-30	1½x7x5″	1.30	1.20	1.20	1.00
42 D 7802	CB-41	1½x7x7″	1.60	1.40	1.30	1.20
42 D 7804	CB-996	1½x9x5½″	1.50	1.40	1.20	1.10
42 D 7805	CB-976	1½x9x7½″	1.80	1.70	1.50	1.40
42 D 7807	CB-997	1½x11x7″	1.80	1.60	1.40	1.30
42 D 7808	CB-998	1½x13x7″	2.10	1.85	1.65	1.50
42 D 7800	CB-38	2x6x7″	1.30	1.20	1.10	1.00
42 D 7806	CB-40	2x10x7″	1.80	1.60	1.40	1.30

B Miniature. Perfect for miniature tube applications or in sub-assemblies. Made to insure utmost strength and long-lasting qualities. ¼″ flange on bottom allows chassis to be fastened down or a bottom plate attached. Available in sizes to satisfy a wide variety of requirements. Natural aluminum finish for a handsome appearance. Av. shpg. wt., ½ lb.

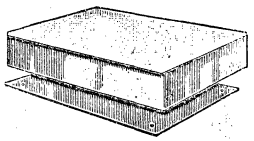
Stock No.	Mfr's Type	Size H x W x D	EACH 1-24	25-49	50-99	100-149
42 D 7810	CB-1624	1x3⅛x1¾″	.60	.50	.50	.40
42 D 7816	CB-1617	1x3⅛x4″	.60	.50	.50	.40
42 D 7812	CB-1626	1x4⅛x2¾″	.70	.60	.50	.50
42 D 7817	CB-1618	1x4⅛x4″	.70	.60	.50	.50
42 D 7818	CB-1619	1x5⅛x4″	.80	.70	.60	.60
42 D 7819	CB-1620	1x6⅛x4″	.80	.70	.60	.60
42 D 7809	CB-1623	1¼x2¾x2⅝″	.50	.50	.40	.40
42 D 7814	CB-1628	1¼x6⅛x3″	.80	.70	.60	.60
42 D 7813	CB-1627	1½x4⅛x3¾″	.70	.60	.50	.50
42 D 7815	CB-1629	1½x4⅞x5¾″	.80	.70	.60	.60
42 D 7811	CB-1625	2x4½x3¼″	.70	.60	.50	.50

Durable Metal Bases and Chassis


Standard

STEEL CHASSIS BASES

Best quality chassis bases. Available in zinc-plated or black-wrinkle finished steel, standard (18-22 gauge) or heavy-duty (16 gauge). Carefully formed, one-piece construction; corners are reinforced and spot-welded. The four sides are folded at the bottom to provide additional strength; bottom fold also permits easy addition of bottom plate. Standard bases are less bottom plates, see below. Heavy-duty bases are for uses requiring extra strength to hold heavy weights, and include 20 gauge bottom plates with mounting screws. *Punched to accommodate chassis mounting brackets.


Bottom Plates

STANDARD CHASSIS BASES

Size H	Size W	Size D	Gauge	Wt., Lbs.	Black-Wrinkle Stock No.	Black-Wrinkle Type No.	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-149	Zinc-Plated Stock No.	Zinc-Plated Type No.	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-149
2″	7″	5″	22	1	42 D 7820	CB-628	1.40	1.30	1.10	1.10	42 D 7884	CB-629	1.80	1.60	1.40	1.30
2½″	9½″	5″	22	1¼	42 D 7821	CB-644	1.80	1.70	1.50	1.40	42 D 7898	CB-645	2.30	2.00	1.80	1.70
1½″	9½″	5″	22	1	42 D 7822	CB-788	1.60	1.40	1.30	1.20	42 D 7899	CB-776	2.30	2.00	1.80	1.70
3″	10″	5″	22	1¼	42 D 7823	CB-604	1.80	1.70	1.50	1.40	42 D 7878	CB-605	2.40	2.20	1.90	1.80
3″	14″	6″	20	1¾	42 D 7824	CB-755	2.30	2.10	1.90	1.80	42 D 7900	CB-756	2.80	2.50	2.20	2.10
2″	7″	7″	20	1½	42 D 7825	CB-789	1.80	1.60	1.40	1.30	42 D 7879	CB-1191	2.10	1.90	1.70	1.60
2″	9″	7″	20	1½	42 D 7826	CB-790	1.80	1.70	1.50	1.40	42 D 7880	CB-1192	2.10	1.90	1.70	1.60
2″	11″	7″	20	1½	42 D 7827	CB-791	1.90	1.70	1.50	1.40	42 D 7881	CB-1193	2.30	2.10	1.90	1.80
3″	12″	7″	20	1¾	42 D 7828	CB-792	2.10	1.90	1.70	1.60	42 D 7882	CB-793	2.80	2.60	2.30	2.10
2″	13″	7″	20	2	42 D 7829	CB-646	2.00	1.80	1.60	1.50	42 D 7883	CB-1194	2.50	2.30	2.00	1.90
2½″	13½″	5″	20	1¾	42 D 7207	CB-647	2.30	2.10	1.90	1.80	42 D 7320	CB-1198	2.90	2.60	2.30	2.20
3″	15″	7″	20	2½	42 D 7208	CB-649	2.70	2.40	2.10	2.00	42 D 7321	CB-1189	3.30	2.90	2.60	2.40
3″	15″	8½″	20	2½	42 D 7209	CB-665	2.90	2.60	2.30	2.20	42 D 7322	CB-666	3.70	3.30	2.90	2.80
3″	17″	4″	20	2¼	42 D 7210	CB-1068	2.40	2.20	1.90	1.80	42 D 7323	CB-1066	2.80	2.60	2.30	2.10
2½″	17″	7″	20	2½	42 D 7211	CB-648	2.70	2.40	2.10	2.00	42 D 7324	CB-1199	3.10	2.80	2.50	2.30
3″	17″	7″	20	1¾	42 D 7212	CB-757	2.90	2.60	2.30	2.20	42 D 7325	CB-758	3.40	3.10	2.70	2.60
2½″	10″	8″	20	2	42 D 7213	CB-701	2.30	2.00	1.80	1.70	42 D 7326	CB-702	2.70	2.40	2.10	2.00
2½″	12″	8″	20	2½	42 D 7214	CB-703	2.30	2.00	1.80	1.70	42 D 7327	CB-704	2.90	2.60	2.30	2.20
3″	12″	8″	20	1¾	42 D 7215	CB-759	2.40	2.20	1.90	1.80	42 D 7328	CB-760	3.10	2.80	2.50	2.30
2″	17″	8″	20	2½	42 D 7217	CB-650	2.30	2.00	1.80	1.70	42 D 7329	CB-774	3.10	2.80	2.50	2.30
3″	17″	8″	20	3¼	42 D 7220	CB-651*	2.80	2.50	2.20	2.10	42 D 7330	CB-775	3.40	3.10	2.70	2.60
3″	12″	10″	20	3	42 D 7830	CB-652	2.50	2.30	2.00	1.90	42 D 7901	CB-1195	3.20	2.90	2.50	2.40
3″	14″	10″	20	4	42 D 7831	CB-653	2.80	2.50	2.20	2.10	42 D 7902	CB-779	3.20	2.90	2.50	2.40
2″	17″	10″	20	3¼	42 D 7221	CB-654*	2.70	2.40	2.10	2.00	42 D 7284	CB-769	3.20	2.90	2.50	2.40
3″	17″	10″	20	4	42 D 7222	CB-636*	2.70	2.40	2.10	2.00	42 D 7331	CB-1196	4.00	3.60	3.20	3.00
3″	17″	10″	18	5	42 D 7223	CB-655*	3.30	3.00	2.70	2.50	42 D 7206	CB-637	3.80	3.40	3.00	2.80
3″	23″	10″	18	5½	42 D 7225 X	CB-656	3.90	3.50	3.10	2.90	42 D 7332 X	CB-1197	4.60	4.10	3.70	3.40
2″	17″	11″	18	4½	42 D 7227 X	CB-657*	3.10	2.80	2.50	2.30	42 D 7333 X	CB-770	3.80	3.40	3.00	2.80
3″	17″	11″	18	4½	42 D 7228 X	CB-658*	3.70	3.30	2.90	2.80	42 D 7280 X	CB-771	4.70	4.20	3.70	3.50
2″	17″	12″	18	4½	42 D 7229 X	CB-663*	3.40	3.10	2.70	2.60	42 D 7334 X	CB-661	4.10	3.70	3.30	3.10
3″	17″	12″	18	5¼	42 D 7230 X	CB-664*	3.80	3.50	3.10	2.90	42 D 7281 X	CB-662	4.80	4.40	3.90	3.60
2″	17″	13″	18	5	42 D 7231 X	CB-659*	3.80	3.50	3.10	2.90	42 D 7282 X	CB-772	4.90	4.40	3.90	3.70
3″	17″	13″	18	5½	42 D 7232 X	CB-660*	4.50	3.60	3.60	3.40	42 D 7283 X	CB-773	5.40	4.90	4.30	4.10
4″	17″	10″	18	6½	42 D 7233	CB-640*	4.30	3.80	3.40	3.20	42 D 7335	CB-641	4.80	4.30	3.80	3.60
4″	17″	13″	18	7½	42 D 7234 X	CB-642*	5.30	4.70	4.20	3.90	42 D 7336 X	CB-643	6.30	5.60	5.00	4.70
5″	17″	10″	18	7½	42 D 7235	CB-623	6.00	5.40	4.80	4.50	42 D 7337	CB-624	7.10	6.40	5.70	5.30
5″	17″	13″	18	8	42 D 7236 X	CB-625	6.60	5.90	5.30	4.90	42 D 7338 X	CB-626	7.80	7.10	6.30	5.90

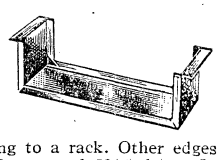
STEEL BOTTOM PLATES FOR STANDARD CHASSIS BASES

Bottom plates to fit standard chassis bases above. In zinc-plated or black-wrinkle finished steel for exact matching with chassis. Effective shields against dust and dirt; protect wiring and components on the under side of the chassis. Bottom plates have four embossed feet in corners to prevent marring of table-tops or shelves. Drilled for No. 6 self-tapping screws.

Fits Chassis D	Fits Chassis W	Wt., Lbs.	Black-Wrinkle Stock No.	Black-Wrinkle Type No.	EACH 1-49	EACH 50-99	EACH 100-149	EACH 150-199	Zinc-Plated Stock No.	Zinc-Plated Type No.	EACH 1-49	EACH 50-99	EACH 100-149	EACH 150-199
5″	7″	½	42 D 7654	BP-705	.80	.70	.60	.55	42 D 7674	BP-706	.80	.70	.60	.55
5″	9½″	¾	42 D 7655	BP-680	.80	.70	.60	.55	42 D 7675	BP-667	.90	.80	.70	.65
5″	10″	¾	42 D 7656	BP-536	.90	.80	.70	.60	42 D 7676	BP-538	1.00	.90	.80	.75
7″	7″	1	42 D 7657	BP-681	1.30	1.10	1.00	.90	42 D 7677	BP-668	1.30	1.10	1.00	.90
7″	9″	1	42 D 7658	BP-682	1.30	1.10	1.00	.90	42 D 7678	BP-669	1.30	1.10	1.00	.90
7″	11″	1	42 D 7659	BP-683	1.30	1.10	1.00	.90	42 D 7679	BP-670	1.30	1.20	1.10	1.00
7″	12″	1¼	42 D 7660	BP-537	1.40	1.30	1.10	1.05	42 D 7680	BP-539	1.60	1.40	1.30	1.20
7″	13″	1¼	42 D 7661	BP-684	1.30	1.10	1.00	.90	42 D 7681	BP-671	1.50	1.40	1.20	1.10
5″	13½″	1	42 D 7662	BP-685	1.00	.90	.80	.75	42 D 7682	BP-672	1.30	1.10	1.00	.90
4″	17″	1½	42 D 7663	BP-1069	1.10	1.00	.90	.80	42 D 7683	BP-1067	1.50	1.40	1.20	1.10
7″	17″	1½	42 D 7664	BP-686	1.10	1.00	.90	.80	42 D 7684	BP-673	1.70	1.50	1.30	1.30
8″	10″	1¼	42 D 7668	BP-707	1.10	1.00	.90	.80	42 D 7685	BP-708	1.30	1.20	1.10	1.00
8″	12″	1½	42 D 7665	BP-709	1.30	1.10	1.00	.90	42 D 7686	BP-710	1 60	1.40	1.30	1.20
8″	17″	1¾	42 D 7666	BP-687	1.30	1.10	1.00	.90	42 D 7687	BP-674	1.80	1.70	1.50	1.40
10″	12″	1½	42 D 7667	BP-688	1.30	1.10	1.00	.90	42 D 7688	BP-675	1.90	1.70	1.50	1.40
10″	14″	1½	42 D 7669	BP-517	1.80	1.60	1.40	1.30	42 D 7689	BP-514	1.80	1.70	1.50	1.40
10″	17″	1¾	42 D 7670	BP-689	1.50	1.40	1.20	1.10	42 D 7690	BP-676	1 90	1.70	1.50	1.40
11″	17″	1½	42 D 7671	BP-690	1.50	1.40	1.20	1.10	42 D 7691	BP-677	1.90	1.70	1.50	1.40
12″	17″	2	42 D 7672	BP-691	1.80	1.60	1.40	1.30	42 D 7692	BP-678	2 30	2.10	1.90	1.80
13″	17″	2¼	42 D 7673	BP-692	1.80	1.60	1.40	1.30	42 D 7693	BP-679	2.70	2.40	2.10	2.00

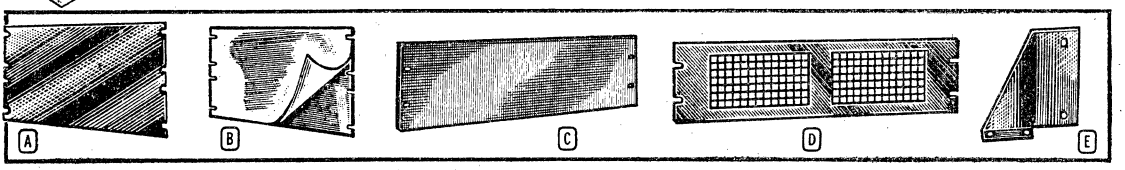
PANEL-MOUNTING CHASSIS

Stock No.	Mfr's Type	Ht.	Wt., Lbs.	EACH 1-24	EACH 25-49	EACH 50-99	EACH 100-149
42 D 7265	CB-1370	1¾″	¾	3.00	2.70	2.40	2.30
42 D 7266	CB-1371	3½″	1¼	3.30	3.00	2.70	2.50
42 D 7267	CB-1372	5¼″	1½	3.80	3.40	3.00	2.80
42 D 7268	CB-1373	7″	2	4.30	3.80	3.40	3.20
42 D 7269	CB-1374	8¾″	2¼	5.10	4.60	4.10	3.80
42 D 7270	CB-1375	10½″	2¾	5.90	5.30	4.70	4.40
42 D 7271 X	CB-1376	12¼″	3	6.60	5.90	5.30	4.90
42 D 7272 X	CB-1377	14″	3¼	7.20	6.50	5.70	5.40



Designed for vertical installation in places where depth in space is limited or access from the front of chassis is desired. Chassis are open-side type for standard 19″ mounting. All are sturdily constructed of .062″ aluminum sheet; have reinforced corners and natural finish. Front flanges are 1″ wide and have standard notching suitable for mounting to a rack. Other edges have ⅝″ flanges. 17″ wide, excluding flange, and 5½″ deep. In heights from 1¾″ to 14″ (see table at left).

Rack Panels and Accessories



STANDARD RACK PANELS

A Heavy-duty 1/8" thick aluminum or steel panels. 19" wide (available 24" wide on Special Order) have notched edges that fit mtg. screw spacing of all Series 60 standard and telephone-type relay racks. For prices on quantities larger than those shown, write, wire or phone Allied Electronics. Specify black wrinkle, gray wrinkle, gray hammertone, smooth gray, or smooth blue finish.

ALUMINUM (Specify Finish)

Stock No.	Mfr's Type	Ht.	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7408 CX	PA-1101	1¾"	½	1.40	1.30	1.10	1.10
42 D 7409 CX	PA-1102	3½"	1	2.00	1.80	1.60	1.50
42 D 7410 CX	PA-1103	5¼"	1¼	2.60	2.30	2.10	1.90
42 D 7411 CX	PA-1104	7"	1¾	3.30	3.00	2.70	2.50
42 D 7417 CX	PA-1105	8¾"	2	3.80	3.50	3.10	2.90
42 D 7418 CX	PA-1106	10½"	2½	4.80	4.40	3.90	3.60
42 D 7419 CX	PA-1107	12¼"	3	5.70	5.10	4.50	4.30
42 D 7420 CX	PA-1108	14"	3¼	6.40	5.80	5.10	4.80
42 D 7421 CX	PA-1109	15¾"	4	7.20	6.50	5.70	5.40
42 D 7422 CX	PA-1110	17½"	4	7.80	7.10	6.30	5.90
42 D 7423 CX	PA-1111	19¼"	4¼	8.60	7.70	6.90	6.50
42 D 7424 CX	PA-1112	21"	5	9.50	8.60	7.60	7.10

STEEL (Specify Finish)

Stock No.	Mfr's Type	Ht.	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7364 CX	PS-1250	1¾"	1¼	1.30	1.10	1.00	.90
42 D 7365 CX	PS-1251	3½"	2½	1.40	1.30	1.10	1.10
42 D 7366 CX	PS-1252	5¼"	3¾	1.90	1.70	1.50	1.40
42 D 7367 CX	PS-1253	7"	4¾	2.00	1.80	1.60	1.50
42 D 7368 CX	PS-1254	8¾"	5½	2.70	2.40	2.10	2.00
42 D 7369 CX	PS-1255	10½"	7	3.10	2.80	2.50	2.30
42 D 7370 CX	PS-1256	12¼"	8	3.60	3.20	2.90	2.70
42 D 7371 CX	PS-1257	14"	8¾	4.00	3.60	3.20	3.00
42 D 7372 CX	PS-1258	15¾"	10¼	4.30	3.90	3.50	3.30
42 D 7373 CX	PS-1259	17½"	11	4.80	4.40	3.90	3.60
42 D 7375 CX	PS-1260	19¼"	12¾	5.30	4.80	4.30	4.00
42 D 7376 CX	PS-1261	21"	13½	6.10	5.50	4.90	4.60

SURFACE-SHIELD RACK PANELS

B 1/8" thick bright aluminum alloy rack panels in blemish-free mill finish. Each panel is covered on both sides with sturdy pressure sensitive white paper to protect against damage. Panels listed are 19" wide. (24" width available on Special Order.)

Stock No.	Mfr's Type	Ht.	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 8662 X	SFA-1831	1¾"	½	1.30	1.10	1.00	.90
42 D 8663 X	SFA-1832	3½"	1	2.00	1.80	1.60	1.50
42 D 8664 X	SFA-1833	5¼"	1¼	2.60	2.30	2.10	1.90
42 D 8665 X	SFA-1834	7"	1¾	3.20	2.90	2.50	2.40
42 D 8666 X	SFA-1835	8¾"	2	3.80	3.40	3.00	2.80
42 D 8667 X	SFA-1836	10½"	2½	4.80	4.40	3.90	3.60
42 D 8668 X	SFA-1837	12¼"	3	5.50	5.00	4.40	4.10
42 D 8669 X	SFA-1838	14"	3½	6.30	5.70	5.10	4.80
42 D 8670 X	SFA-1839	15¾"	3¾	7.10	6.40	5.70	5.30
42 D 8671 X	SFA-1840	17½"	4	7.80	7.10	6.30	5.90
42 D 8672 X	SFA-1841	19¼"	4½	8.70	7.80	6.90	6.50
42 D 8673 X	SFA-1842	21"	5	9.40	8.50	7.50	7.10

FLANGED PANELS

C Quality-constructed flanged panels. Carefully made of heavy-duty 16-ga. steel. 19" wide. ½" flange all around. Four .281x.500" mtg. holes spaced to conform to spacing on mtg. rails. Specify gray wrinkle, black wrinkle, gray hammertone, smooth light gray, smooth light blue, charcoal gray, or sand finish.

Stock No.	Mfr's Type	Ht.	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7350 CX	FPS-1230	1¾"	1	1.50	1.40	1.20	1.10
42 D 7351 CX	FPS-1231	3½"	2	1.60	1.40	1.30	1.20
42 D 7352 CX	FPS-1232	5¼"	2½	1.80	1.60	1.40	1.30
42 D 7353 CX	FPS-1233	7"	3	1.90	1.70	1.50	1.40
42 D 7354 CX	FPS-1234	8¾"	4	2.40	2.20	1.90	1.80
42 D 7355 CX	FPS-1235	10½"	4½	3.00	2.70	2.40	2.30
42 D 7356 CX	FPS-1236	12¼"	5¼	3.50	3.20	2.80	2.60
42 D 7357 CX	FPS-1237	14"	6	3.90	3.50	3.10	2.90
42 D 7358 CX	FPS-1238	15¾"	6¾	4.40	4.00	3.50	3.30
42 D 7359 CX	FPS-1241	21"	9	5.80	5.20	4.60	4.30

CHASSIS MOUNTING BRACKETS

E Insure proper support of heavily loaded chassis. Heavy-gauge steel brackets cut away to accommodate chassis 3" high, except *4" chassis. Black enamel. Sold only in pairs.

Stock No.	Mfr's Type	Ht.	Depth	Wt., Lbs.	PER PAIR 1-49	50-99	100-149	150-199
42 D 7868	MB-458	6½"	8"	1¼	1.60	1.40	1.30	1.20
42 D 7869	MB-448	6½"	10"	1¾	1.60	1.40	1.30	1.20
42 D 7867	MB-459	6½"	11"	2	1.80	1.70	1.50	1.40
42 D 7870	MB-449	6½"	12"	2	2.10	1.90	1.70	1.60
42 D 7873	MB-460	6½"	13"	2½	2.00	1.80	1.60	1.50
42 D 7872	MB-451	*8½"	13"	3	2.50	2.30	2.00	1.90

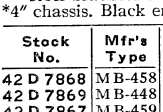
VENTILATED GRILLE PANELS

D Sturdy 1/8" thick steel. Grille is die-stamped in the panel. All panels are 19" wide and are available in a choice of finishes. *Indicates 3½" space provided from bottom of panel to ventilated portion of panel to allow for chassis mounting. Av. wt., 5 lbs.

Specify gray wrinkle, black wrinkle, or gray hammertone finish.

Stock No.	Mfr's Type	Ht.	EACH 1-24	25-49	50-99	100-149
42 D 7574 CX	PS-808	5¼"	4.30	3.90	3.50	3.30
42 D 7575 CX	PS-809	7"	4.80	4.40	3.90	3.60
42 D 7577 CX	PS-811*	10½"	6.10	5.50	4.90	4.60
42 D 7578 CX	PS-812*	12½"	6.60	5.90	5.30	4.90

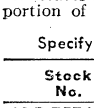
HEAVY-GAUGE STEEL RACK SHELVES



Slide-in shelves for heavy power supplies, modulator units, etc. Require chassis support angles listed below. Black enamel. HWD: CB-1976, 1x19x15". CB-1977, 1x19x12".

Stock No.	Mfr's Type	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7273 X	CB-1976	6¼	4.50	4.10	3.60	3.40
42 D 7274 X	CB-1977	5¼	3.60	3.20	2.90	2.70

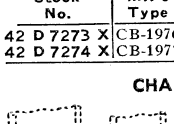
TRIANGULAR MOUNTING BRACKETS



Performance-tested triangular mounting brackets designed and made for durability. Will give long, dependable service. Quality-constructed of heavy-gauge steel to provide rigid support for panel and chassis assemblies and for shelves where heavy weights are involved. Black enamel finish.

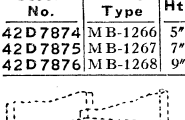
Stock No.	Mfr's Type	Ht.	Depth	Wt., Lbs.	PER PAIR 1-49	50-99	100-149	150-199
42 D 7874	MB-1266	5"	5"	1	1.30	1.10	1.00	.90
42 D 7875	MB-1267	7"	7"	1	1.40	1.30	1.10	1.10
42 D 7876	MB-1268	9"	9"	1½	1.80	1.70	1.50	1.40

CHASSIS SUPPORTING ANGLES



Where heavy weights occur in chassis construction, these supporting angles distribute the weight to the sides of the rack to relieve the panel. Relay-rack runners of 7/64" steel for heavy chassis shelves. Rugged long-wearing construction; designed for years of dependable service.

Stock No.	Mfr's Type	HxWxD	Wt., Lbs.	PER PAIR 1-24	25-49	50-99	100-149
42 D 7877	SA-1349	1⅜x3x14½"	4	2.90	2.60	2.30	2.20
42 D 8641	SA-1350	1⅜x3x12"	3	2.90	2.60	2.30	2.20



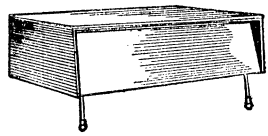
PRESTIGE SUPPORTING ANGLES

CE-2219. Constructed of heavy-duty steel. Designed for attaching to rails of Console Pedestal and Prestige Relay Racks. Slotted to provide infinite vertical adjustment. Extend entirely from front to rear to accept full-depth chassis. 21x3x2¾". Black enamel finish. Shpg. wt., 7½ lbs.

42 D 7195 U. 1-24.....Per Pair 3.70 25-49.....Per Pair 3.30
50-99.....Per Pair 2.90 100-149.....Per Pair 2.80

Quality Metal Cabinets and Cases

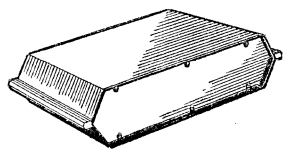
TILT-A-VIEW CABINETS



Designed to present selective angles of viewing for accurate reading of meters, dials, and recorders. These viewpoints are obtained with the slanted front face and the vertical rear face. The 2" detachable legs allow changing the position of the cabinet to a desired angle. Unit can be placed on desks, cabinets of various heights, or mounted on wall. Two-piece 16-gauge steel construction assure strength and rigidity and allow easy access for installation and service. Lower and upper portions of cabinet are fastened by sheet-metal screws. Scratch resistant vinyl finish. Charcoal-gray with light sand front and rear panels.

Stock No.	Mfr's Type	Size H x W x D	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7377 X	TV-2155	4½x15x10"	7	8.10	7.30	6.50	6.10
42 D 7378 X	TV-2156	6½x16x12"	12½	9.50	8.60	7.60	7.10
42 D 7379 X	TV-2157	8½x17x14"	17	13.80	12.40	11.00	10.30

STYLISH GRAND PRIX CABINETS

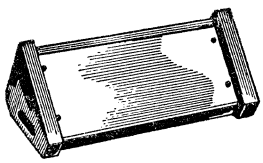


Attractive, modern cabinets of heavy-duty 20-gauge steel. Ideal for a variety of electronic equipment. Designed for easy access for installation and servicing. The upper and lower portions are held together by sturdy brushed-aluminum extrusions and fastened with setscrews. Four rubber feet prevent marring surfaces. Choice of light-gray hammertone body with matching panels or smooth dark-gray body with smooth light-gray panels. Specify Finish.

SPECIFY LIGHT GRAY HAMMERTONE OR SMOOTH DARK GRAY FINISH

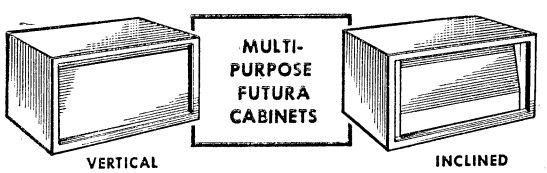
Stock No.	Mfr's Type	Size H x W x D	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 8723 CX	MD-1	4 3/16x19 1/8x10 1/2"	7¼	16.70	15.00	13.40	12.50
42 D 8724 CX	MD-2	7 3/16x19 1/8x10 1/2"	7¾	17.50	15.80	14.00	13.20
42 D 8725 CX	MD-3	4 3/16x12 1/8x8 3/4"	7	13.50	12.20	10.80	10.10

MARK-T CABINETS



Attractive, functional design with wide application in the realm of enclosures for controls. Angle of panel and door allow comfortable viewing of meters, dials, switches, lights, etc. Skillfully planned so that the interior is accessible for installation and adjustment when door is open. All welded 16-gauge steel construction. Removable front panel and hinged door. Cam-action, self-adjusting spring latch holds door securely against frame. Recessed safety-shielded carrying handles. Four rubber feet prevent marring of surfaces. Vinyl-texture, scratch-resistant body. Light-gray enamel panel and door.

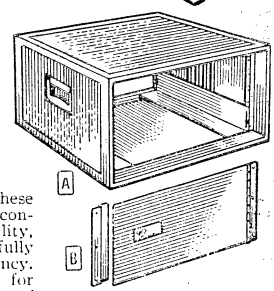
Stock No.	Mfr's Type	Width	Panel Size	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7384 X	MT-214	16"	5¾x14"	9	30.40	27.40	24.30	22.80
42 D 7385 X	MT-219	21"	5¾x19"	12	33.30	30.00	26.70	25.00
42 D 7386 X	MT-224	26"	5¾x24"	14½	39.20	35.30	31.40	29.40



Removable top, side; front-panel flange-held—no screws. Body and rear panel 20-gauge steel; front panel (vertical or 15° incline), 18 gauge. 4 rubber feet on base. Chassis mounts to base, front or rear panel. Av. wt., 8 lbs. Specify smooth blue or gray finish.

Stock No.	Type MD-	Size, (HWD)	Panel Style	EACH 1-24	25-49	50-99	100-149
42 D8732CX	1960	7x13x8"	Vertical	9.00	8.10	7.20	6.80
42 D8733CX	1961	8x14x9"	Vertical	9.70	8.70	7.70	7.30
42 D8734CX	1962	8x16x9"	Vertical	10.00	9.00	8.00	7.50
42 D8735CX	1963	7x13x8"	Inclined	10.50	9.50	8.40	7.90
42 D8736CX	1964	8x14x9"	Inclined	11.30	10.10	9.00	8.50
42 D8737CX	1965	8x16x9"	Inclined	12.00	10.80	9.60	9.00

CLASSIC CABINETS



- Functional Cabinet Beauty for Sophisticated Systems
- Charcoal-Gray or Sand Vinyl-Texture Finish
- Identical Front and Back
- Accept Standard 19" Panels
- 17" of Clear Depth Inside
- Strong Aluminum Handles

The truly functional beauty of these Classic cabinets provides a new concept in enclosures. Look of quality, elegance, and substance are artfully blended with practical efficiency. Their design ideally suits them for sophisticated instrumentation and systems. Extruded (6063-T5) aluminum frame. Patterned .050" aluminum panels on four sides. 16-gauge vertically-adjustable steel chassis supports. Front and rear mounting-rails tapped 10-32 W.E. Heavy-duty aluminum handle at each end. Supplied completely assembled. Complete with 4 rubber feet and 2 chassis supports.

Classic cabinet doors are of ⅛" 5005-H36 aluminum alloy. Stop fits on one panel mounting rail, hinged door attaches to other rail. If an opening is required above and/or below door, select a door whose height is smaller than the opening it is to cover. Plated, flush-type latch. Vinyl texture finish. 'Panel space.

A CLASSIC AGC CABINETS

(Specify Charcoal-Gray or Sand)

Stock No.	Type AGC-	Size, In. Ht.	PS*	Wt., Lbs.	EACH 1-4	5-9	10-14	15-19
42 D 8740 CU	266	4 7/8	3½	17	94.70	85.20	75.80	71.00
42 D 8741 CU	267	6 5/8	5¼	19	97.00	87.30	77.60	72.90
42 D 8742 CU	268	8 3/8	7	20	102.30	92.10	81.80	76.70
42 D 8743 CU	269	10 1/8	8¾	22	104.80	94.30	83.80	78.60
42 D 8744 CU	270	11 7/8	10½	23	108.30	97.50	86.60	81.20
42 D 8745 CU	271	13 5/8	12¼	15	112.60	101.40	90.10	84.50
42 D 8746 CU	272	15 3/8	14	26	116.10	104.50	92.90	87.00
42 D 8747 CU	273	17 1/8	15¾	28	120.50	108.40	96.40	90.40
42 D 8748 CU	274	18 7/8	17½	29	124.00	111.60	99.20	93.00
42 D 8749 CU	275	20 5/8	19¼	31	126.80	114.10	101.40	95.10
42 D 8750 CU	276	22 3/8	21	32	130.90	117.80	104.70	98.20
42 D 8751 CU	277	24 1/8	22¾	34	134.40	121.00	107.50	100.80
42 D 8752 CU	278	25 7/8	24½	35	138.20	124.40	110.60	103.60
42 D 8753 CU	279	27 5/8	26¼	37	141.70	127.50	113.40	106.30
42 D 8754 CU	280	29 3/8	28	38	144.60	130.20	115.70	108.50

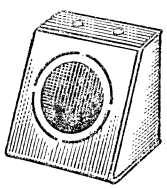
B DOORS FOR CLASSIC CABINETS

(Specify Charcoal-Gray or Sand)

Will Fit Any Other Cabinet or Rack with 19" Panel Space

Stock No.	Type AGD-	Ht. In.	Wt., Lbs.	EACH 1-4	5-9	10-14	15-19
42 D 8755 CU	366	3½	1¼	7.30	6.50	5.80	5.40
42 D 8756 CU	367	5¼	1¾	8.90	8.00	7.10	6.70
42 D 8757 CU	368	7	2¼	10.40	9.30	8.30	7.80
42 D 8758 CU	369	8¾	3	11.40	10.30	9.20	8.60
42 D 8759 CU	370	10½	3¼	12.50	11.30	10.00	9.40
42 D 8760 CU	371	12¼	3¾	13.40	12.10	10.80	10.10
42 D 8761 CU	372	14	4¼	13.70	12.30	11.00	10.30
42 D 8762 CU	373	15¾	4¾	15.50	14.00	12.40	11.60
42 D 8763 CU	374	17½	5¼	16.80	15.10	13.40	12.60
42 D 8764 CU	375	19¼	5¾	18.00	16.20	14.40	13.50
42 D 8765 CU	376	21	6¼	19.10	17.20	15.30	14.30
42 D 8766 CU	377	22¾	6¾	20.00	18.00	16.00	15.00
42 D 8767 CU	378	24½	7¼	21.00	18.90	16.80	15.70
42 D 8768 CU	379	26¼	7¾	22.20	20.00	17.80	16.70
42 D 8769 CU	380	28	8¼	23.70	21.30	19.00	17.80

UNIVERSAL METER CASES

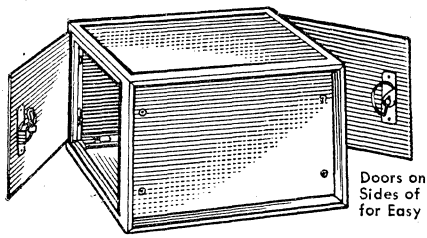


Sloping-front meter housings. Panel cut for 2" meters; knockout ring enlarges hole for 3" meters. Case top has two ⅜" knockouts for mounting terminal posts or feed-through insulators. Type CMA1930 accepts small components as well as meter. Type CM1935 is steel; Types CMA1930 and CMA1936 are aluminum. To minimize magnetic effect on meter, use aluminum case. In light-gray hammertone. 4¼x4x4", except CMA1930, which is 4¼x6x4". Shpg. wts., CM1935, 1 lb.; CMA1936, ¾ lb.; CMA1930, 1 lb.

Stock No.	Mfr's Type	EACH 1-49	50-99	100-149	150-199
42 D 8541	CM1935	1.70	1.50	1.30	1.30
42 D 8542	CMA1936	1.90	1.70	1.50	1.40
42 D 7583	CMA1930	3.30	2.90	2.60	2.40

Metal Cabinets and Cabinet Racks

TUDOR DELUXE CABINETS



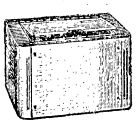
Doors on Both Sides of Cabinet for Easy Access

Handsome modern cabinets of fine design, utility, and quality. Feature two 16-gauge steel hinged doors affording access through either side of cabinet for easy inspection and servicing of equipment. Slender extruded aluminum framework is made of Slimline Imlok 901 aluminum extrusions and corner connectors, yielding greater cubic interior area without sacrificing strength. Side, top, and bottom panels are 0.030" aluminum; front panel is 0.090" aluminum. Front panel is recessed to protect knobs, dials, switches and other components on panel. Cam-action, self-adjusting spring latch holds doors securely against frame. Latch is screwdriver operated. Piano-type door hinge operates smoothly and prevents door from sagging. Four rubber feet on bottom keeps cabinet from sliding or marring finishes. Furnished completely assembled. Fit following chassis: Cabinet S-609, Chassis AC-1413; S-612, AC-1418; S-614, AC-413. Choice of charcoal-gray or sand.

SPECIFY CHARCOAL-GRAY OR SAND FINISH

Stock No.	Mfr's Type	Size HxWxD	Wt., Lbs.	EACH 1-9	10-14	15-19	20-24
42 D 7218 C	S-609	6x9½x8"	4¼	52.40	47.10	41.90	39.30
42 D 7219 C	S-612	8x12x10"	7	57.60	51.90	46.10	43.20
42 D 7216 CX	S-614	10x14x12"	9½	62.40	56.10	49.90	46.80

STREAMLINED CABINETS

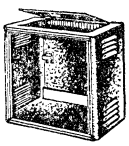


Ruggedly built units have recessed hinge cover with convenient finger-lift for easy opening. Front panels fit flush with embossed, rounded front corners and are removable for chassis installation or cutouts. 3½" high opening in rear for cables or controls. Louvers on sides. 8" high x 8¼" deep except *12x12".

SPECIFY BLACK WRINKLE OR GRAY HAMMERTONE FINISH

Stock No.	Type CD-	Width	Panel Space	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7592 C	1480	10½"	8x8"	6¼	7.60	6.80	6.10	5.70
42 D 7593 C	1481	12½"	8x10"	6	7.70	6.90	6.10	5.80
42 D 7594 CX	1482	14½"	8x12"	7½	8.20	7.40	6.50	6.10
42 D 7595 CX	1483	16½"	8x14"	8¾	8.80	7.90	7.00	6.60
42 D 7596 CX	1484	18½"	8x16"	9¼	9.40	8.50	7.50	7.10
42 D 7597 CX	1485*	20⅝"	12x18"	16¾	19.20	17.30	15.40	14.40

DELUXE CABINET RACKS

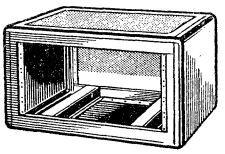


Deluxe racks with rounded corners and red inlaid trim. For 19" panels. 16-guage steel, welded joints. Recessed hinged-top doors with flush snap-locks. Types CR-1727, 1728, 1743, 1744, 1745 have hinged rear doors with snap-locks; rest have welded back panels. Louvered sides and 2½" opening in bottom provide ventilation. CR-1739 and 1742 have ten 9⅝" louvers per set; the rest, five 4⅝" louvers. All have 2 sets of louvers per side, except CR-1728 and 1743, 4 sets; CR-1727, 1744, 1745, 6 sets. Drilled for EIA notched panels, tapped for 10-32 screws. With full-size aluminum panel, mtg. screws. 14¾" deep, 22" wide.

SPECIFY GRAY OR BLACK WRINKLE, LIGHT GRAY HAMMERTONE FINISH

Stock No.	Type CR-	Height	Panel Space	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7450 CU	1726	8²⁵⁄₃₂"	7"	26¼	19.70	17.70	15.80	14.80
42 D 7451 CU	1741	10⁹⁄₁₆"	8¾"	28½	21.00	18.90	16.80	15.80
42 D 7452 CU	1740	12⁵⁄₁₆"	10½"	31	24.60	22.20	19.70	18.50
42 D 7456 CU	1742	14¹⁄₁₆"	12¼"	32¼	25.40	22.80	20.30	19.00
42 D 7457 CU	1739	15¹³⁄₁₆"	14"	35¼	34.40	31.00	27.50	25.80
42 D 7458 CU	1743	19³⁄₁₆"	17½"	40	33.70	30.40	27.00	25.30
42 D 7459 CU	1728	33⁵⁄₁₆"	31½"	43	41.30	37.20	33.10	31.00
42 D 7460 CZ	1744	28¹⁄₁₆"	26¼"	51	38.90	35.00	31.10	29.20
42 D 7461 CZ	1727	22¹³⁄₁₆"	21"	59	36.20	32.50	28.90	27.10
42 D 7462 CZ	1745	36¹³⁄₁₆"	35"	63	43.40	39.10	34.70	32.60

PRESTIGE BALL-CORNERED VERSA-CABINETS



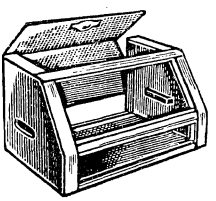
Has frame, two ball-cornered sides, perforated metal back, solid bottom plate, two supporting channels. 1¾x 19" opening in back for cables, controls, or knobs. Front, back, top, and bottom take standard 19" panels. May be placed end-to-end or stacked; can be fastened together horizontally or vertically. Panels easily removed for servicing. Inside width, 22¼"; overall, 23⅜". Inside depth, 15"; overall, 15²⁵⁄₃₂". With 4 rubber feet to prevent marring surfaces. Gray hammertone finish.

Stock No.	Type PC-	Panel Ht. F	Panel Ht. R	Overall Height	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7189 U	1700	5¼"	3½"	8¾"	28	35.20	31.60	28.10	26.40
42 D 7190 U	1701	7"	5¼"	10½"	29	37.20	33.40	29.70	27.90
42 D 7191 U	1702	8¾"	7"	12¼"	31	38.20	34.30	30.50	28.60
42 D 7192 U	1703	10½"	8¾"	14"	34	43.10	38.80	34.50	32.30
42 D 7193 U	1704	12¼"	10½"	15¾"	35	45.40	40.90	36.30	34.10

PERFORATED STEEL TOP PANEL

Stock No.	Type PC-	Size	Wt. Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7194 U	1710	12¼x19"	2½	3.80	3.50	3.10	2.90

"PRESTIGE" SLOPING PANEL CABINETS



Expertly engineered to provide custom housings for quality apparatus. Features include: swept-back top panel; removable panel trim bar for chassis installation; recessed handle slots; ventilated top; rear opening for cables or controls. Uses 19" rack panels. Gray hammertone. Rear opening, 2½x18". Panel recess, 1¼". Top depth, 9". Overall width 22". 3½" vertical panel height; *inclined panel height. Shpg. wts.: C-1555, 26 lbs.; C-1556, 28 lbs.; C-1557, 31 lbs.

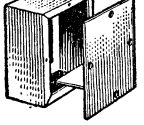
Stock No.	Mfr's Type	Height x Depth	Panel Space	EACH 1-14	15-24	25-34	35-49
42 D 8573 U	C-1555	11⅞x14³⁄₁₆"	* 7"	43.80	39.40	35.00	32.80
42 D 8574 U	C-1556	13¼x15¼"	* 8¾"	47.10	42.40	37.70	35.30
42 D 8575 U	C-1557	14¾x16¼"	*10½"	50.50	45.50	40.40	37.90

"PRESTIGE" STEEL CABINETS

Stock cabinets of advanced design. Removable hinged cover with grommeted finger holes swings back. Cover snaps closed by means of pressure fasteners. Two recessed handles. Two adjustable supporting channels for chassis of different widths. Height of channels permits flow of cooling air and easy removal of cabinet contents. For 19" relay rack panels. 16-gauge steel. Has embossed feet. Width: 21⁹⁄₁₆"; depth, 14⅞". Inside depth, 13⅞". Rear opening, 18x3". Cover opening, 21⁹⁄₁₆x12¾". Gray hammertone. Covers: *solid; †perforated.

Stock No.	Mfr's Type	Height	Panel Space	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7288 U	C-1440*	9½"	7"	26	36.40	32.80	29.10	27.30
42 D 7289 U	C-1441*	14¼"	8¾"	27	38.40	34.60	30.70	28.80
42 D 7290 U	C-1442*	13"	10½"	29	40.00	36.00	32.00	30.00
42 D 7291 U	C-1550†	9½"	7"	26	39.40	35.50	31.50	29.60
42 D 7292 U	C-1551†	11¼"	8¾"	27	41.00	36.90	32.80	30.70
42 D 7293 U	C-1552†	13"	10½"	29	43.30	39.00	34.70	32.50

MINIATURE UTILITY CABINETS WITH ATTACHED CHASSIS



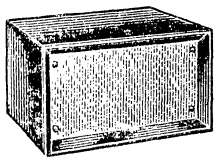
Sturdy steel cabinets with built-in chassis attached to front panel. For frequency meters, decade boxes, standing-wave bridges, etc. Removable front and rear panels fasten with self-tapping screws. Panels fit case flanges snugly; assure low RF leakage; protect components from dust and damage. Heavy-duty black-wrinkle finish. Shpg. wts.: Mfr's Type C-1794 and C-1795, 1 lb.; C-1796 and C-1797, 1¾ lbs.; C-1798, 2¾ lbs.

Stock No.	Mfr's Type	Cabinet HxWxD	Chassis HxWxD	EACH 1-49	50-99	100-149	150-199
42 D 7601	C-1794	4x5x3"	1x4⅛x2⅞"	1.90	1.70	1.50	1.40
42 D 7602	C-1795	5x4x3"	1¼x3⅛x2⅞"	2.10	1.90	1.70	1.60
42 D 7603	C-1796	6x5x4"	1¾x4⅛x3⅞"	2.20	2.00	1.70	1.60
42 D 7604	C-1797	5x6x4"	1¼x5⅛x3⅞"	2.50	2.30	2.00	1.90
42 D 7605	C-1798	6x6x6"	1¾x4⅞x5⅞"	3.00	2.70	2.40	2.30

Bud Cabinets Are Shipped Knocked Down—Easy to Assemble

Metal Cabinets, Miniboxes, and Blowers

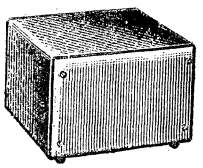
SHADOW CABINETS



All-steel equipment cabinets. These units have been expertly engineered to provide attractive, functionally-styled housing for all types of electronic devices. Ruggedly constructed, they feature recessed front panel design which not only improves appearance, but also protects equipment knobs, controls and switches from being moved accidentally. Sturdy, two-piece bodies are made of 18-gauge steel and front and rear panels are of 16-gauge steel. Finish is light gray hammertone. Bottom, front, and rear panels are each attached by four self-tapping screws. All are equipped with four rubber feet to prevent marring surfaces on which they may be placed. SB-2140 (11½ lbs.) accepts Bud chassis AC-424; SB-2141 (9½ lbs.) accepts chassis AC-408; SB-2142 (10 lbs.) accepts CB-666; SB-2143 (9¾ lbs.) accepts AC-409.

Stock No.	Mfr's Type	Size HxWxD	EACH 1-24	25-49	50-99	100-149
42 D 7253	SB 2140	8x14¼x10″	8.90	8.00	7.10	6.70
42 D 7254	SB 2141	7½x13¼x9″	7.10	6.40	5.70	5.30
42 D 7255 X	SB 2142	9½x17x11″	11.90	10.70	9.60	9.00
42 D 7256	SB 2143	6x15½x9″	6.80	6.10	5.40	5.10

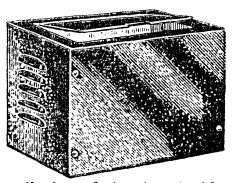
UTILITY CABINETS



Rugged utility cabinets for housing electronic equipment of all kinds. Sturdily constructed; made of 20-gauge steel throughout. Have rounded contoured corners; flanged panels also have rounded corners to preserve symmetry of design. Rear panel is louvered to assure complete ventilation of circuitry to be enclosed; unit has solid front panel. Both front and rear panels are attached with four 6-32 screws each, and are easily removed. Four rubber feet attached to base prevent scratching of surface on which unit is placed. Cabinets are attractively finished; bodies dark gray enamel, panels light gray enamel. Shpg. wts.: Type CU463, 1¾ lbs.; CU465, 2¼ lbs.; CU585, 3 lbs.; CU587, 3¾ lbs.; CU7125, 5 lbs.; CU7127, 6 lbs.

Stock No.	Mfr's Type	Size HxWxD	EACH 1-24	25-49	50-99	100-149
42 D 8692	CU463	4 7/32x6 7/32x3¾″	6.20	5.60	4.90	4.60
42 D 8693	CU465	4 7/32x6 7/32x5¾″	7.10	6.40	5.70	5.30
42 D 8694	CU585	5 7/32x8 7/32x5¾″	9.10	8.20	7.30	6.80
42 D 8695	CU587	5 7/32x8 7/32x7¾″	10.00	9.00	8.00	7.50
42 D 8696	CU7125	7 7/32x12 7/32x5¾″	9.20	8.30	7.30	6.90
42 D 8697	CU7127	7 7/32x12 7/32x7¾″	9.70	8.70	7.70	7.30

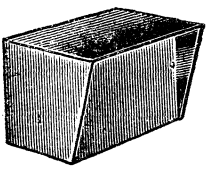
INSTRUMENT AND RECEIVER CABINETS



Ruggedly constructed, moderately priced steel cabinets. Particularly suitable for housing Amateur receivers, transmitters, signal generators, etc. Each unit has recessed hinged cover for easy access to all inside locations. Front panel is held securely in place with self-tapping screws. Panel extends full width of cabinet—provides maximum space for installation of controls. Louvers on each side of cabinet assure ample ventilation of circuitry inside. Body of cabinet is constructed of 20-gauge steel; panels are all 18-gauge steel, except those marked *, which are 16-gauge steel. Black wrinkle enamel finish.

Stock No.	Mfr's Type	Size HxWxD	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7652	C-973	7x8x8″	5	5.70	5.10	4.50	4.30
42 D 7653	C-993	7x10x8″	5½	6.50	5.90	5.20	4.90
42 D 7200	C-994	7x12x8″	6	6.70	6.10	5.40	5.10
42 D 7201	C-995	7x14x8″	7¼	7.20	6.50	5.70	5.40
42 D 7202 X	*C-1190	8x16x8″	9¼	10.20	9.20	8.10	7.60
42 D 7203 X	*C-975	9x15x11″	13	12.40	11.10	9.90	9.30
42 D 7205 X	*C-999	12x18x12″	17½	13.40	12.10	10.80	10.10

COWL-TYPE MINIBOXES



Sturdy 18-gauge aluminum. For housing VFO's, test equipment, etc. Easy to drill or punch. Projecting cover reduces glare from overhead lighting. Protects dials, switches and meter faces. Cover has two ½″ box braces to which bottom is attached with 4 No. 6 self-tapping sheet metal screws provided with each "Minibox." Natural aluminum or gray hammertone finish.

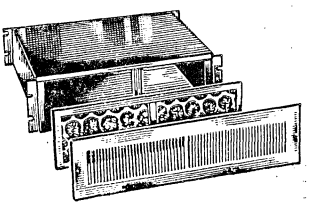
GRAY HAMMERTONE

Stock No.	Mfr's Type	Size HxWxD	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 8684	SC-2130	6x10x7″	2	7.30	6.60	5.90	5.50
42 D 8685	SC-2131	7x12x8″	2¾	8.00	7.20	6.40	6.00
42 D 8686	SC-2132	3x8x5″	1	4.30	3.80	3.40	3.20
42 D 8687	SC-2133	5x5x5″	1	4.30	3.90	3.50	3.30

NATURAL ALUMINUM

42 D 8688	SC-3030	6x10x7″	1¾	5.30	4.80	4.30	4.00
42 D 8689	SC-3031	7x12x8″	2¾	5.80	5.20	4.60	4.30
42 D 8690	SC-3032	3x8x5″	1	3.00	2.70	2.40	2.30
42 D 8691	SC-3033	5x5x5″	1	3.20	2.90	2.50	2.40

"TRANS-AIRE" BLOWERS



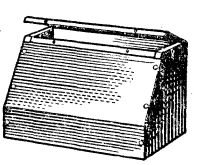
Operate as intake or exhaust fan for equipment cooling. Rubber-mounted 2-speed motor with oilite bearings. Thermal overload protection with automatic reset. Fiberglass filter (included). Type B-23 uses BF-24 filter; B-25, BF-26; B-27, BF-28. Horsepower: B-23, 1/20; B-25, 1/6; B-27, ¼. Panel width, 19″. Can be mounted to rails of 19″ racks or cabinets. *Air displacement at 0° static pressure. 18″ 3-wire cord. 110-120 V, 60 Hz AC. Shpg. wt., B-23, 16½ lbs.; B-25, 29 lbs.; B-27, 35¼ lbs.

Stock No.	Mfr's Type	Size HxD	cfm* High	Low	EACH 1-9	10-14	15-19	20-24
42 D 7287 X	B-23	3½x12″	200	100	74.20	66.80	59.30	55.60
42 D 7286 U	B-25	5¼x14½″	500	250	84.80	76.30	67.90	63.60
42 D 7285 U	B-27	7x14½″	750	350	95.30	85.80	76.30	71.50

FILTERS FOR ABOVE (Shpg. wt., 1 lb.)

Stock No.	Mfr's Type	1-24, EA.	25-49, EA.	50-99, EA.	100-149, EA.
42 D 7891	BF-24	1.80	1.70	1.50	1.40
42 D 7890	BF-26	2.00	1.80	1.60	1.50
42 D 7889	BF-28	2.30	2.00	1.80	1.70

SLOPING-PANEL CABINETS



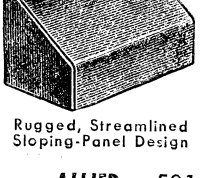
Sturdily built cabinets with hinged tops for easy access to tubes and other components. Front panel also removable for attachment of chassis. Fit following size chassis: C-1584, 7x6x2″; C-1585, 7x8x2″; C-1586, 7x10x2″; C-1587, 7x7x2″; C-1588, 7x9x2″; C-1892, 8x12x2½″; C-1893, 10x17x3″; C-1894, 7x13x2″; C-1896, 7x17x3″.

SPECIFY BLACK WRINKLE OR GRAY HAMMERTONE FINISH.

Stock No.	Mfr's Type	Size H x W x D	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7466 C	C-1584	6½x7 1/16x7 5/16″	2½	4.30	3.80	3.40	3.20
42 D 7467 C	C-1585	6½x9 1/16x7 5/16″	3	4.70	4.20	3.70	3.50
42 D 7468 C	C-1586	6½x11 1/16x7 5/16″	3½	5.40	4.90	4.30	4.10
42 D 7469 C	C-1892	8x13 1/16x8½″	5¼	7.40	6.70	5.90	5.60
42 D 7470 CX	C-1893	10x18 1/16x10½″	8½	9.80	8.80	7.80	7.80
42 D 7471 C	C-1587	8x8 1/16x8″	2¾	5.70	5.10	4.50	4.30
42 D 7472 C	C-1588	8x10 1/16x8″	3¼	6.30	5.60	5.00	4.70
42 D 7474 C	C-1894	8x14 1/16x8″	4	6.70	6.00	5.30	5.00
42 D 7475 CX	C-1896	9x18 1/16x8 1/8″	7	9.40	8.50	7.50	7.10

UNIVERSAL SLOPING-PANEL CABINETS

Ideal for control boxes, mike mixers, etc. Have one-piece detachable back and side attached with 4 screws. Accommodate most small chassis. All are 4¼″ high, 4″ deep. Have gray hammertone finish. Shpg. wts.: 4″ and 5″ wide cabinets, aluminum, ½ lb., steel, ¾ lb. 6″ and 7″ cabinets, aluminum, ¾ lb., steel, 1⅛ lbs.

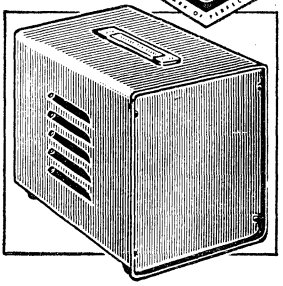


Rugged, Streamlined Sloping-Panel Design

Width	ALUMINUM Stock No.	Mfr's Type	EACH 1-49	50-99	100-149	150-199	STEEL Stock No.	Mfr's Type	EACH 1-49	50-99	100-149	150-199
4″	42 D 8646	AC-1610	2.40	2.20	1.90	1.80	42 D 8642	C-1606	1.90	1.70	1.50	1.40
5″	42 D 8647	AC-1611	2.30	2.10	1.90	1.80	42 D 8643	C-1607	2.00	1.80	1.60	1.50
6″	42 D 8648	AC-1612	2.50	2.30	2.00	1.90	42 D 8644	C-1608	2.20	2.00	1.70	1.60
7″	42 D 8649	AC-1613	2.80	2.60	2.30	2.10	42 D 8645	C-1609	2.50	2.30	2.00	1.90

Write, Wire or Phone for Prices on Quantities Larger than Shown

Metal Cabinets and Foundations

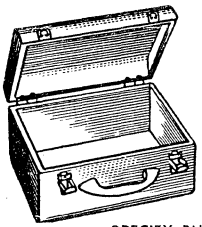


PORTACAB CABINETS

For equipment requiring maximum portability. Sturdy one-piece body is .050" aluminum with contoured corners. Cabinet is louvered for adequate ventilation. Louvers point inward for side-to-side placement of cabinets without loss of space. Welded back has opening (table below) for access to interior. .062" aluminum front panel recessed ½" to protect controls. Front panel mtg. flanges ½" wide. With 4 rubber feet. Gray hammertone finish. "Use With" column in table below indicates recommended Bud chassis (listed on page 496 of this catalog).

Stock No.	Mfr's Type	Depth	Width	Ht.	Opening	Louvers Per Side	Wt., Lbs.	Use With	EACH 1-24	25-49	50-99	100-149
42 D 8226	WA-1541	12"	8⅛"	9"	2x6½"	2 Sets	3	AC-407	14.70	13.20	11.80	11.00
42 D 8227	WA-1540	8"	6⅛"	8"	2x4½"	1 Set	2½	AC-402	11.40	10.30	9.30	8.70
42 D 8228	WA-1542	8"	10⅛"	8"	2x8½"	1 Set	3½	AC-406	13.10	11.80	10.50	9.80
42 D 8229 X	WA-1543	18"	11⅞"	11"	2x9½"	3 Sets	6½	AC-416	18.20	16.40	14.60	13.70
42 D 8233 X	WA-1544	18"	14⅛"	12"	2x12½"	3 Sets	7¾	AC-420	21.00	18.90	16.80	15.70

"TRANSICASE" INSTRUMENT CASES

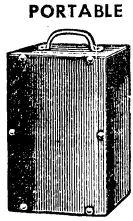


Handsome portable instrument cases with unlimited applications. Smart contoured design made of .040" thick alum. Flush-fitting aluminum panel; lid on 2 slide-off hinges—fastened by toggle catches (chromium plated). Inside of lid cushioned by foam rubber; 1 15/32" clearance from panel top. Rubber feet, base and back. TC-300 and TC-301 have 4 13/32" clearance below panel; wt., 4½ lbs. TC-302 and TC-303 have 5 29/32"; 8 lbs. TC-304 has 7 11/32"; 10 lbs. Choice of two colors.

SPECIFY BLUE OR GRAY ENAMEL FINISH

Stock No.	Type TC-	Size H x W x D	Panel Size	EACH 1-9	10-14	15-19	20-24
42 D 7584 C	300	6x10 1/16x7"	8 15/16x5 15/16"	27.80	25.00	22.20	20.90
42 D 7586 C	301	6x11½x8¼"	10 3/8x7¼"	28.50	25.60	22.80	21.40
42 D 7588 C	302	7½x13x9"	11 7/8x7 15/16"	29.10	26.20	23.20	21.80
42 D 7589 C	303	7½x16½x9"	15 3/8x7 15/16"	29.60	26.60	23.60	22.20
42 D 7590 CX	304	9x20⅛x8"	19x7"	31.20	28.10	25.00	23.40

PORTABLE ALUMINUM AND STEEL CARRYING CASES



Ideal housings for portable transceivers, test instruments, power supplies, radio-control units, field-strength meters, phono oscillators, etc. Handle on top for portability. Panels are removable to provide access to interior; can be used for mounting components such as meters, transformers, power resistors, etc. Available in either welded steel for maximum strength or in aluminum for light weight. Made for hard usage and long life. Rigid construction assures proper support for components. Aluminum units weigh less than 2 lbs. Av. shpg. wt., 3 lbs.

STEEL CASES

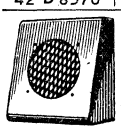
Black Wrinkle	Gray Wrinkle	Type CC-	Size HxWxD	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7838	42 D 7842	1095	9x6x5"	3¼	4.10	3.70	3.30	3.10
42 D 7841	42 D 7845	1092	7x12x6"	4	5.70	5.10	4.50	4.30
42 D 7247	42 D 7250	1097	15x7¾x7"	7¾	6.30	5.70	5.10	4.80
42 D 7249	42 D 7252	1093	9x15x7"	8¼	7.90	7.10	6.30	5.90

NATURAL FINISH ALUMINUM CASES

Stock No.	Type ACC-	Size HxWxD	EACH 1-24	25-49	50-99	100-149
42 D 8567	2095	9x6x5"	4.20	3.80	3.30	3.10
42 D 8565	2091	6x9x5"	4.20	3.80	3.30	3.10
42 D 8568	2096	12x7x6"	6.30	5.70	5.10	4.80
42 D 8566	2092	7x12x6"	6.30	5.70	5.10	4.80

GRAY HAMMERTONE ALUMINUM CASES

42 D 8571	2095	9x6x5"	4.80	4.30	3.80	3.60
42 D 8569	2091	6x9x5"	4.80	4.30	3.80	3.60
42 D 8572	2096	12x7x6"	7.30	6.50	5.80	5.40
42 D 8570	2092	7x12x6"	7.30	6.50	5.80	5.40

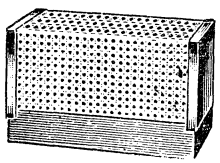


WALL-TYPE SPEAKER CASES

Can be hung on wall or set on table. Rugged steel construction, will not warp or split. Unaffected by weather or temperature conditions. Keyway holes provided for wall mounting; four embossed feet for table use. Brown wrinkle enamel finish.

Stock No.	Mfr's Type	Hole Size	Spk'r Size	Size HxWxD	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 8771	CS-1948	3½"	4"	7½x6½x4¼"	1¾	3.60	3.20	2.90	2.70
42 D 8772	CS-1939	4"	5"	7½x6½x4¼"	1¾	3.80	3.40	3.00	2.80
42 D 8773	CS-1940	4¾"	6"	9½x8x5 5/8"	3	4.30	3.90	3.50	3.30
42 D 8774	CS-1941	6½"	8"	11½x9½x7"	4	5.50	5.00	4.40	4.10
42 D 8775	CS-1942	8½"	10"	13½x11½x8¼"	5	6.80	6.10	5.40	5.10
42 D 8776	CS-1943	10½	12"	15½x13½x9¾"	6	8.20	7.40	6.50	6.10

STANDARD AMPLIFIER FOUNDATIONS

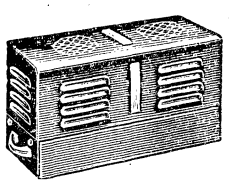


Meet most amplifier requirements. Each foundation consists of a sturdy 20-gauge steel chassis with a removable steel cover.

18-gauge steel angles are used on ends of each cover to provide firm bracing and allow a snug fit to chassis. Entire side and top area between ends is enclosed by 20-gauge metal screening; provides excellent ventilation and protection of tubes and components. Smooth, easy-grip metal handles are attached to the chassis for increased portability.

All types have a 2½" high chassis, except Type CA-1128 has a 3" high chassis. All have attractive black wrinkle finish that resists scratching. Shpg. wt.: CA-699, 4 lbs.; CA-1125, 4¾ lbs.; CA-1126, 6½ lbs.; CA-1128, 6¾ lbs.

Stock No.	Type CA-	Size H x W x D	EACH 1-24	25-49	50-99	100-149
42 D 7244	699	8 5/16x9 5/8x5 1/8"	7.60	6.80	6.10	5.70
42 D 7245	1125	8 5/16x13 5/8x5 1/8"	7.90	7.10	6.30	5.90
42 D 7246	1126	8 5/16x17 1/8x7 1/8"	8.90	8.00	7.10	6.70
42 D 7242	1128	8 13/16x12 1/8x10 1/8"	9.20	8.30	7.30	6.90



STREAMLINED FOUNDATIONS

Modern styling, streamlining, and chrome trim make these deluxe foundation units ideal for applications where an especially pleasing appearance is required. Used for all types of electronic equipment. Feature rigid construction, durability, and toughness for protection of equipment and long, hard service. Each unit consists of a removable top cover mounted on a chassis. Covers have louvered sides and perforated tops to provide proper ventilation of warm-running equipment. Strong aluminum handles are solidly fitted to each end of chassis for easy portability. Attractively and durably finished in black or gray wrinkle enamel. All chassis are 3" high.

SPECIFY BLACK WRINKLE OR GRAY WRINKLE ENAMEL FINISH

Stock No.	Type CA-	Size H x W x D	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7476 C	1750	9x10 1/16x5"	4¾	9.10	8.20	7.30	6.80
42 D 7477 C	1751	9x12 1/16x7"	6	10.80	9.70	8.60	8.10
42 D 7478 C	1752	9x17 1/16x7"	7¾	11.50	10.40	9.20	8.60
42 D 7479 CX	1753	9x17 1/16x10"	9¼	12.40	11.20	10.00	9.30

MINIATURE AMPLIFIER FOUNDATION

Type CA-1754. An extremely compact, sturdily-built amplifier foundation. Designed to meet the requirements of builders employing miniature tubes, transistors, capacitors, and other miniaturized components. Ideal for portable type PA amplifiers, recording preamplifiers, etc. Its compact style and handsome, modern appearance greatly enhance any installation.

The chassis, an integral part of the unit, is 2" high, 7" wide, and 5" deep. With foundation cover fastened in place, the entire unit stands only 6" high. A high degree of rigidity and full protection of internal equipment are achieved by heavy-gauge steel construction. Unit will give years of dependable service.

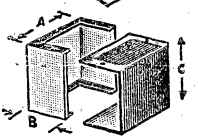
Removable cover includes a carrying handle for easy portability. Cover is heavily perforated to allow full circulation of air for efficient cooling of warm-running equipment. It fastens securely to sides of chassis with four self-tapping screws. Attractive black wrinkle finish. Shpg. wt., 2 lbs.

42 D 7866. 1-24....Each 5.40 25-49.....Each 4.30
50-99.....Each 4.90 100-149.....Each 4.10

Depend on Allied for Same-Day Shipment at OEM Prices

All-Purpose Utility Cabinets

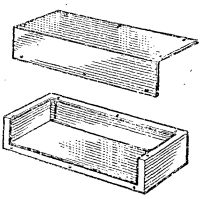
ALUMINUM TWO-PIECE MINIBOXES



Self-contained units for use where shielding as well as protection from dust and dirt is desired. May be used for phono amplifiers, VHF and UHF converters, low-pass TVI filters, test and measurement units, etc. Valuable for experimenters, industrial and laboratory use. Two-piece construction permits installation of components or wiring modifications. Flanges assure low RF leakage and provide high rigidity. User has choice of snap-lock fastening or screw fastening; all hardware supplied. Made of high-quality aluminum, gray hammertone or natural finish; strong, yet easy to cut, punch and drill.

Size AxCxB	Wt., Lbs.	Gray Hammertone	Mfr's Type	EACH 1-49	50-99	100-149	150-199	Natural Aluminum	Mfr's Type	EACH 1-49	50-99	100-149	150-199
2¾x2⅛x1⅝"	¼	42 D 7616	CU-2100-A	.90	.80	.70	.70	42 D 7634	CU-3000-A	.80	.70	.60	.60
3¼x2⅛x1⅝"	¼	42 D 7617	CU-2101-A	.90	.80	.70	.70	42 D 7635	CU-3001-A	.80	.70	.60	.60
4x2⅛x1⅝"	¼	42 D 7618	CU-2102-A	1.00	.90	.80	.80	42 D 7636	CU-3002-A	.80	.80	.70	.60
4x2¼x2¼"	¼	42 D 7619	CU-2103-A	1.10	1.00	.90	.80	42 D 7637	CU-3003-A	1.10	1.00	.90	.80
5x2¼x2¼"	¼	42 D 7620	CU-2104-A	1.20	1.10	.90	.90	42 D 7638	CU-3004-A	1.10	1.00	.90	.80
5x4x3"	½	42 D 7621	CU-2105-A	1.50	1.40	1.20	1.10	42 D 7639	CU-3005-A	1.10	1.00	.90	.80
5¼x3x2⅛"	¼	42 D 7622	CU-2106-A	1.30	1.10	1.00	.90	42 D 7640	CU-3006-A	1.10	1.00	.90	.80
6x5x4"	¾	42 D 7623	CU-2107-A	1.90	1.70	1.50	1.40	42 D 7641	CU-3007-A	1.40	1.30	1.10	1.10
7x5x3"	¾	42 D 7624	CU-2108-A	2.20	2.00	1.70	1.60	42 D 7642	CU-3008-A	1.80	1.70	1.50	1.40
8x6x3½"	1	42 D 7625	CU-2109-A	2.80	2.60	2.30	2.10	42 D 7643	CU-3009-A	2.30	2.10	1.90	1.80
10x6x3½"	1¼	42 D 7626	CU-2110-A	3.10	2.80	2.50	2.30	42 D 7644	CU-3010-A	2.50	2.30	2.00	1.90
12x7x4"	1¼	42 D 7627	CU-2111-A	4.20	3.80	3.30	3.10	42 D 7645	CU-3011-A	3.50	3.20	2.80	2.60
17x5x4"	2¼	42 D 7628	CU-2112-A	4.20	3.80	3.30	3.10	42 D 7646	CU-3012-A	3.50	3.20	2.80	2.60
10x2x1⅝"	½	42 D 7629	CU-2113-A	1.60	1.40	1.30	1.20	42 D 7647	CU-3013-A	1.30	1.20	1.10	1.00
12x2½x2¼"	¾	42 D 7630	CU-2114-A	2.10	1.90	1.70	1.60	42 D 7648	CU-3014-A	1.80	1.60	1.40	1.30
4x2x2¾"	¼	42 D 7631	CU-2115-A	1.10	1.00	.90	.80	42 D 7649	CU-3015-A	1.00	.90	.80	.80
4¼x2¼x1½"	¼	42 D 7632	CU-2116-A	1.10	1.00	.90	.80	42 D 7650	CU-3016-A	1.00	.90	.80	.80
3¼x2⅛x1⅛"	¼	42 D 7633	CU-2117-A	1.10	1.00	.90	.80	42 D 7651	CU-3017-A	.80	.80	.70	.60

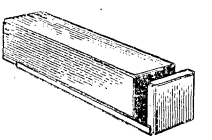
"CONVERTA" BOXES



Versatile component enclosures of exceptional design and quality. Expertly engineered and made to exacting specifications to provide custom housings that will accommodate a wide variety of electronic equipment. Their design ideally suits them for sophisticated instrumentation. Applications for which they can be used are practically unlimited. Sturdy steel construction with welded base and two-sided cover. Specially designed to afford maximum protection to delicate electronic components. Components and controls can be mounted to any surface of these enclosures for complete versatility and design flexibility. Cover and base fasten together securely with self-tapping screws. Components remain easily accessible for efficient inspection and servicing. These boxes are valuable for experimenters as well as industrial and laboratory use. Made of 20-gauge steel for durability, maximum rigidity, and protection of internal equipment. Cadmium plated. Includes all hardware.

Stock No.	Mfr's Type	Size HxWxD	Wt., Lbs.	EACH 1-24	25-49	50-99	100-149
42 D 7704	CU-341	1½x4x3"	½	2.40	2.20	1.90	1.80
42 D 7705	CU-452	2x5x4"	1	2.30	2.10	1.90	1.80
42 D 7706	CU-482	2x8x4"	1¼	2.50	2.30	2.00	1.90
42 D 7707	CU-592	2½x9½x5"	1¾	2.70	2.40	2.10	2.00
42 D 7708	CU-622	2½x12x6"	2¾	2.90	2.60	2.30	2.20
42 D 7709	CU-712	2½x15x7"	3½	3.90	3.50	3.10	2.90

MINISLIDES



Ideal housing where easy access for efficient inspection and servicing of internal parts is important. Provides a high degree of shielding, protection from dust, and mechanical protection to delicate components. Designed for use with a wide variety of electronic equipment. Expertly engineered and made to exacting specifications. Can be mounted in a number of positions in rack or cabinet. Four self-tapping screws provide secure fastening. Easy accessibility to internal equipment by removing the sliding cover. Made of 0.050" aluminum. Light gray hammertone or natural aluminum finish.

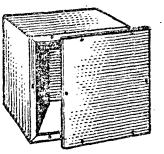
GRAY HAMMERTONE

Stock No.	Mfr's Type	Size LxWxD	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7714	MS-2150	13x3⅛x2⅝"	1	4.70	4.20	3.70	3.50
42 D 7715	MS-2151	13x5⅛x2⅝"	1½	5.30	4.80	4.30	4.00
42 D 7716	MS-2152	17x3⅛x2⅝"	1¼	5.20	4.70	4.10	3.90

NATURAL ALUMINUM

Stock No.	Mfr's Type	Size LxWxD	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
42 D 7717	MS-3050	13x3⅛x2⅝"	1	3.50	3.20	2.80	2.60
42 D 7718	MS-3051	13x5⅛x2⅝"	1½	4.30	3.80	3.40	3.20
42 D 7719	MS-3052	17x3⅛x2⅝"	1¼	4.10	3.70	3.30	3.10

METAL UTILITY CABINETS



Large selection of general-purpose cabinets, well adapted for shielding high-gain preamps, RF sections, and other circuits. Two removable panels provide easy access to inside of cabinets. Steel cabinets are offered in black wrinkle or gray hammertone finish; shpg. wts. are given in table below. Aluminum cabinets have natural aluminum or gray hammertone finish; all have shpg. wts. of 1 lb.

STEEL

Size HxWxD	Black Wrinkle	Gray Hammertone	Mfr's Type	Wt., Lbs.	EACH 1-49	50-99	100-149	150-199
4x4x2"	42 D 7856	42 D 7606	CU 883	¾	1.40	1.30	1.10	1.10
4x5x3"	42 D 7857	42 D 7607	CU 728	⅞	1.60	1.40	1.30	1.20
6x5x4"	42 D 7858	42 D 7608	CU 729	1¼	1.80	1.60	1.40	1.30
6x6x6"	42 D 7859	42 D 7609	CU 1098	2½	2.80	2.50	2.20	2.10
9x6x5"	42 D 7860	42 D 7610	CU 1099	3	3.00	2.70	2.40	2.30
10x8x7"	42 D 7861	42 D 7611	CU 879	5	4.30	3.90	3.50	3.30
10x10x8"	42 D 7863	42 D 7613	CU 880	5½	5.20	4.70	4.10	3.90
12x7x6"	42 D 7862	42 D 7612	CU 1124	4	4.20	3.80	3.30	3.10
12x11x8"	42 D 7864	42 D 7614	CU 881	6	5.70	5.10	4.50	4.30
.....	.....	42 D 7615	CU 882	7½	5.80	5.20	4.60	4.30

ALUMINUM

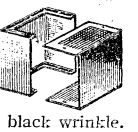
Size HxWxD	Mfr's Type	Natural Finish	EACH 1-49	50-99	100-149	150-199	Gray Ham'rtone	EACH 1-49	50-99	100-149	150-199
4x4x2"	AU-1038	42 D 8543	1.80	1.60	1.40	1.30	42 D 8548	2.00	1.80	1.60	1.50
4x5x3"	AU-1028	42 D 8544	1.80	1.70	1.50	1.40	42 D 8549	2.30	2.00	1.80	1.70
6x5x4"	AU-1029	42 D 8545	2.00	1.80	1.60	1.50	42 D 8550	2.40	2.20	1.90	1.80
6x6x6"	AU-1039	42 D 8546	2.90	2.60	2.30	2.20	42 D 8551	3.20	2.90	2.50	2.40
9x6x5"	AU-1040	42 D 8547	3.30	3.00	2.70	2.50	42 D 8552	4.00	3.60	3.20	3.00

MIDGET SPEAKER CASES

Quality constructed all-metal cases. 4x4x4¼". Type CS-1685 has 2 3/16" hole for 2" speaker. Type CS-1686 has 2 13/16" hole for 3" speaker. Black wrinkle finish. Wt., 2 lbs.

Stock No.	Type CS-	EACH 1-24	25-49	50-99	100-149
42 D 7239	1685	2.30	2.00	1.80	1.70
42 D 7240	1686	2.30	2.00	1.80	1.70

STEEL HANDY BOXES



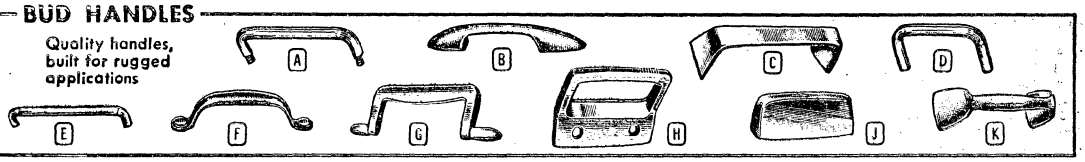
Two-piece steel cases. Provide maximum accessibility, adequate shielding, plus protection from injury and dust. 22-gauge steel. Type HB-1621, 1½ x2¼x4¼". Type HB-1622, 2¾x2x4". Finished in black wrinkle. Shpg. wt., ½ lb.

Stock No.	Type HB-	EACH 1-49	50-99	100-149	150-199
42 D 7237	1621	1.70	1.50	1.30	1.30
42 D 7238	1622	1.70	1.50	1.30	1.30

Handles, Accessories and Plastic Cases

BUD HANDLES

Quality handles, built for rugged applications



A Designed for rugged applications. Far superior to handles of similar appearance. Made from 3/8" steel rod. Chrome plated. With mounting hardware. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Mtg. Ctrs.	Hand Clear.	PER PAIR 1-49	50-99	100-149	150-199
42 D 8059	H-9115	4"	1 5/16"	3.80	3.50	3.10	2.90
42 D 8060	H-9116	6"	1 5/16"	4.30	3.90	3.50	3.30
42 D 8061	H-9160	3 1/2"	1 11/16"	4.30	3.80	3.40	3.20
42 D 8062	H-9161	5 1/4"	1 11/16"	4.80	4.30	3.80	3.60
42 D 8063	H-9162	7"	1 11/16"	4.90	4.40	3.90	3.70

B Has rugged die-cast aluminum construction; silver-anodized finish. Outside centers are 5 3/8". With all necessary mounting hardware. Av. shpg. wt., 3 oz.

42 D 8067	H-9120	4 3/8"	1"	6.00	5.40	4.80	4.50
42 D 8069	H-9123	4 1/2"	1"	3.90	3.50	3.10	2.90

C Made of light-weight die-cast aluminum with tarnish-resistant silver anodized finish. Mount easily with 4 10-32x1/2" screws (included). Av. shpg. wt., 3 oz.

42 D 8075	H-9151	5 5/32x5 5/8"	1 1/4"	8.00	7.20	6.40	6.00
42 D 8076	H-9152	3 7/8"	1 1/8"	6.50	5.90	5.20	4.90

D Have unlimited applications in electronic, electrical, and other equipment. Manufactured of chrome-plated 1/4" brass rod. With two 5/32x1/2" screws. Av. shpg. wt., 4 oz.

42 D 8077	H-9166	12 9/32"	1"	2.00	1.80	1.60	1.50
42 D 8078	H-9168	3"	1"	2.10	1.90	1.70	1.60

E Ruggedly constructed from 3/4" steel rod except *1/2" steel rod. Chrome-plated. Includes all necessary mounting hardware. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Mtg. Ctrs.	Hand Clear.	PER PAIR 1-49	50-99	100-149	150-199
42 D 8054	H-9110	6"	1 1/4"	4.60	4.10	3.70	3.40
42 D 8055	H-9111	4"	1 5/16"	2.40	2.20	1.90	1.80
42 D 8056	H-9112	6"	1 5/16"	2.80	2.60	2.30	2.10
42 D 8057	H-9113	8"	1 5/16"	3.10	2.80	2.50	2.30
42 D 8058	H-9114*	8"	1 1/2"	5.10	4.60	3.80	3.05

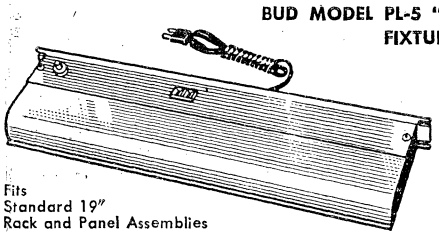
F Gives portability to any small housing or speaker enclosure. Etched tubular aluminum. Length: UH-70A, 5 1/8"; UH-71A, 3 3/4". Av. shpg. wt., 3 oz.

42 D 7893	UH-70A	4 5/8"	7/8"	.60	.50	.50	.40
42 D 7894	UH-71A	3 1/4"	3/4"	.50	.50	.40	.40

All handles listed in table below are die-cast, silver-anodized aluminum. All necessary mounting hardware is included. Type H-9122 has 1 1/2" hand clearance, includes 1/2" steel pins with hinge blocks. Type H-9131 is 4x2 7/8". Type H-9140 has 3/4" hand clearance. Type H-9150 has 1 1/4" hand clearance. Av. wt., 3 oz.

Stock No.	Mfr's Type	Fig.	Mtg. Ctrs.	PER PAIR 1-49	50-99	100-149	150-199
42 D 8070	H-9122	G	7 1/4"	10.10	9.10	8.10	7.60
42 D 8072	H-9131	H	2 1/4"	5.80	5.30	4.70	4.40
42 D 8073	H-9140	J	3 1/2"	3.50	3.20	2.80	2.60
42 D 8074	H-9150	K	4x5/8"	4.90	4.40	3.90	3.70

BUD MODEL PL-5 "PAN-LITE" FIXTURE



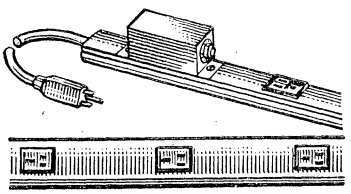
Fits Standard 19" Rack and Panel Assemblies

Pushbutton Starter

Easily installs on rack or panel. Light (5x18x1 1/4") has bronze-tone aluminum frame mounted on standard Bud 1 3/4x19" steel rack panel with gray finish. Translucent plastic light diffuser; pushbutton switch; outlet; 6-ft. cord and plug. Requires standard 15-watt fluorescent bulb. U.L. Listed. 115 VAC. Shpg. wt., 2 lbs.

42 D 8726 X. 1-9... Each 10.70 10-14.....Each 9.70
15-19.....Each 8.60 20-24.....Each 8.00

BUD AC POWER OUTLET STRIPS



Quality-constructed outlet strips designed to add outlets easily to cabinets and racks. Mounts vertically or horizontally. Ready to use. Have 15A, 125V grounding receptacles; 15A overload circuit breaker with reset button; 6-ft. cord, grounding plug. Heavy-duty light-gray enameled steel, designed for durability. U.L. Listed.

Stock No.	Mfr's Type	Length	No. Outlets	Wt., Lbs.	EACH 1-5	6-11	12-17	18-23
42 D 7380 X	POS-4	17 1/2"	4	2	22.70	20.50	18.20	17.00
42 D 7381 X	POS-7	48"	7	4	23.90	21.50	19.10	17.90
42 D 7382 X	POS-9	60"	9	4 1/4	26.30	23.60	21.00	19.70
42 D 7383 X	POS-11	72"	11	5	28.70	25.80	22.90	21.50

BUD SWIVEL TRUCK CASTERS

Type RC-7756. Heavy-duty ball-bearing casters especially designed for use on Bud deluxe relay racks. Support up to 400 pounds distributed on four casters. Rugged, long-wearing wheels are carefully made from high-grade hard rubber. Overall height, 2 5/8". Shpg. wt., 10 oz.

42 D 8624. 1-49.....Each 1.20 50-99.....Each 1.10
100-149.....Each .90 150-199.....Each .90

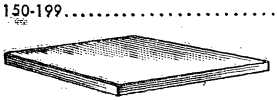
Type RC-7757. Light duty, ball-bearing casters for Bud relay racks. Wheels are precision constructed of durable, high grade hard rubber. Self-lubricating. Height, 2". Same as above but for lighter load. 5 oz.

42 D 8079. 1-49.....Each .70
50-99.....Each .60 100-149.....Each .50
150-199.....Each .50

Type RC-7758. Heavy-duty casters designed for use with Bud Series 60 cabinets. Ball bearing wheels are hard tread composition, self-lubricating. Wheel diameter, 2 1/2". Height, 3 1/4". Shpg. wt., 1 1/2 lbs.

42 D 8225. 1-49.....Each 2.90
50-99.....Each 2.60 100-149...Each 2.30
150-199.....Each 2.20

BUD TABLE TOPS



Adjustable table tops of exceptional design and quality. Made of rugged 16-gauge steel. Solidly built for hard usage. Mounting brackets welded to underside. Adjust front-to-back in three positions to allow for required overhang front or rear. Mount to pedestals by means of attached mounting brackets. Available in three sizes.

Stock No.	Mfr's Type	Size HxWxD	Wt., Lbs.	EACH 1-14	15-24	25-34	35-49
42 D 7710 U	CT-2205	25x30x1 1/16"	18	23.00	20.70	18.40	17.30
42 D 7711 U	CT-2206	52x30x1 1/16"	35	30.20	27.20	24.20	22.70
42 D 7712 U	CT-2207	69x30x1 1/16"	45	37.30	33.60	29.90	28.00

HARRY DAVIES PLASTIC CASES

Quality molded black plastic cases (Fig. A) and panels (Fig. B) for test instrument mounting. Take meters with flange sizes up to 4 5/8x4 3/16". Cases have recessed corner bosses for flush mounting of covers. Take 1/2" No. 6 self-tapping screws, except Type 220 uses 4-36x1/2" screws. Walls and covers are 1/8" thick. Cases, 1 1/2 lbs.; panels, 1 lb.

Stock No.	Mfr's Type	Fig.	Size	EACH 1-49	50-249	250-499	500-999
42 D 7895	220	A	1x2 7/8x1 9/16"	.39	.33	.31	.28
42 D 7885	240	A	6 1/4x3 3/4x1 1/8"	.66	.48	.44	.40
42 D 7886	260	A	6 1/16x5 9/64x2 3/64"	.89	.76	.71	.62
42 D 7896	221	B	4x2 7/8x 1/16"	.23	.20	.19	.16
42 D 7887	241	B	6x3 1/2"	.45	.38	.36	.31
42 D 7888	361	B	6 1/2x5"	.61	.51	.48	.43

Depend on Allied for Same-Day Shipment at OEM Prices

Dual-Heat Soldering Guns for Every Use

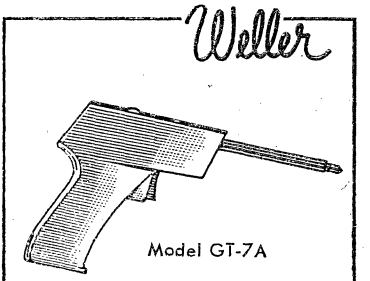
TEMPMATIC® TEMPERATURE-CONTROLLED SOLDERING GUN

Model GT-7A. Combines the benefits of temperature-controlled operation with the ease, speed and convenience of a pistol-shaped, trigger-operated soldering gun with small-frame pencil-type iron. Puts up-to-the-minute state-of-the-art technology to work for you whenever today's advanced electronics demands it. Quick-heating, patented powerhead gives you control of maximum temperature to assure damage-free soldering of delicate integrated circuits and sensitive field effect transistors. Complete with #7A long-life 700°F, 3/16" chisel point powerhead. Optional #6B, 600°F, 1/8" conical point powerhead is available (order below). Features convenient ejection button that makes changing powerheads quick and easy. Just discharge one head and slip in the other. 110-120V, 60 Hz AC. Shpg. wt., 1 lb.

26 D 1694. 1-2.....Ea. 9.95
3-11.....Ea. 8.95 12-Up.....Ea. 7.95

26 D 1695. Tool, 600°F Powerhead.
1-2.....Ea. 9.95
3-11.....Ea. 8.95 12-Up.....Ea. 7.95

26 D 1696. Tool, less powerhead...Ea. 3.00
26 D 1697. 700°F Powerhead.....Ea. 6.95
26 D 1698. 600°F Powerhead.....Ea. 6.95



Model GT-7A

SOLDERING GUNS, TIPS AND REPLACEMENT PARTS

MEDIUM-DUTY SOLDERING GUN

Model D-440. Dual-heat gun for a wide variety of professional, shop uses. "Triggermatic" control selects 145 or 210-watt heat. Has long-life, high efficiency copper tip with long reach for those hard-to-get-at places. Dual, pre-focused spotlights brilliantly illuminate work; eliminate shadows for more exact soldering. Use with smoothing and cutting tips, below, for furniture repair, cutting tile, and many other jobs. Includes "Soldering Tips" booklet of practical soldering procedures. U.L. Listed. For 110-120 volts, 60 Hz AC. Shpg. wt., 3 lbs.

26 D 1497. 1-2.....Each 9.15
3-11.....Each 8.25 12-Up.....Each 7.30

CHISEL-POINT TIPS

2 per Pkg. Av. shpg. wt. per pkg., 3 oz.

Stock No.	Type	Use With Models	PKG.
26 D 1476	7135	WS-100, WD-135, S-400, D-440, 8200	.50
26 D 1475	7250	WS-200, WD-250, S-500, D-550, 8250A	.50
26 D 1477	7300	S-107, D-207, not interchangeable with above.	.50
26 D 1209	8125	8100B, 8200	.50

VERSATILE ACCESSORY TIPS

*Cutting; †smoothing. Av. shpg. wt., 3 oz.

Stock No.	Type	For Models	EACH
26 D 1516	6110*	WS-100, WD-135, S-400, D-440	.50
26 D 1517	6120†	8100(B), 8200	.50
26 D 1518	6130*	WS-200, S-500,	.50
26 D 1521	6140†	D-550, 8250A	.50

REPLACEMENT PARTS

For maintaining Weller soldering guns. *Tip nut; †switch. Av. shpg. wt., 3 oz.

Stock No.	Type	Use With Models	EACH
26 D 1491	7325*	D-440, S-400, 8100, 8200, 8100B	.20
26 D 1494	7417*	D-550, S-500, 8250A	.20
26 D 1492	7323†	All Single-heat type Soldering Guns	1.20
26 D 1493	7324†	All Dual-heat type Soldering Guns	1.20

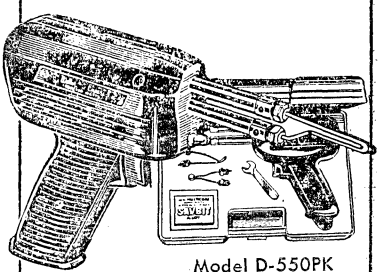
HEAVY-DUTY SOLDERING GUN

Model D-550PK. For professional heavy-duty applications in the home workshop, research and development lab or on the production line. High-performance soldering gun provides instant heat for the big jobs. Gives you finger-tip trigger control of high or low heat as job requires.

Outfit includes Weller Model D-550 heavy-duty 240/325-watt soldering gun with copper soldering tip, one smoothing tip and one cutting tip; nickel-plated tip-changing wrench, coil of solder, instruction booklet, unbreakable plastic utility case.

Heavy copper soldering tip provides for greater heat transfer. Prefocused twin spotlights illuminate work area. Gun is compact, lightweight and balanced. For 115 VAC. U.L. Listed. Shpg. wt., 5 lbs.

26 D 2057. 1-2...Ea. 11.60 3-Up..Ea. 10.45
D-550P. Soldering Gun Alone. Wt., 3½ lbs.
26 D 1496. 1-2....Ea. 9.95 3-Up..Ea. 8.95


Model D-550PK

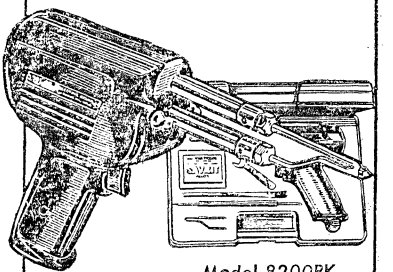
DUAL-HEAT SOLDERING GUN

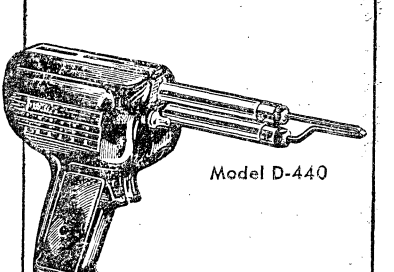
Model 8200PK. Low-cost soldering gun kit has everything necessary for doing fast, professional-quality work for a wide variety of commercial, industrial and military electrical repair and construction uses.

Includes Model 8200 dual-heat soldering gun that provides both high and low temperatures from the same gun. Gun is compact, lightweight and balanced for easy use. Two trigger positions permit instant switching to high 140-watt or low 100-watt heat as the job requires. On/Off switch gives you finger-tip control—no need to unplug gun. Three high-efficiency soldering gun tips made of pure copper for superior heat transfer.

With nickel-plated tip-changing wrench, handy cleaning brush, soldering aid tool, coil of all-purpose 60/40 rosin core solder—all contained in a break-proof plastic utility case. Also has a built-in spotlight to illuminate work area. Comprehensive, illustrated "Soldering Tips" manual of practical soldering procedures. For 110-120 V, 60 Hz AC. Shpg. wt., 3½ lbs.

26 D 2059. 1-2...Ea. 8.30 3-Up..Ea. 7.69
8200 Soldering Gun Alone. Wt., 3½ lbs.
26 D 2058. 1-2....Ea. 6.60 3-Up..Ea. 6.19


Model 8200PK


Model D-440

DUAL-HEAT SOLDER GUN WITH 3 INTERCHANGEABLE TIPS

Model 6760. Solid-state soldering gun for professional radio-TV service repairmen, "do-it-yourself" home craftsmen, and lab technicians actively working on projects in electronic research and development. Offers protection against damaging sensitive integrated circuits and delicate field effect transistors while soldering connections because the soldering tip is electrically isolated from the heating element providing an electrically inert tip. Today's technician will find this gun a must to complete his tool kit. Solid-state circuitry completely replaces old-fashioned heavy transformer to assure light weight (5 oz., less cord). With 3 different thread-on tips (order extra replacement tips below) that handle high-density circuitry soldering and give superior heat transfer for heavy-duty uses. Features neon "on" indicator light; Hi/Lo switch for selecting 900°F or 500°F. Temperatures; fast 11-second trigger-activated warmup time. For 110-120 V, 60 Hz AC. Shpg. wt., 1 lb.

26 D 1734. 1-3.....Ea. 9.95
4-11.....Ea. 8.85 12-Up.....Ea. 7.95

26 D 2126. 6763 Handle/Cord Set.
1-3.....Ea. 4.55
4-11.....Ea. 4.09 12-Up.....Ea. 3.60

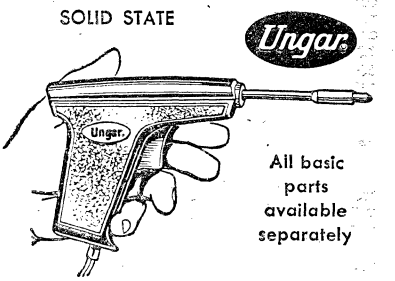
26 D 2072. 6751 Heat Cartridge. 1-3 Ea. 4.20
4-11.....Ea. 3.78 12-Up.....Ea. 3.36

26 D 2084. 6753 Short Chisel Tip. 1-3 Ea. .40
4-11.....Ea. .36 12-Up.....Ea. .33

26 D 2087. 6754 Pyramid Tip. 1-3...Ea. .40
4-11.....Ea. .36 12-Up.....Ea. .33

26 D 2089. 6755 Long Chisel Tip. 1-3 Ea. .40
4-11.....Ea. .36 12-Up.....Ea. .33

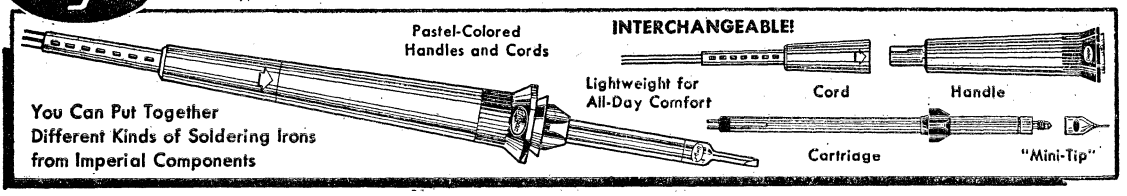
SOLID STATE



All basic parts available separately

- Handle & Cord; Heat Cartridge
- 3 Separate Thread-On Tips

Ungar IMPERIAL Soldering Components



"PERMA-COOL" HANDLES

TYPE 6100. Slim, functionally-designed handles. Double cushion of air and five heat-transition surfaces keep handle cool, comfortable. Polypropylene resin, die-cast aluminum heat sink. 4.7" long; 0.8" dia. at grip. Weigh 1 oz. For 115 V, AC-DC. U.L. Listed. 2 oz.

Stock No.	Color	EACH 1-9	10-99	100-Up
26 D 1616	Beige	1.52	1.28	1.20
26 D 1617	Ivory	1.52	1.28	1.20
26 D 1618	Turquoise	1.52	1.28	1.20
26 D 1579	Black	1.52	1.28	1.20

INTERCHANGEABLE CORD SETS. U.L. Listed

Vinyl covered, color-matched to handles. 115 V, AC-DC. 3 oz.

Stock No.	Mfr's Type	Description	Color	EACH 1-9	10-99	100-Up
26 D 1683	6102	2-wire	Beige	2.22	1.86	1.71
26 D 1684	6102	2-wire	Ivory	2.22	1.86	1.71
26 D 1619	6102	2-wire	Turquoise	2.22	1.86	1.71
26 D 1663	6102	2-wire	Black	2.22	1.86	1.71
26 D 1685	6103	3-wire	Beige	3.88	2.74	2.51
26 D 1686	6103	3-wire	Ivory	3.88	2.74	2.51
26 D 1620	6103	3-wire	Turquoise	3.88	2.74	2.51
26 D 1661	6103	3-wire	Black	3.88	2.74	2.51

"LONG LIFE" HEAT CARTRIDGES

Stainless-steel cartridges for "Mini-Tips," at right. 7½" long except *8" long, †8½" long. 6203, 950-1050°F; 6200, 750-950°F; 6201, 650-850°F; 6202, 600-800°F; 6207, 850-1000°F. U.L. Listed. 2 oz.

Stock No.	Type	Watts	1-9, EA.	10-99, EA.	100-Up, EA.
26 D 1049	†6207	100	6.31	5.30	4.97
26 D 2025	*6203	60	4.73	3.97	3.63
26 D 1622	6200	40	4.12	3.46	3.17
26 D 1623	6201	30	4.12	3.46	3.17
26 D 1624	6202	25	4.12	3.46	3.17

INTERCHANGEABLE MINI-TIP® SOLDERING TIPS

Interchangeable thread-on tips eliminate the expense of using several irons for every job. Tips have high thermal conductivity. *In Description column indicates a 24-kt. gold-plated, iron-clad tip; †tellurium copper composition. All may be used with 25, 30, 40, or 60-watt "Long-Life" cartridges, except 6520, which is for use with 100-watt cartridge. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Description	Size	EACH 1-9	10-99	100-Up
26 D 1625	6304	*Micro-chisel	3/64x1/2"	1.06	89	.82
26 D 1626	6305	*Micro-spade	3/64x1/2"	1.06	.89	.82
26 D 1627	6312	†Pencil	1/8x3/4"	.48	.40	.37
26 D 1628	6313	*Pencil	1/8x3/4"	1.06	.89	.82
26 D 1630	6316	*Pencil, offset	1/8x3/4"	1.06	.89	.82
26 D 1631	6318	†Long taper chisel	1/8x3/4"	.48	.40	.37
26 D 1632	6319	*Long taper chisel	1/8x3/4"	1.06	.89	.82
26 D 1633	6324	†Long taper pyramid	1/8x3/4"	.48	.40	.37
26 D 1634	6325	*Long taper pyramid	1/8x3/4"	1.06	.89	.82
26 D 1636	6331	*Screwdriver	1/8x3/4"	1.06	.89	.82
26 D 1637	6333	*Needle	1/8x3/4"	1.06	.89	.82
26 D 1639	6336	*Spade	1/8x3/4"	1.06	.89	.82
26 D 1641	6366	*Long taper chisel	3/16x3/4"	1.25	1.05	.96
26 D 1645	6372	*Screwdriver	3/16x3/4"	1.25	1.05	.96
26 D 1051	6373	†Slotted	3/16x3/4"	1.06	.89	.82
26 D 1652	6390	*Screwdriver	3/16x1½"	1.29	1.08	.99
26 D 1658	6424	*Long taper chisel	1/4x3/4"	1.29	1.08	.99
26 D 1662	6474	*Long taper chisel	3/8x3/4"	1.48	1.24	1.13
26 D 1981	6481	*Tapered screwdriver	3/4x3/32"	1.06	.89	.82
26 D 2026	6482	Micro-spade	3/64x1 1/16"	1.06	.89	.82
26 D 1050	6520	†100-W. Cart. Chisel	1/2x1½"	1.29	1.08	.99
26 D 3072	6368	†Long taper pyramid	1/8x3/4"	.57	.48	.44
26 D 3073	6473	†Long taper chisel	1/4x3/4"	.57	.48	.44
26 D 3074	6500	*100-W. Cart. Chisel	1½x1½"	2.52	2.12	1.94
26 D 3070	6391	*Precision Mini-Tip	.010"	.76	.64	.59
26 D 3071	6392	†Precision Mini-Tip	.005"	1.48	1.24	1.13

"MICRO-TIPS"® AND 15-WATT CARTRIDGE FOR MICROMINIATURE ASSEMBLIES

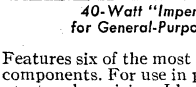
6206 15-WATT CARTRIDGE. Short length and small diameter for tight, high-density circuitry requiring precise tip temperatures and extreme soldering care. Only 67/8x5/16". Weighs only 0.89 oz. 614-743°F depending on tip. U.L. Listed. Shpg. wt., 2 oz.

26 D 2294. 1-9.....Each 4.12
10-99.....Each 3.46 100-Up.....Each 3.17

"MICRO-TIPS." Use only with 6206 cartridge, left. Tips are iron clad, 24 kts. gold plated. Shpg. wt., 2 oz.

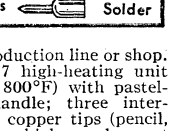
Stock No.	Mfr's Type	Description	Size	EACH 1-9	10-99	100-Up
26 D 2295	6550	Taper screwdriver	1/8x3/8"	1.24	1.04	.95
26 D 2296	6551	Stepped spade	.040x3/8"	1.24	1.04	.95
26 D 2297	6553	Stepped chisel	.040x3/8"	1.24	1.04	.95
26 D 2298	6554	Stepped pencil	.040x3/8"	1.24	1.04	.95

TIPS FOR MICROMINIATURE ASSEMBLY WORK



Ultra-fine points. For "Long Life" Heat Cartridges above. Shpg. wt., 1 oz.
26 D 3070. 6391 .005" Copper Tip.
1-9 Ea. .76 10-99 Ea. .64 100-Up Ea. .59

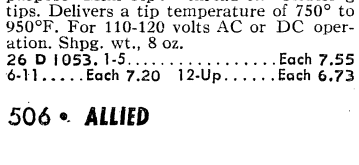
26 D 3071. 6392 .010" Iron-Clad Gold-Plated Copper Tip. 1-9.....Each 1.48
10-99..Each 1.24 100-Up.....Each 1.13



"IMPERIAL" IRON HOLDER

6800 IRON HOLDER. For use with "Imperial" line of irons. Shpg. wt., 8 oz.
26 D 1702. 1-9.....Each 1.95
10-49.....Each 1.75 50-Up.....Each 1.59

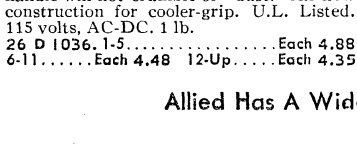
6010 SOLDERING OUTFIT



40-Watt "Imperial" Outfit for General-Purpose Soldering

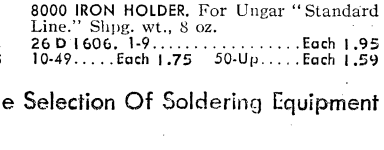
Features six of the most popular "Imperial" components. For use in production development and servicing. Ideal for printed circuit and solid-state devices. Kit includes: #6100 Perma-Cool Handle; #6200 stainless-steel, double-insulated 40-watt heat cartridge; #6102 two-wire cord; and three multi-purpose Mini-Tip® thread-on soldering tips. Delivers a tip temperature of 750° to 950°F. For 110-120 volts AC or DC operation. Shpg. wt., 8 oz.
26 D 1053. 1-5.....Each 7.55
6-11.....Each 7.20 12-Up.....Each 6.73

7070 GENERAL-PURPOSE "TECHNICIANS" SOLDERING KIT



Complete outfit for production line or shop. Consists of Type 1237 high-heating unit (37½ watts—750° to 800°F) with pastel-colored Type 777 handle; three interchangeable, thread-on copper tips (pencil, chisel, and pyramid) for high-speed repeat soldering; spool of 60/40 non-corrosive, rosin-core solder. Lightweight polypropylene handle will not crumble or "dust." Air-flow construction for cooler-grip. U.L. Listed. 115 volts, AC-DC. 1 lb.
26 D 1036. 1-5.....Each 4.88
6-11.....Each 4.48 12-Up.....Each 4.35

SOLDERING ACCESSORIES



COIL-A-CORD. Keeps power cord of soldering iron or soldering gun out of your way while you work. Permits you to do better, more exact soldering on precision components. Use with Ungar "Standard Line" and "Imperial" soldering units. 2 oz.
26 D 2069. 1-9.....Each 1.25
10-49.....Each 1.02 50-Up.....Each .93

8000 IRON HOLDER. For Ungar "Standard Line." Shpg. wt., 8 oz.
26 D 1606. 1-9.....Each 1.95
10-49.....Each 1.75 50-Up.....Each 1.59

Allied Has A Wide Selection Of Soldering Equipment

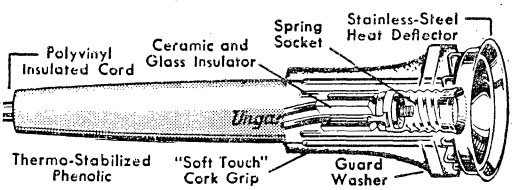
"Standard Line" Soldering Components

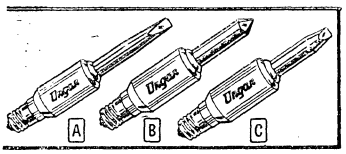
TYPE 776 AND 777 HANDLES AND CORDS

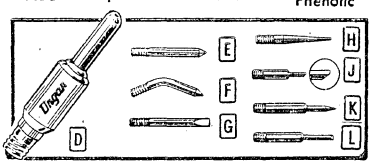
6. Seven ways better on the production line. (See illustration.) Ideal for inted circuits and subminiature systems. Durable, and lightweight to luce fatigue. Spring socket—tip can't wobble or "give." Special cer- ic and glass insulator resists tip heat. Stainless-steel heat deflector re- ects heat away from operator's hand. Octagon guard washer prevents ndle roll, acts as built-in stand. Vinyl covered cord. Handle 5". Order ement and tip below. U.L. Listed. Shpg. wt., 4 oz.
D 1304. 1-9.....Each 1.65 10-49.....Each 1.36 50-Up.....Each 1.24

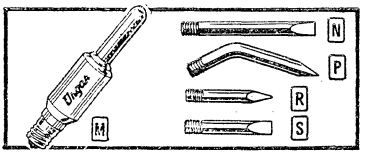
7 "CLEAN ROOM" HANDLE AND CORD. Attractive pastel color. Heat abilized poly-propylene grip is convection cooled. Octagonal. U.L. Wt., 4 oz.
D 1029. 1-9.....Each 1.87 10-49.....Each 1.53 50-Up.....Each 1.40

LIGHTWEIGHT, HEAVY-DUTY CONSTRUCTION









COMBINATION ELEMENT-TIPS

Element and tip for use with Types 776 and 777 handles, above. U.L. Listed. For 110-120 volts AC-DC. 2 oz.

47½ WATTS—850°-1000°F

IRON-CLAD, SILVER-PLATED

A **26 D 1498.** 4033 Chisel Tip, Long Taper. General-purpose. Tip, 1⅝x¼".

B **26 D 1499.** 4036 Pyramid Tip. For extra-heavy-duty work. Tip, 1⅛x⅜".

C **26 D 1500.** 4039 Chisel Tip, Short Taper. For production line. Tip, 1⅛x⅜".

1-9.....Each 3.17
10-49.....Each 2.60 50-Up....Each 2.38

37½ WATTS—750°-800°F

A **26 D 1401.** 1233 Chisel Tip, Long Taper. For general service/light production. Copper-alloy, unplated tip, 1⅝x¼".

B **26 D 1480.** 1236 Pyramid Tip. For general service/light production. Solid Armco iron, silver plated tip, 1⅛x5⁄16".

C **26 D 1481.** 1239 Chisel Tip, Short Taper. For general-purpose work. Solid Armco iron, silver-plated tip, 1⅛x⅜".

1-9.....Each 1.92
10-49.....Each 1.58 50-Up....Each 1.44

23½ WATTS—650°-700°F

A **26 D 1400.** 533 Chisel Tip, Long Taper. Made of copper alloy. For general repair. Tip, 1⅝x3⁄16".

B **26 D 1478.** 536 Pyramid Tip. For general maintenance. Tip, 1⅛x5⁄16".

C **26 D 1479.** 539 Chisel Tip, Short Taper. For general repair on small-board surface joints. Tip, 1⅛x5⁄16".

1-9.....Each 1.52
10-49.....Each 1.25 50-Up....Each 1.14

HOT KNIFE

- 500°F Blade Temperature
- Cuts Plastics and Epoxy
- Blades are Replaceable

4025. Fits both Standard #776 handle, and #777 "Clean-Room" handle. Cuts thin film epoxy coating for component replacement, plastic films, and trims flash from rubber or plastic moldings. With Dacron, nylon or other synthetics, cuts and seals preventing ragged edges. Includes 47½-watt heating unit with collet closure, and one stainless steel blade. U.L. Listed. 3 oz.
26 D 1078. 1-9.....Each 3.65
10-49..Each 3.29 50-Up.....Each 2.92

THREAD-IN ELEMENTS AND ⅛" TIPLETS FOR SUBMINIATURE WORK

D ELEMENTS. Fit Types 776 and 777 handles, above. Type 4035, for 800-850°F; Type 1235, for 700-750°F; Type 535, for 600-650°F. Steel body treated to resist corrosion. U.L. Listed. For 110-120 volts AC or DC. Shpg. wt., 2 oz.

Stock No.	Mfr's Type	Watts	EACH 1-9	10-49	50-Up
26 D 1490	4035	47½	3.17	2.60	2.38
26 D 1488	1235	37½	1.92	1.58	1.44
26 D 1482	535	23½	1.52	1.25	1.14

⅛" TIPLETS. For subminiature work. 1" long, except *1¼", †⅝". §1⁄16" point; #3⁄64" point. Av. shpg. wt., 2 oz.

IRON-CLAD SILVER-PLATED COPPER ALLOY

Stk. No.	Type	Fig.	Description
26 D 1469	PL331	E	Pencil
26 D 1470	*PL332	F	Pencil, Offset
26 D 1471	PL333	G	Chisel, Long Taper
26 D 1101	§PL338	H	Tapered Needle
26 D 1409	†#PL340	J	Micro-Spade
26 D 1755	7154	K	Pencil, Stepped
26 D 2068	7155	L	Chisel, Stepped

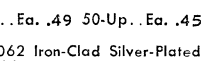
1-9.....Each .60
10-49.....Each .49 50-Up.....Each .45

UNPLATED COPPER ALLOY

26 D 1483	331	E	Pencil
26 D 1484	332	F	Pencil, Offset
26 D 1485	333	G	Chisel, Long Taper

1-9.....Each .25
10-49.....Each .21 50-Up.....Each .19

MICROMINIATURE TIPS FOR ⅛" ELEMENTS



26 D 3089. Type 7012 Copper .005" Tip. Shpg. wt., 1 oz.
1-9..Ea. .60 10-49..Ea. .49 50-Up..Ea. .45

26 D 3090. Type 7062 Iron-Clad Silver-Plated Copper .010" Tip. Ship. wt., 1 oz.
1-9..Ea. 1.13 10-49..Ea. .93 50-Up..Ea. .85

THREAD-IN ELEMENTS AND ¼" THREAD-ON TIPS FOR HI-SPEED WORK

T ELEMENTS. Fit 776 and 777 handles, above. Nickel-plated copper alloy. 4037, 750-900°F; 1237, 750-800°F; 537, 600-650°F. U.L. Listed. For 115V. AC-DC. 2 oz.

Stock No.	Mfr's Type	Watts	EACH 1-9	10-49	50-Up
26 D 1403	4037	47½	3.17	2.60	2.38
26 D 1402	1237	37½	2.13	1.75	1.60
26 D 1593	537	23½	1.77	1.47	1.33

TIPS. *Iron-clad, silver-plated copper. †Unplated copper. ¾x⅛". 2 oz.

(W) **26 D 1404.** PL-111* Pencil.
(X) **26 D 1405.** PL-113* Chisel.
(J) **26 D 1040.** PL-114* Micro-Spade.
(Y) **26 D 1041.** PL-116* Pyramid.

1-9.....Each .80
10-49.....Each .66 50-Up.....Each .60

(W) **26 D 1406.** 111† Pencil.
(X) **26 D 1407.** 113† Chisel.
(Y) **26 D 1048.** 116† Pyramid.

1-9.....Each .40
10-49.....Each .33 50-Up.....Each .30

THREAD-IN ELEMENT AND 3⁄16" TIPLETS FOR GREATER HEAT TRANSFER

4045 ELEMENT

M 800-850°F, 56½ WATTS. Fits 776 and 777 handles, above. High-temperature steel body treated to resist corrosion. Fits Ungar desoldering tips. For 110-120 V, AC or DC. U.L. Listed. Shpg. wt., 2 oz.
26 D 1105. 1-9.....Each 3.17
10-49.....Each 2.60
50-Up.....Each 2.38

3⁄16" TIPLETS

For extra-high heat transfer. Lengths given for unthreaded portions only. Wt., 2 oz.

IRON-CLAD SILVER PLATED COPPER ALLOY
Both are chisel tip, long taper. Wt., 2 oz.

Stock No.	Type	Fig.	Description
26 D 1412	PL833	N	1⅝" long
26 D 1413	PL834	P	1⅝" long, offset

1-9.....Each 1.00
10-49.....Each .82 50-Up....Each .75

26 D 1410	PL823	R	Pyramid, 1" long
26 D 1411	PL824	S	Chisel, 1" long taper

1-9.....Each .70
10-49.....Each .58 50-Up.....Each .53

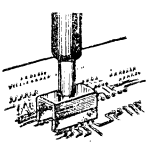
UNPLATED COPPER ALLOY

(R) **26 D 2023.** 823 Pyramid. 1" long.
(S) **26 D 2024.** 824 Chisel Long Taper. 1".

1-9.....Each .30
10-49.....Each .25 50-Up.....Each .23

INTEGRATED CIRCUIT REMOVER

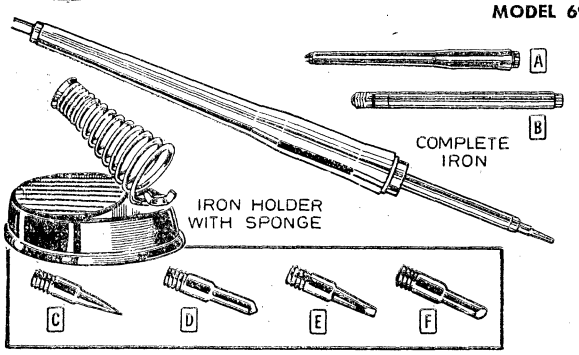
859. Save time and money with the new Ungar IC desoldering tip. The IC desolderer melts all sixteen solder pads at the terminals simultaneously, freeing the IC in less than 30 seconds. Chromed and pre-tinned for immediate use. Use with Ungar 4045 47½-watt heat unit and 776 or 777 "Clean-Room" handle (above). Wt., 4 oz.



26 D 2075......Each 1.95
10-49.....Each 1.75 50-Up...Each 1.59

"Princess" Soldering and Desoldering Tool

MODEL 6900 SOLDERING STATION



Ten-watt soldering iron and holder with specially processed sponge for cleaning nibs. With 3 copper nibs (tips): pencil, screwdriver, spade. Tip temp., 550-650°. 120V, AC-DC.
26 D 1570. Shpg. wt., 10 oz. 10.66
26 D 1574. Iron Less Holder, U.L. Listed. 6 oz. 7.52
26 D 3075. Type 6990 Iron Holder, Sponge. Wt., 4 oz. 3.25
26 D 3076. Type 6991 Sponge Refill. For holder. 1 oz. ..... .49

A CORDS AND HANDLES. Handle, 5x½" dia.; vinyl cord. 5 oz.

Stock No.	Type	Description	1-9, EA.	10-49, EA.	50-Up, E
26 D 3079	6902	2-wire	3.07	2.75	2.49
26 D 3080	6903	3-wire	4.08	3.66	3.32

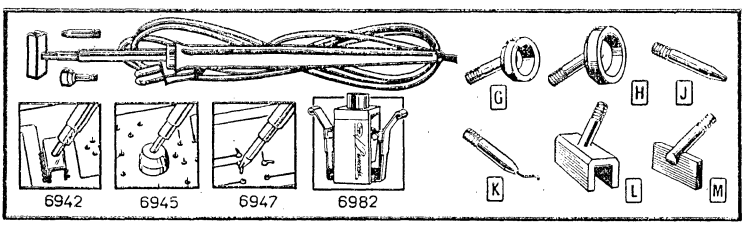
B HEAT CAPSULES. Stainless Steel. Wt., 2 oz.

26 D 1544	6906	6-watt	3.75	3.37	3.05
26 D 3078	6910	10-watt	3.75	3.37	3.05
26 D 3077	6915	15-watt	3.75	3.37	3.05
26 D 1545	6918	18-watt	3.75	3.37	3.05

SOLDERING NIBS. (*Iron-Clad Gold-Plated Copper. †Plain Copper nib). Spade, screwdriver, pencil or precision point.

Stock No.	Mfr's Type	Fig.	Description	LxDia.xTip	EACH 1-9	10-49	50-U
26 D 3081	6952	C	†Spade	.61x⅛x.08"	.38	.34	.31
26 D 3082	6962	C	*Spade	.62x.13x.09"	.64	.57	.52
26 D 3083	6951	D	†Screwdriver	.60x⅛x.005"	.38	.34	.31
26 D 3084	6961	D	*Screwdriver	.62x.13x.06"	.64	.57	.52
26 D 3085	6950	E	†Pencil	.61x.125x.015"	.38	.34	.31
26 D 3086	6960	E	*Pencil	.62x.130x.015"	.64	.57	.52
26 D 3087	6953	F	†Precision	.61x⅛x.005"	.69	.62	.56
26 D 3088	6963	F	*Precision	.61x⅛x.010"	1.25	1.21	1.01

DESOLDERING KIT FOR IC AND SEMICONDUCTOR PACKAGE



Model 6959. Has 15-watt heat capsule with three special desolder tips for fast and efficient desoldering work with semiconductor and IC packages. Model 6945 tip has .375" diameter for easy removal of "TO" packages in one pass. Model 6947 lead straightener melts and straightens bent leads. Model 6942 tip removes up to 16-pin dual-in-line IC's in one operation. U. L. Listed heat capsule. Heat resistant handle with 3-wire grounded cord. 120 VAC. Order replacement heat capsule and handle, additional tips below and at right. 12 oz.
26 D 2239. 1-3 ..... Each 12.70
4-11 .... Each 11.40 12-Up ..... Each 10.33

26 D 3077 Model 6915 Replacement Heat Capsule. Wt., 2 oz. 1-9 ..... Each 3.75
10-49 .... Each 3.37 50-Up ..... Each 3.05

26 D 3080. Model 6903 Replacement Handle. Wt., 5 oz. 1-9 ..... Each 4.08
10-49 .... Each 3.66 50-Up ..... Each 3.32

Model 6982 Dual In-Line IC Extractor. Push-button extractor for use with Model 6942 desoldering tip. Spring-loaded action—locks on to IC case, releases automatically. Fast release prevents board damage, eliminates lead damage and circuit destruction.
26 D 2251 Wt., 00 oz. 1-9 ..... Each 1.77
10-49 .... Each 1.56 50-Up ..... Each 1.41

G Model 6945 "TO" Package Desoldering Tip. Nickel-plated. .375" diameter, 680° tip temperature when used with 15-watt heat capsule. Order at right.

H Model 6943 "TO" Package Tip. .600" diameter, 640° F tip temperature at 15 watts. Order from table below.

H Model 6944 "TO" Package Tip. .500" diameter, 670° F tip temperature at 15 watts. Order from table below.

H Model 6946 "TO" Package Tip. .280" diameter, 700° F tip temperature at 15 watts. Order from table below.

J **26 D 2221.** Model 6947 Slotted Lead Straightener. Melts, straightens leads. 680° F tip temperature. 1-9 ..... Each 1.64
10-49 .... Each 1.47 50-Up ..... Each 1.33

K **26 D 2240.** Model 6940 Flat Pack Tip. For separate flat pack leads. Hooked tip. 650° F. 1-9 ..... Each 2.05
10-49 .... Each 1.84 50-Up ..... Each 1.67

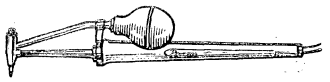
L Model 6942 Dual In-Line Tip. Removes to 16-pin IC's in one pass. 550° tip temperature. Order from table below.

M Model 6941 Flat Pack Tip. For all leads on one side of flat pack. 700° F tip temperature. Order from table below.

Stock No.	Type	Fig.	Stock No.	Type	Fig.
26 D2248	6945	G	26 D 2249	6946	H
26 D2244	6943	H	26 D 2243	6942	L
26 D2245	6944	H	26 D 2241	6941	M

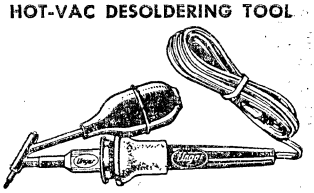
1-9 ..... Each 1.95
10-49 .... Each 1.75 50-Up ..... Each 1.59

MINIATURE DE-SOLDERETTE



Model 6992. Lets you desolder even the smallest microminiature components in seconds without damage. 18-watt heat capsule delivers 600° F tip temperature that melts solder for easy removal. Rubber bulb creates a 5.5-ounce per-square-inch vacuum at tip—"sucks up" molten solder. Special coating inside and outside the collector body eliminates sticking and clogging. U. L. Listed. For 110-130 V, 60 Hz AC.
26 D 2050. Shpg. wt., 12 oz. 14.67
26 D 2891. Replacement Tip. 2 oz. 1.07

HOT-VAC DESOLDERING TOOL



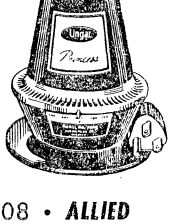
Model 7800. Provides fast, safe, three-fingered desoldering best for printed circuit work. Has lightweight Model 777 handle of heat resistant, fatigue-free plastic. Special non-slip grip stays cool, assure easy finger-touch control. Both miniature and standard desoldering are made easier by vacuum bulb. Special coating inside and out prevents solder from sticking and clogging. Unit can even be used on heat shrinkable tubing. U. L. Listed. For 110-120 V, AC or DC. Order additonal tips below.
26 D 1028. Shpg. wt., 10 oz. 1-5 Each 12.09
6-11 .... Each 9.93 12-Up ..... Each 9.05

25 D 2890. Type 7806. .057" diameter tip for above. Shpg. wt., 2 oz. ..... Each .78

25 D 2891. Type 7812. .033" diameter tip for above. Shpg. wt., 2 oz. ..... Each 1.07

25 D 2892. Type 7813. .069" diameter tip for above. Shpg. wt., 2 oz. ..... Each .78

COMPACT SOLDERING CUP "SCALED FOR THE JOB"



- Specially Designed for Microminiature Components
- Corrosion-Proof Cup Has 1-Oz. Solder Capacity
- Stable Base Plate Prevents Spilling and Wastage
- Thermostatic Control Adjusts from 400° to 750° F

Model 7000. Deluxe miniature soldering cup, great for soldering microminiature components and leads Also can be used for efficient desoldering. Corrosion-proof bronze melt cup has full 1-oz. solder capacity: built-in dross ring; precision machine finish. Adjustable thermostatic control lets you select soldering temperatures from 400° to 750° F. Special design permits cool operation with minimal external heat radiation. Die-cast construction for long life, excellent operating stability. Stable base plate prevents spilling and wastage. Cup depth of only ⅜" reduces possibility of damage to delicate components. 3-wire cord, grounded NEMA plug. For 120 volts AC or DC. Shpg. wt., 4 lbs.
26 D 2222. 1-3 ..... Each 21.23
4-11 ..... Each 19.04 12-Up ..... Each 17.27

SEE PAGE 514 FOR ADDITIONAL DESOLDERING EQUIPMENT

Low-Voltage, Temperature-Controlled Irons

UNGAR "PRINCESS" 6970 LOW-VOLTAGE SOLDERING SYSTEM

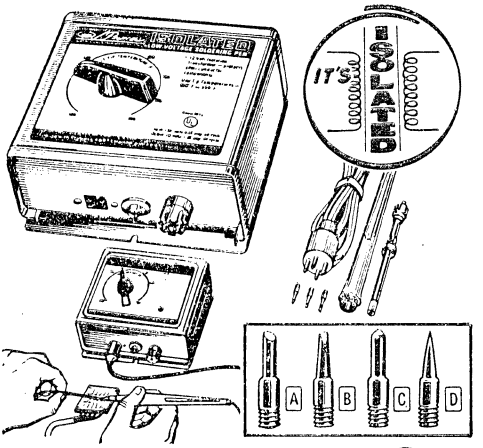
Dial the exact tip temperature for every job. Exclusive adjustable transformer with 10-volt ouput delivers tip temperature from 400° to 900°F. Solder in safety —grounded isolation transformer completely isolates soldering pen from line voltage. Heating unit in tip end. Uses 3-amp bayonet-type fuse. Pilot light. With 3 soldering nibs. U.L. Listed. 110-120 V, 50-60 Hz AC.

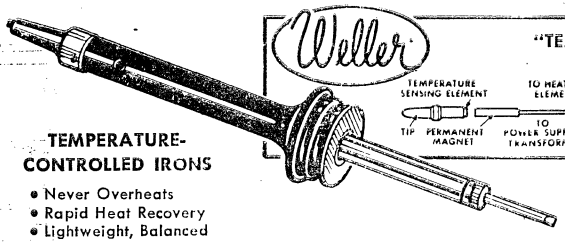
26 D 2046. Shpg. wt., 4 lbs. 1-3.....Each 28.28
4-11.....Each 25.37 12-Up.....Each 23.00

26 D 2049. 6071. Heat Capsule. Shpg. wt., 2 oz. 1-3.....Each 3.98
4-11.....Each 3.69 12-Up.....Each 3.39

SOLDERING NIBS (*Iron-Clad Gold-Plated Copper, †Plain Copper)

Stock No.	Mfr's Type	Fig.	Description	LxDia.xTip (Inches)	EACH 1-9	10-49	50-Up
26 D 3081	6952	A	†Spade Nib	.61x⅛x.08″	.38	.34	.31
26 D 3082	6962	A	*Spade Nib	.62x.13x.09″	.64	.57	.52
26 D 3083	6951	B	†Screwdriver Nib	.60x⅛x.005″	.38	.34	.31
26 D 3084	6961	B	*Screwdriver Nib	.62x.13x.06″	.64	.57	.52
26 D 3085	6950	C	†Pencil Nib	.61x.125x.015″	.38	.34	.31
26 D 3086	6960	C	*Pencil Nib	.62x.130x.015″	.64	.57	.52
26 D 3087	6953	D	†Precision Point	.61x⅛x.005″	.69	.62	.56
26 D 3088	6963	D	*Precision Point	.61x⅛x.010″	1.25	1.12	1.01



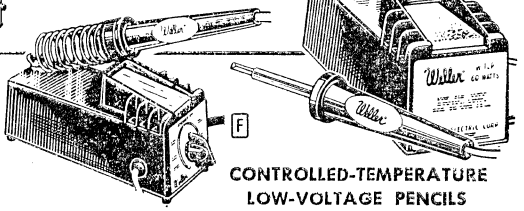


TEMPERATURE-CONTROLLED IRONS

- Never Overheats
- Rapid Heat Recovery
- Lightweight, Balanced

"TEMPERATURE SENSING" TIPS

Magent-Type Switch Senses Thermal Energy Needed



CONTROLLED-TEMPERATURE LOW-VOLTAGE PENCILS

MODEL W-60 60-WATT SOLDERING IRON. Temperature-sensing device in tip automatically maintains correct soldering temperature. Does work of conventional 15 to 100-watt irons. Never overheats; saves current when idling. Reaches full heat quickly, gives rapid heat transfer. Much less tip redressing is required. Tips are easily removed and replaced by loosening tip nut. Only 2½ oz. Length, 7¼". 700°F, ¼" screwdriver tip. 120 VAC. Shpg. wt., 10 oz.
26 D 1832.....9.00

MODEL W-100 100-WATT IRON. As above, 100 watts. Does the work of 75 to 150-watt irons. Length, 8¼"; weighs only 3½ oz. With 700° F, ⅜" screwdriver tip. For 120 volts, 60 Hz AC. Shpg. wt., 12 oz.
26 D 3288.....11.25

MODEL W-200 200-WATT IRON. Weighs 10 oz., replaces most irons in 130-250 watt range. For heavy load applications; ideal for high production rates. 9½". With 700°F, ½" chisel tip. Wt., 1 lb.
26 D 1146.....15.00

REPLACEMENT HEATING ELEMENTS

26 D 1889. HE-W60. For W-60 iron. Wt., 2 oz.....4.10
26 D 1891. HE-W100. For W-100 iron. Wt., 3 oz.....5.70
26 D 1151. HE-W200. For W-200 iron. Wt., 6 oz.....8.25

PREMIUM-PLATED REPLACEMENT TIPS FOR IRONS

Stock No.	Description	Fits Model	Temp.	EACH 1-14	15-49	50-Up
26 D 1933	1/16″ Screwdriver	W-60	600°F	.95	.85	.75
26 D 1180	1/16″ Screwdriver	W-60	700°F	.95	.85	.75
26 D 1934	1/16″ Screwdriver	W-60	800°F	.95	.85	.75
26 D 1181	3/32″ Screwdriver	W-60	600°F	.95	.85	.75
26 D 1218	3/32″ Screwdriver	W-60	700°F	.95	.85	.75
26 D 1235	3/32″ Screwdriver	W-60	800°F	.95	.85	.75
26 D 1978	1/8″ Screwdriver	W-60	600°F	.95	.85	.75
26 D 1237	1/8″ Screwdriver	W-60	700°F	.95	.85	.75
26 D 1980	1/8″ Screwdriver	W-60	800°F	.95	.85	.75
26 D 1296	3/16″ Screwdriver	W-60	600°F	.95	.85	.75
26 D 1330	3/16″ Screwdriver	W-60	700°F	.95	.85	.75
26 D 1332	3/16″ Screwdriver	W-60	800°F	.95	.85	.75
26 D 2015	1/8″ Screwdriver	W-100	700°F	1.50	1.35	1.20
26 D 2018	1/8″ Screwdriver	W-100	800°F	1.50	1.35	1.20
26 D 1362	3/16″ Screwdriver	W-100	700°F	1.50	1.35	1.20
26 D 1363	3/16″ Screwdriver	W-100	800°F	1.50	1.35	1.20
26 D 1364	1/4″ Screwdriver	W-100	700°F	1.50	1.35	1.20
26 D 2062	1/4″ Screwdriver	W-100	800°F	1.50	1.35	1.20
26 D 1366	1/4″ Screwdriver	W-200	700°F	2.25	2.00	1.80
26 D 1395	1/4″ Screwdriver	W-200	800°F	2.25	2.00	1.80
26 D 1446	3/8″ Chisel	W-200	700°F	2.25	2.00	1.80
26 D 1460	3/8″ Chisel	W-200	800°F	2.25	2.00	1.80
26 D 1528	7/16″ Chisel	W-200	700°F	2.25	2.00	1.80
26 D 1529	7/16″ Chisel	W-200	800°F	2.25	2.00	1.80
26 D 1530	Stripping	W-60	500°F	1.20	1.10	.96
26 D 1531	Eyelet Cleaning	W-60	750°F	1.20	1.10	.96
26 D 1532	Wire Stripping	W-60	500°F	1.20	1.10	.96

[E] MODEL W-TCP 60-WATT UNIT. Features accurate, automatic temperature control plus low-voltage power unit. (24-volts). 7½" pencil-size length; weighs only 1¾-oz. Power unit, 2x3x6". With 3/16" 700° tip; tip-cleaning sponge attached to power unit. Other tips below. For 110-120 volts, 50-60 Hz. AC. Shpg. wt., 4 lbs.
26 D 2051. 1-5 Each 19.50 6-23..Each..17.30 24-Up..Each 15.60

[F] MODEL W-TCP2 20-WATT UNIT. Similar to W-TCP above, but has silicon-controlled rectifier and thermistor control circuit. Adjusts temperature range continuously from 200°F to 450°F. For use only with solder that has melting point lower than 300°F. For 110-130 volts, 50-60 Hz AC. Shpg. wt., 3 lbs.
26 D 2986. 1-3..Each 50.00 4-11..Each 45.00 12-Up..Each 40.50

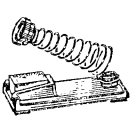
PREMIUM-PLATED REPLACEMENT TIPS FOR W-TCP SERIES

Stock No.	Mfr's Type	Description	Temp.	EACH 1-14	15-49	50-Up
26 D 1656	PTA5	1/16″ Screwdriver	500°F	.95	.85	.75
26 D 1664	PTC5	1/8″ Screwdriver	500°F	.95	.85	.75
26 D 1666	PTH5	1/32″ Screwdriver	500°F	.95	.85	.75
26 D 1669	PTL5	5/64″ Long Screwdriver	500°F	.95	.85	.75
26 D 1703	PTBB5	3/32″ Spade	500°F	.95	.85	.75
26 D 1704	PTCC5	1/8″ Spade	500°F	.95	.85	.75
26 D 1706	PTA6	1/16″ Screwdriver	600°F	.95	.85	.75
26 D 1727	PTC6	1/8″ Screwdriver	600°F	.95	.85	.75
26 D 1771	PTH6	1/32″ Screwdriver	600°F	.95	.85	.75
26 D 1773	PTL6	5/64″ Long Screwdriver	600°F	.95	.85	.75
26 D 1785	PTBB6	3/32″ Spade	600°F	.95	.85	.75
26 D 1786	PTCC6	1/8″ Spade	600°F	.95	.85	.75
26 D 1799	PTA7	1/16″ Screwdriver	700°F	.95	.85	.75
26 D 1815	PTC7	1/8″ Screwdriver	700°F	.95	.85	.75
26 D 1816	PTH7	1/32″ Screwdriver	700°F	.95	.85	.75
26 D 1817	PTL7	5/64″ Long Screwdriver	700°F	.95	.85	.75
26 D 1818	PTBB7	3/32″ Spade	700°F	.95	.85	.75
26 D 1824	PTCC7	1/8″ Spade	700°F	.95	.85	.75
26 D 1856	PTA8	1/16″ Screwdriver	800°F	.95	.85	.75
26 D 1862	PTC8	1/8″ Screwdriver	800°F	.95	.85	.75
26 D 1863	PTH8	1/32″ Screwdriver	800°F	.95	.85	.75
26 D 1864	PTL8	5/64″ Long Screwdriver	800°F	.95	.85	.75
26 D 1867	PTBB8	3/32″ Spade	800°F	.95	.85	.75
26 D 1871	PTCC8	1/8″ Spade	800°F	.95	.85	.75

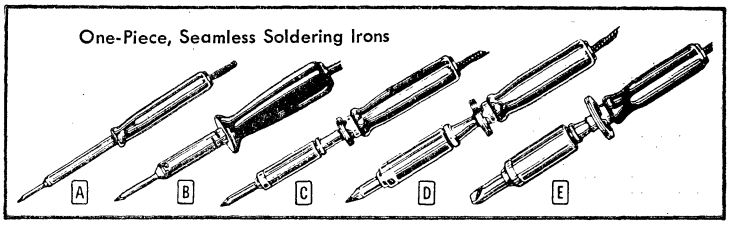
SOLDERING IRON STANDS

MODEL PH60. For Model W-60. Includes tip cleaning sponge. Shpg. wt., 2 lbs.
26 D 1872. 1-14.....Each 4.15
15-49.....Each 3.67 50-Up....Each 3.30

MODEL PH100. For Model W-100. 2 lbs.
26 D 1825. 1-14.....Each 4.85
15-49.....Each 4.33 50-Up....Each 3.90



American Beauty Soldering Irons for Industry



Designed for any soldering application. Special iron-plated tips, available for all models greatly reduce pitting and redressing. Casing and body are of one-piece seamless steel. Rubberoid-coated handles remain cool after hours of use. With 6-ft. cords. U.L. Listed.

[A] MODEL 3128—60 WATTS

For light work. ¼" copper tip. With stand. Length, 12¼". For 110-120 volts, AC-DC. Shpg. wt., 1 lb.

26 D 1514. 1-5.....Each 7.20

6-Up.....Each 6.84

[B] MODEL 3114—60 WATTS

For light-medium work. ¼" copper tip. With stand. Chrome-plated metal parts. 9" long. For 110-120 V, AC-DC. 1 lb.

26 D 1886. 1-5.....Each 8.00

6-Up.....Each 7.60

[C] MODEL 3138—100 WATTS

General-purpose. ⅜"-dia. copper tip. Chrome plated. Cooling baffle; stand. 12⅞" long. For 110-120 V, AC-DC. 2¼ lbs.

26 D 1504. 1-5.....Each 10.35

6-Up.....Each 9.83

[D] MODEL 3158—200 WATTS

For medium-heavy work. ⅝" copper tip. With stand. Overall length, 13⅝". For 110-120 V, AC-DC. Wt., 3 lbs.

26 D 1501. 1-5.....Each 12.75

6-Up.....Each 11.91

[E] MODEL 3178—300 WATTS

Designed to handle special production-line applications. Has ⅞" copper tip. 14⅜" long. With stand. For 110-120 volts, AC-DC. Shpg. wt., 4 lbs.

26 D 1887. 1-5.....Each 16.75

6-Up.....Each 15.91

REPLACEMENT ELEMENTS

Stock No.	Mfr's Type	For Iron	EACH
26 D 1888	9270	3114	3.40
26 D 1890	9272	3128	3.60
26 D 1892	9273	3138	4.10
26 D 1893	9275	3158	5.75
26 D 1894	9277	3178	7.65

COPPER-NICKEL PLATED TIPS

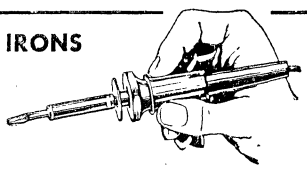
*Diamond; †Chisel; §Screwdriver. 3 oz.

Stock No.	Mfr's Type	Shape	For Iron	EAC
26 D 1515	3728	*	3114, -25, -28	.3€
26 D 1895	3728S	†	3114, -25, -28	.3€
26 D 1505	3738	*	3138	.5€
26 D 1896	3738S	§	3138	.50
26 D 1503	3758	*	3158	1.25
26 D 1897	3758C	†	3158	1.25
26 D 1898	3778D	*	3178	2.45
26 D 1899	3778	†	3178	2.45

"PARAGON" IRON-CLAD TIPS

26 D 1900	67D	*	3114, -25, -28	1.50
26 D 1901	67S	†	3114, -25, -28	1.50
26 D 2123	43D	*	3138	1.85
26 D 1906	56	§	3138	1.90
26 D 2124	44D	*	3158	2.80
26 D 1907	44C	†	3158	2.80
26 D 1908	45D	*	3178	5.00
26 D 1909	45C	†	3178	5.00

"LITTLE DANDY" SOLDER IRONS



- Lightweight • Plug-In Tips
- Aerated Grip • Can't Roll
- Stainless-Steel Element Case

MODEL 3108—20 WATTS

Perfect balance with Lexan® handle, Tenite® finger grip. Anti-roll flange. Quick-heating. 6½" long. With ⅛" tip. For 110 VAC. 3 oz.

26 D 1357. 3108 2-Wire Type.
1-5...Each 4.70 6-Up...Each 4.46

26 D1359. 3108-S3 3-Wire Type.
1-5...Each 5.40 6-Up...Each 5.13

3108 REPLACEMENT ELEMENTS

Stock No.	Type	Watts	EA.
26 D 2012	9014	20	3.10
26 D 2013	9014	25	3.10
26 D 2014	9014	30	3.10

3108 NICKEL-PLATED TIPS

Stock No.	Type	Description	EA.
26 D 2150	295	⅛" Diamond	.34
26 D 2151	296	⅛" Chisel	.34
26 D 2152	297	⅛" Screwdriver	.34
26 D 2153	298	7/16" Turned Chisel	.34

3108 "PARAGON" IRON-CLAD TIPS

26 D 2154	501	⅛" Blunt Chisel	1.20
26 D 2155	502	⅛" Screwdriver	1.20
26 D 2156	271	3/32" Screwdriver	1.20
26 D 2157	503	7/16" Turned Chisel	1.20
26 D 2158	505	⅛" Blunt Diamond	1.20
26 D 2163	507	7/16" Turned Scrwdrvr	1.20

MODEL 3110—25 WATTS

For production-line conditions. "Lexan" handle. 6½". With 274 nickel-plated 3/16" screwdriver tip, 110 VAC. 5 oz.

26 D 1072. 3110 2-Wire Type.
1-5...Each 4.70 6-Up...Each 4.46

26 D 1084. 3110-53 3-Wire Type.
1-5...Each 5.40 6-Up...Each 5.13

3110 REPLACEMENT ELEMENTS

Stock No.	Type	Watts	EA.
26 D 1095	9010	25	3.10
26 D 1097	9010	30	3.10
26 D 1098	9010	35	3.10

3110 NICKEL-PLATED TIPS

Stock No.	Type	Description	EA.
26 D 1068	274	3/16" Screwdriver	.26
26 D 1069	275	7/32" Screwdriver	.26
26 D 1070	277	3/16" Diamond	.26
26 D 1071	278	⅛" Diamond	.26

3110 "PARAGON" IRON-CLAD TIPS

26 D 1054	602	3/16" Chisel	1.40
26 D 1055	604	7/16" Chisel	1.40
26 D 1064	605	7/32" Chisel	1.40
26 D 1065	610	3/16" Diamond	1.40
26 D 1066	613	3/32" Screwdriver	1.40
26 D 1067	618	7/32" Screwdriver	1.40

MODEL 3112 40-WATT SOLDERING IRON

Same features as Models 3108 and 3110, but 40 watts, 7½" long. With ¼" tip. 6 oz.

26 D 2078. 3112 2-Wire Type.
1-5...Each 5.95 6-Up...Each 5.65

26 D 2079. 3112-S3 3-Wire Type.
1-5...Each 6.65 6-Up...Each 6.32

3112 REPLACEMENT ELEMENTS

Stock No.	Type	Watts	EA.
26 D 2097	9012	40	4.25
26 D 2098	9012	50	4.25
26 D 2099	9012	60	4.25

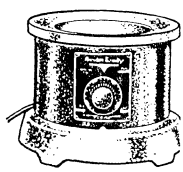
3112 NICKEL-PLATED TIPS

Stock No.	Type	Description	EA.
26 D 2805	286	¼" Diamond	.34
26 D 2806	288	⅛" Diamond	.34
26 D 2807	289	¼" Scrwdrvr	.34
26 D 2808	291	⅛" Scrwdrvr	.34

3112 "PARAGON" IRON-CLAD TIPS

26 D 2809	704	¼" Chisel	1.55
26 D 2810	710	⅛" Diamond	1.55
26 D 2843	709	¼" Diamond	1.55
26 D 2844	714	3/32" Scrwdrvr	1.55
26 D 2845	720	5/32" Scrwdrvr	1.55

MODEL 600 SOLDER POT



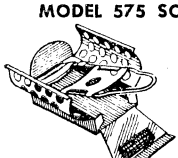
Cast-iron crucible and base; wrap-around steel casing. Chemically stable crucible holds 2½ lbs. of solder; is center-tapped (5/16-18) and has flared lip for fixturing. Two 300-W cartridge elements heat solder to 400°F in 15 minutes, and to 750° in 25 min. Black crackle finish. "Microlite" insulation Size: 5½x6x7"; crucible, 3½" I.D. x 1½" deep. For 110-120 V 50-60 Hz AC.

26 D 1916. Shpg. wt., 9 lbs.....31.90
26 D 1918. 602 Dross Skimmer. 4 oz.....2.98
26 D 1921. Extra Model 9300 Heating Element. (2 per pot.) Shpg. wt., 2 oz.....Each 3.90

MODEL 300 SOLDER POT. Above, but smaller (1 lb. capacity). Two 160-W elements. ¼-20 center tap. 5⅛x5¾x4¾"; crucible, 2¼" I.D. x 1½" deep.

26 D 1104. Shpg. wt., 6½ lbs.....30.40
26 D 1106. 302 Dross Skimmer. 4 oz.....2.98
26 D 1107. Extra Model 9301 Heating Element. (2 per pot.) Shpg. wt., 2 oz.....Each 3.90

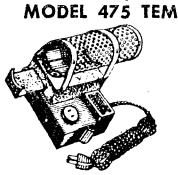
MODEL 575 SOLDER IRON STAND



Cadmium-plated steel stand accepts all "Little Dandy", other miniature irons. Gravity-controlled to open, close automatically. Holds iron in aerated basket. Can be mounted. 4x2x6" long. Wt., 12 oz.

26 D 1286.....Each 3.00

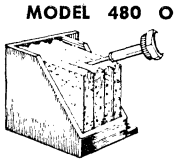
MODEL 475 TEMP.-REGULATING STAND



Adjustable and thermostat-controlled. Keeps temperature constant at pre-set level. Ends tip burning. Has copper cradle and pilot light. With heater cord. For 110-600 W. irons. For 125 VAC. Shpg. wt., 2½ lbs.

26 D 1508.....9.70

MODEL 480 ONE-PASS TIP CLEANER



High-impact styrene case holds set of sponges. One pass between wet sponges cleans entire tip. ¾" deep water well. Non-slip base. Can be mtd. 2½x2¾x3½". 10 oz.

26 D 1328.....2.25
26 D 1346. Replacement Sponges. Wt., 3 oz.....16

Precision Industrial Soldering Equipment

ANTEX SOLDERING IRONS FOR MICRO-ELECTRONIC CIRCUITS

NICKEL-PLATED TIPS

Size	Stock No.	Fig.	Type	Stock No.	Fig.	Type	EACH 1-49	EACH 50-Up
1/64"	26 D 1474	A	Spade	26 D 1953	B	Chisel	.55	.50
1/16"	26 D 1917	A	Spade	26 D 1954	B	Chisel	.55	.50
3/32"	26 D 1283	A	Spade	26 D 1955	B	Chisel	.55	.50
1/8"	26 D 1924	A	Spade	26 D 1962	B	Chisel	.55	.50
5/32"	26 D 1857	A	Spade	26 D 1963	B	Chisel	.55	.50
3/16"	26 D 1925	A	Spade	26 D 1964	B	Chisel	.55	.50
1/32"	26 D 2464	C	Pyramid	.....	....	.....	.55	.50

IRON-PLATED TIPS

1/64"	26 D 1861	A	Spade	26 D 1986	B	Chisel	1.20	1.10
1/16"	26 D 1968	A	Spade	26 D 1987	B	Chisel	1.20	1.10
5/64"	26 D 1969	A	Spade	26 D 1989	B	Chisel	1.20	1.10
3/32"	26 D 1290	A	Spade	26 D 1293	B	Chisel	1.20	1.10
1/8"	26 D 1970	A	Spade	26 D 2016	B	Chisel	1.20	1.10
5/32"	26 D 1965	A	Spade	26 D 1294	B	Chisel	1.20	1.10
3/16"	26 D 1985	B	Chisel	.....	....	.....	1.20	1.10
.....	26 D 1588	D	Needle	.....	....	.....	1.65	1.50

MODEL ST-1 IRON STAND

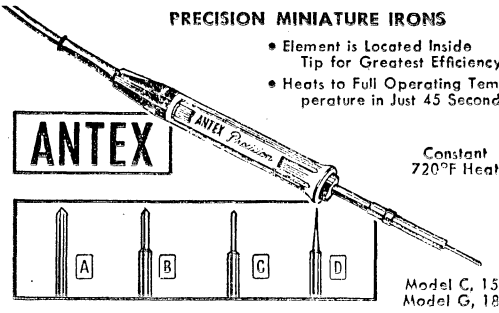
Holds Antex soldering iron and solder spool. 8¼" high.
26 D 1819. Shpg. wt., 2 lbs. 2.95

REPLACEMENT ELEMENTS

For Antex soldering irons, right. Shpg. wt., 2 oz.
26 D 1823. For Model C. ..... Each 2.50
26 D 2471. For Model G. ..... Each 2.60

PRECISION MINIATURE IRONS

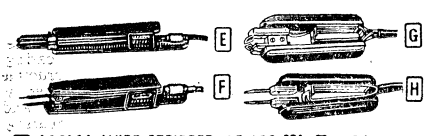
- Element is Located Inside Tip for Greatest Efficiency
- Heats to Full Operating Temperature in Just 45 Seconds



Feather-light iron has the element inside the tip for best efficiency —does the work of a 25-watt conventional iron. Weighs only an ounce; perfect for miniaturized circuits. Heats to operating temperature in 45 seconds, maintains a constant 720°F heat. Tips can be changed in seconds, even while the iron is hot. Bright yellow plastic handle remains cool, won't char. Flexible cord for easy handling, 6½" long. Choice of 2-prong plug or 3-prong Hubbell plug. For 110-120 V, 50-60 Hz AC. From England. Less tip; order from variety of types listed at left. Shpg. wt., 3 oz.

26 D 2461. Model C, 2-prong Plug. 1-5...Ea. 5.80 6-Up...Ea. 5.30
26 D 2462. Model C, 3-prong Plug. 1-5...Ea. 6.10 6-Up...Ea. 5.60
26 D 2468. Model G, 2-prong Plug. 1-5...Ea. 6.30 6-Up...Ea. 5.80
26 D 2469. Model G, 3-prong Plug. 1-5...Ea. 6.60 6-Up...Ea. 6.10

WASSCO CONTROLLED-TEMPERATURE SOLDERING DEVICES



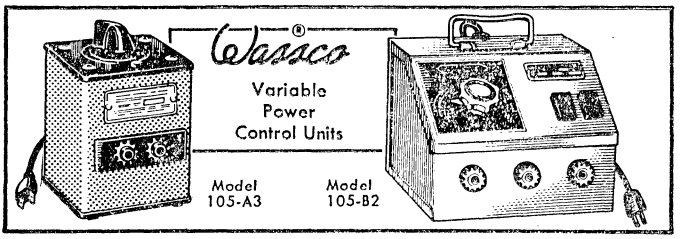
E 105131 WIRE STRIPPER. 15-100 W. For 24-gauge wire or finer. 6½" long. Heatproof cord.
26 D 3704. Shpg. wt., ½ lb. 15.90

F 105133 MICRO-TWEEZER. Solders wires 22-gauge or finer. 15-100 W. 6½" long. .040" electrode.
26 D 3709. Shpg. wt., ½ lb. 15.90

G 10541 TWEEZERS. Resistance soldering. .078" electrode dia. 0-⅜" space. 5" long, 4' lead.
26 D 1960. Shpg. wt., 1 lb. 18.25

H 10544 TWEEZER-TYPE WIRESTRIPPER. Wires to 18-gauge. 15-100 W. 4½" long. Adj. stop.
26 D 1967 Shpg. wt., 1 lb. 18.25

26 D 1977. 10545 Element. For 10544 Wirestripper above. Shpg. wt., 1 oz. ..... Pkg. of 2 for .58
26 D 1979. 10542 Electrode. For 10541 Tweezers above. Shpg. wt., 2 oz. ..... .49
26 D 2460. 10519 Footswitch. For 105-A3 and 105-B2 Power Units at right. Shpg. wt., 12 oz. ... 9.00



MODEL 105-A3 POWER UNIT

Infinitely variable power control unit provides single power control for most thermal wire-stripping and resistance soldering uses. Gives accurate control of soldering tool heat. Isolates soldering tool from line voltage for additional safety. Use with headpieces listed below. Has adjustable 0-100 watt output, 0-3 volt output. Fuse protected. Size, 4x5x5". 110-120 V, 60 Hz AC. Wt., 7½ lbs.
26 D 1971 ..... 42.00

MODEL 105-B2 POWER UNIT

Precision power unit offers 22 outputs for all types of soldering applications. Select power from 80-500 watts, voltage from 0.8 to 2.8 volts. Use with hand pieces and thermal wire stripper listed below. Pilot light, power switch. Gray steel hammerloid case, 6½x7½x8½". With 2-wire, 6-ft. power leads and attachment plug caps. For 110-120 V, 60 Hz AC. Shpg. wt., 24 lbs.
26 D 3631 X 76.00

ELECTROMATION COMPONENTS CORP. ULTRASONICS FOR FLUXLESS SOLDERING

Ultrasonic soldering outfit for precision soldering applications. High-frequency vibrations are used to induce a mechanical cavitation action in molten solder removing oxides and other foreign matter which would normally prevent the solder from adhering to the surface of the work. This eliminates the need for flux and its consequent removal, resulting in great time-saving when used in production applications. Order ultrasonic generator, soldering iron and/or plain vibrating tip below.

ULTRASONIC GENERATOR

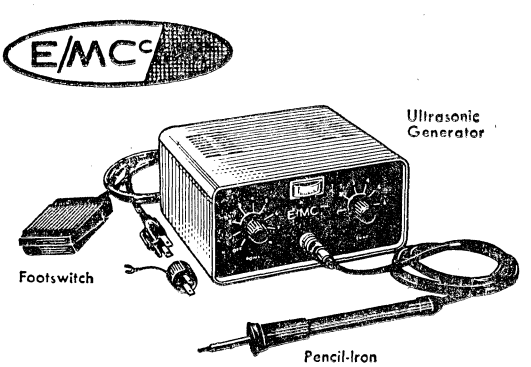
Supplies 10 watts of ultrasonic energy at 25 kHz/s to soldering tool. Provides ultrasonic power and current for soldering iron, ultrasonic power only for vibrating tip. Has three-prong grounded plug, two-prong plug adapter, and footswitch. Front panel connection for soldering tool. Footswitch controls vibrations to soldering tip. Generator unit, 4x8x7". For 110-130 V, 60 Hz AC.
26 D 1535 Z. Shpg. wt., 14 lbs. 249.50

12-WATT PENCIL-TYPE SOLDERING IRON

12-watt heating element in tip. Used to heat parts and melt solder, vibration used to effect bond. 9" long, 4' cord.
26 D 1536. Shpg. wt., 8 oz. 174.50

UNHEATED VIBRATOR TIP

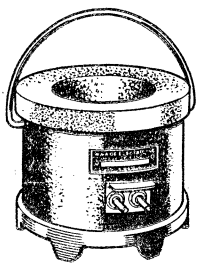
Use with external heat source, such as hot plate. For parts not able to be heated with 12 watt element. 9" long, 4' cord.
26 D 1538. Shpg. wt, 8 oz. 139.50

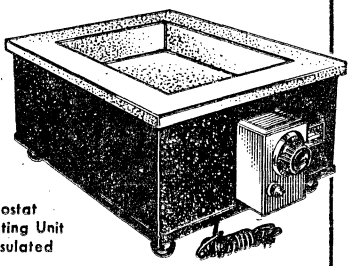


- Removes Oxides and Foreign Matter Which Prevents Solder from Adhering, Eliminates Need for Flux and Flux Removal
- Solder Adheres Only Where Vibrating Tip Contacts Work, Reducing Unwanted Flow of Excess Solder to Adjacent Components

Soldering Accessories and Solder

WAAGE SOLDER MELTING POTS AND TANKS





- Adjustable Thermostat
- Replaceable Heating Unit
- Compact, Fully Insulated

ROUND SOLDER MELTING POTS

For melting solder, tin, low-temperature alloys. Automatic thermostat provides temperature to 550° F. Rugged construction of fabricated steel. Fiberglass and air insulation reduces heat loss. With 6-ft. cord. For 115 VAC.

MP1A. Capacity, 1 lb. Outside size, 4" dia. x 4" deep. 200 watts. Wt., 5 lbs.
26 D 1122.....24.00

MP4A. Capacity, 4 lbs. Outside size, 5" dia. x 4" deep. 300 watts. Wt., 6 lbs.
26 D 1174.....28.00

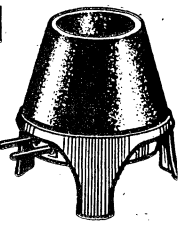
RECTANGULAR MELTING TANKS

Specially designed for printed circuit fabrication, with wide top area and shallow depth. Rugged construction, fiberglass insulation. Automatic thermostat provides temperature from 150° to 550° F. With 6-ft. cord. For 115 VAC.

RSP1. Capacity, 10 lbs. Size, 9x9x5". 600 watts. Shpg. wt., 15 lbs.
26 D 1179 X.....42.50

RSP2. Capacity, 20 lbs. Size, 9x13x5". 1200 watts. Shpg. wt., 23 lbs.
26 D 1183 X.....58.00

LECTROHM SOLDER POTS



- For Dip-Solder Jobs
- Heating Elements are Replaceable
- Ideal for Production Line use

Rugged low-cost pots for small dip-soldering jobs. Ideal for use on production lines and in shops. Helpful aids in stepping up production—perfect for tinning wires and component leads. Rugged construction with replaceable heating elements (order below). Choice of two sizes, 200 or 250 watts, with up to 2 lb. capacity for extended use without refilling. Sizes: SP-200, 2¾x2⅜x⅞" deep; SP-250, 3¼x2x1¾" deep. Supplied complete with power cord. Pot capacity: SP-200, 1¾ lbs.; SP-250, 2 lbs. For 110-120 V. AC or DC. Shpg. wt., 3½ lbs.

Stock No.	Mfr's Type	Watts	EACH
26 D 1553	SP-200	200	6.95
26 D 1554	SP-250	250	6.95

REPLACEMENT ELEMENTS. Composed of nickel-chrome wire. Wt., 4 oz.
26 D 1555. Type A. For SP-200.....2.35
26 D 1557. Type B. For SP-250.....2.35

KESTER AND ERSIN MULTICORE MULTI-PURPOSE SOLDER

KESTER SOLDERS

Kester "44"

Resin Core Solder

- For High-Speed Soldering
- Fast Melting 60/40 Alloy

High-speed solder with fast action, instant wetting "44" Resin flux core. Despite its activity, flux is non-corrosive, non-conductive. 60% tin, 40% lead. Available in 1-lb. or 5-lb. spools.

Size	1-LB. SPOOL		5-LB. SPOOL	
	Stock No.	EA.	Stock No.	EACH
1/16"	26 D 2112	2.14	26 D 2113	10.45
1/32"	26 D 2164	2.82	26 D 2894	11.20

"RESIN FIVE" CORE SOLDER. With non-corrosive and non-conductive "Resin 5" flux. 60% tin, 40% lead. Shpg. wt.: 1-lb. spool, 1¼ lbs.; 5-lb. spool, 5¼ lbs.

1/16"	26 D 2234	2.14	26 D 1311	10.45
1/32"	26 D 2285	2.82	26 D 2893	11.20

"RESIN FIVE" CORE SOLDER. Same as above, but 40% tin, 60% lead.

Size	1-LB. SPOOL		5-LB. SPOOL	
	Stock No.	EA.	Stock No.	EACH
1/16"	26 D 2826	1.58	26 D 2886	7.65
1/32"	26 D 2887	2.27	26 D 2888	8.85

PRINTED-CIRCUIT SOLDER. 60% tin, 40% lead. 1/16" dia. 1¾ lbs.
26 D 1589. 1-Lb. Spool.....2.14

ACID-CORE SOLDER. For non-electrical work. ⅛" dia. 40% tin, 60% lead.
26 D 1572. 1-Lb. Spool.....1.54

SOLDERING PASTE. Distributes flux for easier soldering. 2 oz. cans. Shpg. wt., 5 oz.
26 D 1578. 1-9.....Each .15
10-Up.....Each .13

ERSIN "MULTICORE" SOLDERS

All Ersin solders conform to Federal Specification QQ-S-571.

"MULTICORE." Positive action solder. Incorporates highly efficient, non-corrosive Ersin flux in a 5-core pattern running throughout entire length of solder. This unique feature assures uninterrupted flux flow from even the smallest piece of solder—insures instant spreading and gripping. 60% tin and 40% lead. 1-pound spools. From Great Britain. Shpg. wt., 1¾ lbs.

Gauge	Stock No.	PER SPOOL	
		1-27	28-Up
16 (.064")	26 D 1730	3.34	2.81
18 (.048")	26 D 1733	3.40	2.84
20 (.036")	26 D 1736	3.67	3.08
21 (.032")	26 D 3285	3.79	3.18
22 (.028")	26 D 3286	3.95	3.31
24 (.022")	26 D 3287	5.78	4.85

LEAD/TIN "MULTICORE" SOLDER. Same as above, but 40% tin and 60% lead. Non-corrosive flux. Shpg. wt , 1½ lbs.

16 (.064")	26 D 1594	2.67	2.24
18 (.048")	26 D 1313	2.80	2.27

SPECIAL ALLOY INDUSTRIAL SOLDERS. Low-melting-point type (L.M.P. in table below) is 62% tin, 36% lead, 2% silver. Melts at 354°F. Recommended for ceramics, printed or etched circuits. H.M.P. high-melting-point type is 5% tin, 93.5% lead, 1.5% silver. Melts at 565°F. Eutectic 63/37 alloy has no plastic range. Melts at 361°F. 1-lb. spools. Shpg. wt., 1¾ lbs.

Gauge	EUTECTIC		TYPE L.M.P.	
	Stock No.	EACH	Stock No.	EACH
16	26 D 2005	3.54	26 D 2000	5.06
18	26 D 2006	3.60	26 D 2001	5.86
20	26 D 2007	3.74	.....	.....
22	26 D 2481	3.89	26 D 2002	7.25
TYPE H.M.P. (5/93.5/1.5)				
16	26 D 2003	4.27	.....	.....
18	26 D 2004	4.33	.....	.....

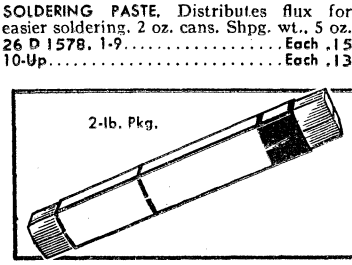
"SAVBIT" COPPER-LOADED. High-strength copper-tin-lead alloy solder. 1-lb. spools. Shpg. wt., 1¾ lbs.

Gauge	Stock No.	EACH	
		1-27	28-Up
16 (.064")	26 D 1123	3.22	2.72
18 (.048")	26 D 1629	3.34	2.81
20 (.036")	26 D 1635	3.63	3.08
22 (.028")	26 D 2205	3.90	3.28

EXTRA-FINE GAUGE 5 CORE SOLDERS. For micro-miniature applications. Multicore is 60% tin, 40% lead; Eutectic is 63% and 37%. Conforms to Federal spec. no. QQ-S-571. Each package contains four ½-lb. spools. Shpg. wt., per package. 3 lbs.

Gauge	Stock No.	Type	2 LB. PKG.
24 (.022")	26 D 3015	Multicore	11.57
28 (.014")	26 D 3016	Multicore	15.29
32 (.0108")	26 D 3017	Multicore	19.96
34 (.009")	26 D 3018	Multicore	24.26

Gauge	Stock No.	Type	2 LB. PKG.
20 (.036")	26 D 3056	Eutectic	7.45
24 (.022")	26 D 3057	Eutectic	12.12
28 (.014")	26 D 3058	Eutectic	15.52
32 (.0108")	26 D 3059	Eutectic	20.15



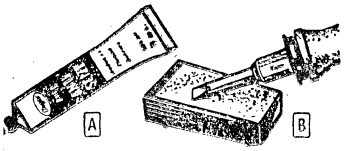
ERSIN MULTICORE EXTRUSOL® SOLID BAR SOLDER

High-purity Ersin solder in a smooth-finished, extruded bar. Type HP, high-purity, conforms to QQS-571-D. Type LA, commercial, for dots and wave soldering equipment 8" long, trapesium shaped. 1x ¾". Two 1-lb. bars per pkg. Wt., 2½ lbs.

Stock No.	Alloy Tin/Lead	Type	2 LB. PKG.	
			1-9	10-Up
26 D 1744	60/40	HP	6.38	5.36
26 D 1745	60/40	LA	5.38	4.36

Soldering Aids, Tools, Welding Torch

INGAR SOLDERING ACCESSORIES

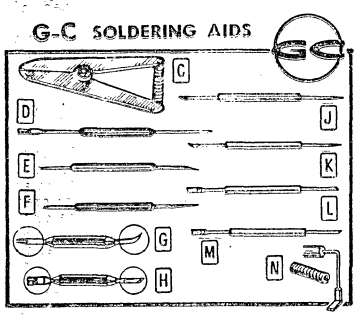


A ANTI-SEIZE COMPOUND. Lubricates soldering iron tip threads, reduces possibility of seizure and corrosion. In ½ oz. tube. Shpg. wt., 3 oz.
6 D 1356, 1-9 ..... Each .65
10-99 ..... Each .53
100-Up ..... Each .48

B NO. 400 "KLEEN-TIP" KIT. Insures longer tip life. Removes oxides and excess solder. Consist of specially processed sponge, and phenolic tray and bracket for bench mounting. Shpg. wt., 2 oz.
26 D 1421, 1-9 ..... Each 1.13
10-99 ..... Each .93
100-Up ..... Each .85

NO. 455 REFILL SPONGES. Specially processed "Kleen-Tip" sponges for the above No. 400 kit. Shpg. wt., 2 oz.
26 D 1422, 1-9 ..... Each .45
10-99 ..... Each .37
100-Up ..... Each .34

G-C SOLDERING AIDS



C 9077 HEAT SINK. Protects parts from heat. Made of aluminum—solder will not stick. Self-closing; frees hands. 3 oz.
26 D 1742 ..... .39

D 9088 BRUSH. Wire brush and chrome-tipped holding end. 4 oz.
26 D 1000 ..... 1.03

E 9076 ANGLE END-TOOL. 4 oz.
26 D 1729 ..... .90

F 9075 STRAIGHT END-TOOL. Double ends ream, hold or pry. Chromed. 4 oz.
26 D 1728 ..... .90

G 9093 SOLDERING PROBE. For printed-circuit work. 8". 3 oz.
26 D 1586 ..... 1.03

H 9094 PC BOARD BRUSH AND SCRAPER. Stainless steel brush on one end, steel scraper on other. 8" overall length. 3 oz.
26 D 1587 ..... 1.03

J 9069 REAMER AND SCRAPER TIP. Chrome-plated. Ends insulated. Scrape joints, ream lug holes. Wt., 4 oz.
26 D 2255 ..... .90

K 9073 BRUSH AND FORKED TIP. For PC work. Forked tip for twisting or holding wires. Ends insulated. 3 oz.
26 D 2256 ..... .95

L 9074 BRUSH AND SCRAPER TIP. Brush for dusting away excess solder, scraper for joints. Ends insulated. 3 oz.
26 D 2257 ..... .95

M 9086 STRAIGHT REAMER AND FORKED TIP. Steel, chrome plated. For lug holes, forked tip holds wires. 3 oz.
26 D 2258 ..... 1.03

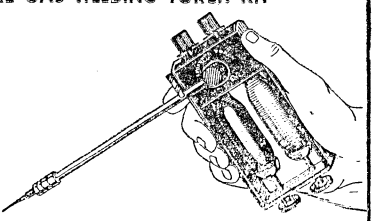
N 6798 SOLDERING AID. Connector for easy replacing of components on PC board. Copperweld core. 4 oz.
26 D 2259 ..... .99

MICROFLAME MINIATURE GAS WELDING TORCH KIT

Self-contained torch uses miniature oxygen and LP gas cylinders to weld, braze and solder even rare metals with pinpoint accuracy. Will also cut most metals quickly and easily. Gives over 5000° F flame for fast welding.

Ideal for use in design laboratories, for prototype construction, or for any lightweight industrial or commercial application requiring a small, easy-to-handle torch. Overall size, 5¼x2x1¼", for easy one-hand operation.

Complete kit includes three flame tips, torch tube, gaskets, two oxygen and one butane cylinders, plus complete instructions. Housed in plastic box. Order replacement oxygen and butane cylinders below. Shpg. wt., 1 lb.
26 D 3275, 1-5 ..... Each 17.95
6-Up ..... Each 15.96

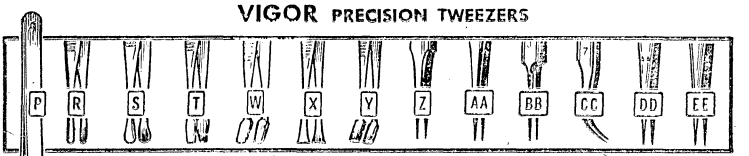


- Welds, Brazes and Cuts Most Metals
- Pin-Point Accuracy with 5000° F Flame
- Designed for Simple One-Hand Operation

Oxygen Cylinders. Shpg. wt., 2 oz.
26 D 3276 ..... Each .75
2-5 ..... Each .70 6-Up ..... Each .60

Butane Cylinders. Shpg. wt., 2 oz.
26 D 3277 ..... Each .50
2-5 ..... Each .45 6-Up ..... Each .40

VIGOR PRECISION TWEEZERS



SEMICONDUCTOR TWEEZERS

- For Germanium, Silicone Discs
- Large Surface for Positive Grip
- Thin Edge for Easy Pick-Up

Mirror-smooth finish holds germanium and silicone disc semiconductors without scratching surface. Nickel plated carbon steel with serrated grip except TW-702A, stainless steel with plain grip. All are 4¾" long except TW-328, which is 4" long. Av. shpg. wt., ½oz.

Stock No.	Fig.	Mfr's Type	Style	EACH 1-11	EACH 12-Up
26 D 1083	P	TW-702A	2A	2.90	2.59
26 D 1086	R	TW-325	25	1.31	1.17
26 D 1096	S	TW-326	26	1.31	1.17
26 D 1108	T	TW-327	27	1.31	1.17
26 D 1111	W	TW-328	28	1.44	1.29
26 D 1114	X	TW-335	35	1.44	1.29
26 D 1121	Y	TW-336	36	1.44	1.29

In table at right: *Beveled-sharp tips; †beveled-medium tips; ‡Serrated tips. All others are round-sharp.

PRECISION ASSEMBLY TWEEZERS

For miniature and micro-fine work. Hand ground; points are ground flat on the inside. In table: Carbon Steel (C), Stainless Steel (SS) and Carbon Steel Nickel Plated (CNP). Precise sharp and shaped points, tension spring action. All are 4¾" long except Style 3C, 4¼"; Style 5, 7, 7B and AA, 4¾"; Style MM, 5" long. Av. wt., ½ oz.

Stock No.	Fig.	Style	Type Steel	EACH 1-11	EACH 12-Up
26 D 3030	AA*	1	C	1.78	1.57
26 D 3031	AA*	1	SS	1.99	1.76
26 D 3032	Z†	2	C	1.91	1.68
26 D 3033	Z†	2	SS	2.12	1.87
26 D 3034	AA	3	C	1.91	1.68
26 D 3035	AA	3	SS	2.12	1.87
26 D 3036	AA	3C	C	1.91	1.68
26 D 3037	AA	3C	SS	2.12	1.87
26 D 3038	BB	5	C	2.72	2.40
26 D 3039	BB	5	SS	2.93	2.58
26 D 3040	CC	7	C	2.97	2.62
26 D 3041	CC	7	SS	3.18	2.81
26 D 3042	CC‡	7B	SS	3.18	2.81
26 D 3043	DD*	AA	CNP	1.02	.90
26 D 3044	EE*	MM	CNP	1.10	.97

MILLER, XCELITE AND CLAUSS SOLDER AIDS

FF MILLER MODEL 80 HEAT SINK

Spring type. Copper jaws for high heat absorption, cool plastic handles. Shpg. wt., .06 oz.
26 D 1743 ..... .95

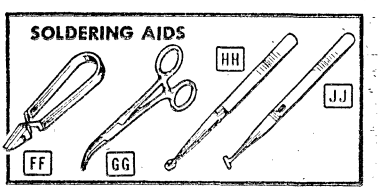
GG XCELITE 6" "SEIZERS"

TYPE-42H. Straight-nose design. Holds parts firmly. Shpg. wt., 3 oz.
26 D 1255 ..... 4.13

TYPE 43H. As above, but curved-nose design. Shpg. wt., 3 oz.
26 D 1256 ..... 4.27

HH CLAUSS HS5 HEAT-SINK TOOL

Copper beryllium alloy provides maximum thermal conductivity when soldering. High-luster satin chrome finish resists solder sticking. Length, 5". Shpg. wt., 2 oz.
26 D 2074 ..... 2.49



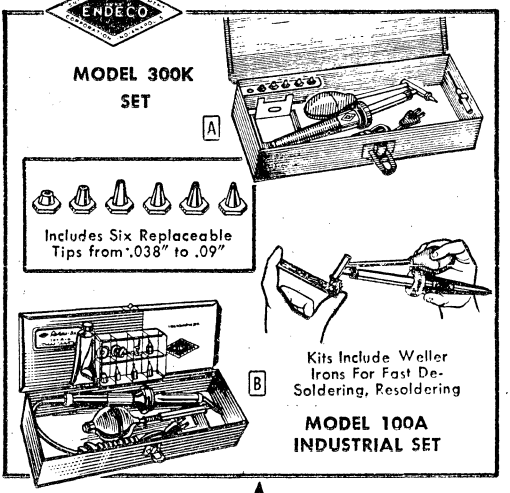
JJ CLAUSS MODEL AW ANTI-WICKING TOOLS

Overall length, 5". *American Wire Gauge. Shpg. wt., 2 oz.

Stock No.	Size*	EACH
26 D 2076	18	6.19
26 D 2077	20	6.19
26 D 2081	22	6.19
26 D 2083	24	6.19
22 D 2085	26	6.19
26 D 2086	28	6.19
26 D 2088	30	6.19

Desoldering, Welding and Vacuum Equipment

ENDECO QUALITY DESOLDERING EQUIPMENT



A MODEL 300K DESOLDERING OUTFIT

Easily removes miniature components in just seconds without damage. Resolders with "wrap-around" contact. Convenient one-hand operation. 8" long. 40W. Includes 6 replaceable tips from .038" to .090", cleaning tool, stand and case. For 115 VAC. Shpg. wt., 3 lbs.

26 D 2898. 300K. 2-wire cord. 1-24.....Ea. 19.90 25-Up....Ea. 17.91
26 D 2899. 300K-3. 3-wire cord. 1-24....Ea. 20.90 25-Up....Ea. 18.81
26 D 3601. 2-Wire Iron. 1 lb. 1-24.....Ea. 10.05 25-Up.....Ea. 9.85
26 D 3602. 3-Wire Iron. 1 lb. 1-24.....Ea. 11.95 25-Up....Ea. 10.75

Extra Replaceable Tips. Package of 6 assorted replaceable tips for Model 300K or Model 300K-3. Shpg. wt., 2 oz.
26 D 1877.....3.95

B MODEL 100A INDUSTRIAL DESOLDERING OUTFIT

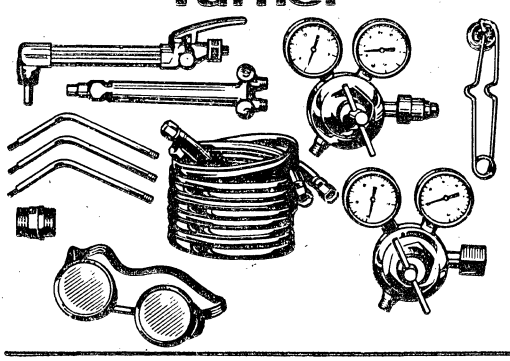
Desolders, resolders without changing tips. Heats in just two minutes—sensing-device tip can't overheat. Vacuum solder pick-up. Simple one-hand operation. 12" long; includes 6 replaceable tips. 75 watts. For 110-120 V, 60 Hz AC. Shpg. wt., 4 lbs.

26 D 1880. 100A-K. 2 wire cord. 1-24.....Ea. 27.40 25-Up...Ea. 24.65
26 D 1882. 100A-K-3. 3-wire cord. 1-24...Ea. 28.40 25-Up...Ea. 25.55
26 D 3050. 2-Wire Iron. 2 lbs. 1-24.....Ea. 20.65 25-Up...Ea. 18.60
26 D 3051. 3-Wire Iron. 2 lbs. 1-24.....Ea. 21.65 25-Up...Ea. 19.50

Extra Tips. Package of 6 assorted replaceable tips for Model 100A-K or Model 100A-K-3. Shpg. wt., 2 oz.
26 D 1910.....3.95

HEAVY-DUTY WELDING/CUTTING/BRAZING OUTFIT

Turner



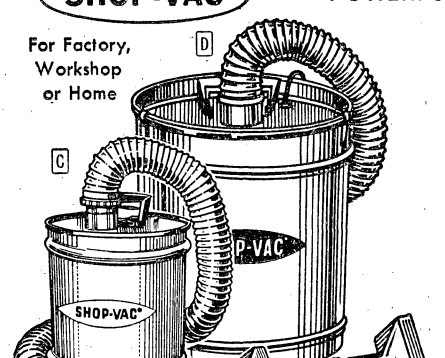
PROFESSIONAL QUALITY FOR AUTOMOBILE WORK, SHOP AND FARM . . WELDS UP TO ½-INCH, CUTS TO 1½-INCH

Top quality oxygen-acetylene, single-stage outfit by Turner. Specially designed, professional-quality for expert welding, cutting, brazing, or practically any heavy-duty job application. Gas-operated equipment is ideally suited for automobile and machinery repairs, farm and ranch general maintenance, as well as light- and heavy-gauge sheet metal work.

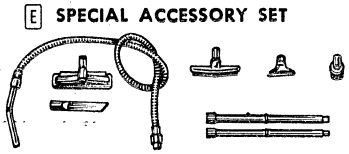
Engineered to satisfy the needs of contractors and metal-working shops. Indispensable for welding jobs around the home, too. Welds all standard metals up to ½" and handles cutting jobs up to 1½" thickness.

Complete Turner welding outfit includes: welding handle and mixer assembly; single-stage oxygen and acetylene regulators; Numbers 1, 5 and 8 welding tips; cutting attachment and cutting tip; pair of welding safety goggles; spark-lighter; 20-feet of 3/16" Duoweld hose; fittings and commercial adapter (adapts POL regulator to commercial tank). You need only oxygen plus acetylene or propane gas supply. Shpg. wt., 22 lbs.
26 D 1454 X.....109.95

SHOP-VAC — POWERFUL VACUUM CLEANERS FOR BIG CLEAN-UP JOBS



E SPECIAL ACCESSORY SET



C 5-GALLON, 1-HP MODEL.

Designed for hard-to-keep-clean areas such as work shops and factories. Does clean-up jobs with ease that would ruin an ordinary vacuum cleaner. Hose has big 2½-inch diameter, 6-inch nozzle that picks up sawdust, chips, sticks, and stones. Attaches to power tools such as saws or routers for sawdust and chip removal.

Motor is located near top of drum—debris drops to bottom of the drum, allowing free air-flow and peak efficiency. Top of drum unclamps to empty.

Carrying handle, 6-ft. flexible hose, 6" nozzle, 2½" to 1¼" adapter, 1-hp motor. Gold enamel. 18" high, 12" dia. U.L. Listed. 115 V, 50-60 Hz. AC.
26 D 2515 X. Shpg. wt., 15 lbs..26.95

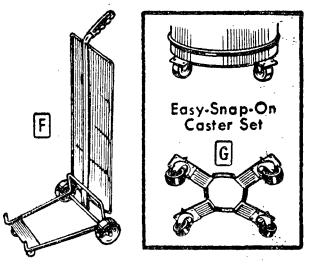
D 10-GALLON, 1-HP.

Has steel drum 19 inches high, 15" diameter.
26 D 3101 X. Shpg. wt., 20 lbs...29.95

E 825-AZ. 1¼" ACCESSORY KIT.

Tools for general cleaning. With 1¼" adapter for 2½" vacuum cleaners.
26 D 1250 X. Shpg. wt., 4 lbs...19.50

ACCESSORY SET. (Not illus.) Extra-long 14-inch floor nozzle, brush, 30" extension handle, conversion coupler.
26 D 3103 X. Shpg. wt., 3 lbs.....9.95
26 D 3636 X. 6' Hose Ext. 1½ lbs. 6.95
26 D 3637. Crevice Tool. 8 oz.....3.75
26 D 3638. Filter Bags. 4 oz. Pkg. 5 for 98¢



F VAC-CART.

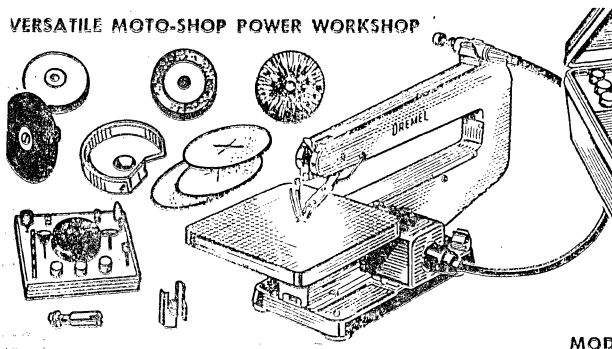
Permits easy rolling of vacuum cleaner to the job. Saves stooping and lifting. Complete with bag that holds extension handles, nozzles, brushes, other accessories.
26 D 1257 X. For 5-Gallon Vacuum. Shpg. wt., 6½ lbs.....10.95
26 D 1258 X. For 10-Gallon Vacuum. Shpg. wt., 6½ lbs.....10.95

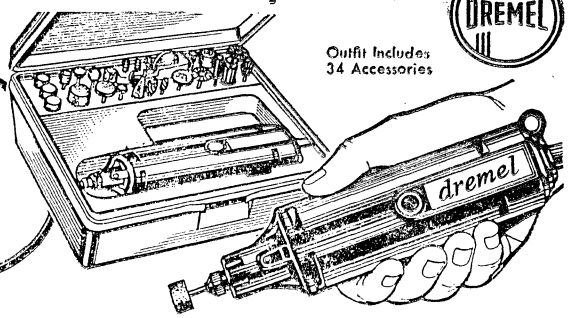
G CASTER SET.

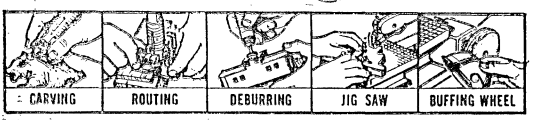
Excellent for large shops or any wide-cleaning area. Casters snap on and off quickly and easily. Roller ball-bearing casters for smooth, effortless movement.
26 D 3104 X. For 5-Gallon Vacuum. Shpg. wt., 1¾ lbs.....3.39
26 D 3105 X. For 10-Gallon Vacuum. Shpg. wt., 1¾ lbs.....3.39

Tools for Shop and Laboratory

VERSATILE MOTO-SHOP POWER WORKSHOP







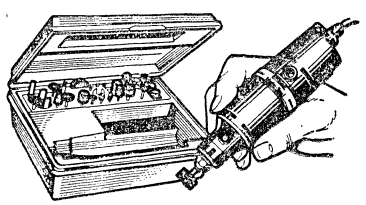
Model 57. Multi-purpose Moto-Shop by Dremel is five different tools in one low-cost, compact unit. Starting with a large capacity 15" jigsaw, attachments can be connected to convert the unit to a disc sander, bench grinder, buffing wheel or flexible shaft machine. Features unique power takeoff for driving attachments—makes change-over quick and easy.

Plastic handpiece has 2½' flexible neoprene covered shaft, instant-action wrenchless chuck, coupling adapter. Allows grinding, drilling, polishing, carving, sharpening—handles easily as a pencil. Powered by ball-bearing 3450-rpm rotary motor. Jigsaw has 4 blades, each adapts in 3 directions. Table tilts for easy angle cuts. Lightweight, flexible-shaft handpiece has ⅛4" to ⅛" capacity. Includes finger guard, 12 bits for drilling, grinding, routing, sharpening, deburring, carving. Attachments: rubber backing pad, 3 sanding discs, grinder, buffer, wire brush, wheel guard, polishing stick. U.L. Listed. For 110-120 V, 60 Hz AC.

26 D 1834 X. Shpg. wt., 17 lbs. **39.95**

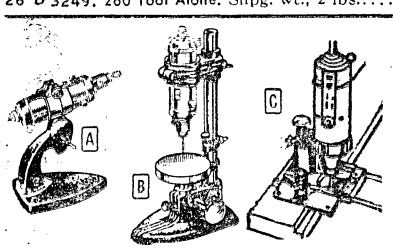
MODEL 261 MOTO-TOOL SET

- Compact—Only 6½ x1½" Diameter
- 30,000-rpm Motor
- Weighs Only 11 Oz.
- Vibration-Free
- 34 Accessories



Performs with pin-point accuracy. Delivers 30,000 rpm; draws 0.5-amp with almost stall-proof drop-off. Large vents, high velocity fan. Hanger hook, finger grip extension. Includes: steel cutters, grinding wheels, wire, bristle brushes, rubber polishing tip, sanding discs, drum sander with bands, mandrels, dressing stone, wrench, 4 collets (⅛"-3⅛2", 1⅛6", 1⅛2"), case. U.L. Listed. 117 VAC.

26 D 3195. Shpg. wt., 3 lbs. **27.95**
26 D 3249. 260 Tool Alone. Shpg. wt., 2 lbs. **21.95**



DREMEL MOTO-TOOL ACCESSORY STANDS

Add Versatility to All Dremel Moto-Tools

A #223 UNIVERSAL STAND. Leaves both hands free. Ball and socket assembly can be set at any angle. Quick-action clamp. Heavy cast iron base will not tip. Shpg. wt., 2½ lbs.
26 D 2480 ..... **6.95**

B #225 DRILL PRESS. For precision drilling, routing, model making. Table can be raised or lowered; locks in any position for accurate depth adjustment. 12" high, 6¾x4" base.
26 D 2491. Shpg. wt., 3 lbs. **12.95**

C ROUTER ATTACHMENT. Allows fingertip guidance plus superior visibility. Integral guide bars provide excellent depth adjustment. Can be used portably or in permanent bench-mounted position.
26 D 1025. Shpg. wt., 1 lb. **9.95**

MODEL 271 SUPER-POWER, LIGHTWEIGHT MOTO-TOOL KIT

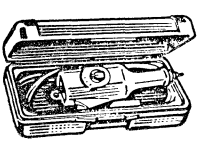
Super-powered for performance-plus on professional and hobby jobs. For its size, it's one of the fastest, most powerful hand grinders available. Permanent magnet 0.8-amp motor with unique full-wave rectifier provides constant torque at 30,000 rpm, no-load speed. Dynamic balancing—vibration-free, with high velocity cooling fan. Self-lubricating bronze bearings, pencil-grip extension. 7¼" long. Lexan housing; weighs only 11 oz. Set includes: high speed steel cutters, grinding wheels, rubber polishing tip, brushes, sanding discs, drum sander, mandrels, dressing stone, wrench, 4 collets, case, 3-wire cord. U.L. Listed. For 117 VAC.

26 D 2128. Complete Moto-Tool Set. Shpg. wt., 3 lbs. **32.95**
26 D 2127. 270 Moto-Tool Alone. Shpg. wt., 2 lbs. **26.95**

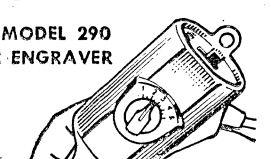
MODEL 281 HEAVY-DUTY MOTO-TOOL SET

Same as above, but manufactured with extra-rugged ball bearing 0.9-amp motor for top performance.

26 D 3260. Complete Moto-Tool Set. Shpg. wt., 3 lbs. **44.95**
26 D 3261. 280 Moto-Tool Alone. Shpg. wt., 2 lbs. **38.95**



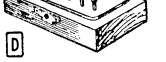
DREMEL MODEL 290 ELECTRIC ENGRAVER



- Permanently Marks Most Materials
- Easy to Use Without Special Skill
- High-Speed Reciprocating Motor
- Five-Position Stroke Adjustment

Heavy-duty engraver for fast, permanent marking on all types of materials, from hardened steel to glass. Provides positive identification on shop tools, production parts, sporting goods, jewelry, other valuables. Makes precision engraving as easy as writing; rugged enough for industrial use. Calibrated 5-position stroke adjustment regulates length of stroke, depth of engraving—from delicate fine lines to deep marks. Withstands heavy use, yet is comfortable enough for operation over extended periods. High-speed reciprocating motor delivers 7200 strokes per minute. Sturdy, high-impact nylon housing has handy hanger ring and easy-to-hold pencil grip. Solid carbide point is practically wearproof, stays sharp for fine-quality engraving. Molded plastic storage case with hinged cover. 117 VAC. Shpg. wt., 1½ lbs.

26 D 2405 ..... **11.95**



HIGH-SPEED CUTTER SETS

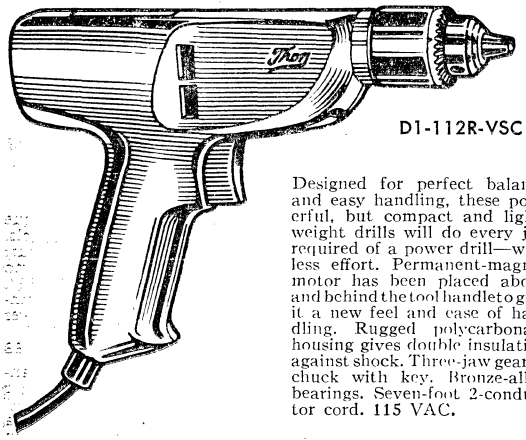
For Precision Carving with Any Dremel Moto-Tool

D #220 12-PIECE CUTTER SET. Economy set includes 12 of the most popular high speed steel cutters for Dremel Moto-Tools. Precision made to stay sharp, cut smoothly in wood, metal, plastic and many other materials. In deluxe storage case. Shpg. wt., 1 lb.
26 D 3137 ..... **15.00**

E #240 24-PIECE CUTTER SET. High speed steel cutters for precision carving and cutting with Dremel Moto-Tools. Will cut tool steel, wood, metals, plastics and other materials. Made for smooth cutting and long-lasting sharpness. Set includes 24 different cutter styles for every application, for both professional and hobby use. In deluxe storage case. Shpg. wt., 1¼ lbs.
26 D 3138 ..... **30.00**

Electric Drills and Precision Drill-Bit Sets

THOR DOUBLE INSULATED REVERSING, VARIABLE AND FIXED-SPEED DRILLS



D1-112R-VSC

Designed for perfect balance and easy handling, these powerful, but compact and lightweight drills will do every job required of a power drill—with less effort. Permanent-magnet motor has been placed above and behind the tool handle to give it a new feel and ease of handling. Rugged polycarbonate housing gives double insulation against shock. Three-jaw geared chuck with key. Bronze-alloy bearings. Seven-foot 2-conductor cord. 115 VAC.

- Features 50% Reduction in Weight plus Compact Size
- New-Type High-Performance Permanent Magnet Motor
- Double Insulated Against Electric Shock
- Motor Placed Behind Tool Handle for Perfect Balance

⅜-INCH DRILLS

Model D1-112R-VSC Reversing Variable-Speed Drill. Operates forward or backward at any speed between 0-1200 rpm. Has trigger speed-control switch. Weighs only 1⅞ lbs. Overall Length, 7⅞". Spindle Offset, ⅝". Shpg. wt., 2⅞ lbs.
26 D 1677.....42.95

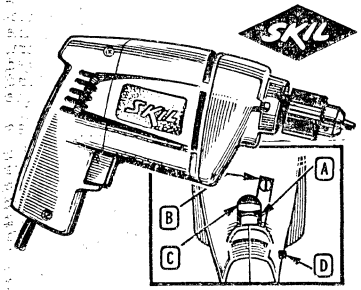
Model D1-112 VSC Variable-Speed Drill. Similar to above, but drill is nonreversing. Shpg. wt., 2⅞ lbs.
26 D 1678.....36.95

Model D1-112 Fixed-Speed Drill. Similar to above, but operates at 1200 rpm and has momentary-contact switch. Wt., 2⅞ lbs.
26 D 1681.....29.95

¼-INCH DRILLS

Model D1-110VSC Variable-Speed Drill. Speed variable from 0-2000 rpm, controlled by trigger switch. Weighs only 1¾ lbs. Overall Length, 7¾". Spindle Offset, 1⁹⁄₃₂". Shpg. wt., 2¾ lbs.
26 D 1682.....32.95

Model D1-110 Fixed-Speed Drill. Similar to above, but operates at 2000 rpm and has momentary-contact switch. Wt., 2¾ lbs.
26 D 1691.....24.95

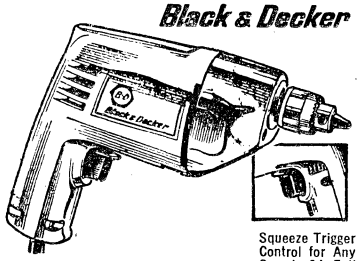


¼" REVERSIBLE DRIVE-R-DRILL WITH ADJUSTABLE SPEED CONTROL

Use as drill, screwdriver, nutdriver in hundreds of applications. Easy-to-use—squeeze trigger (A) to increase speed, flip reversing switch (B) to change direction, set adjustment knob (C) to set drill speed below normal maximum, depress locking button (D) to lock drill at any speed. 2.5-amp motor. 0-2000 rpm. 6-ft. 3-wire cord. Less bits. U.L. Listed. 117 VAC.
26 D 1192. Shpg. wt., 4 lbs.....29.88

⅜" DRIVE-R-DRILL. Above, except 3-amp motor, 0-750 rpm. Removable side handle.
26 D 1194. Shpg. wt., 4½ lbs.....36.88

½" DRIVE-R-DRILL. Above, 3-amp motor, 0-500 rpm. Larger chuck. Side handles.
26 D 1201. Shpg. wt., 4½ lbs.....39.88



Squeeze Trigger Control for Any Speed—0 to Full

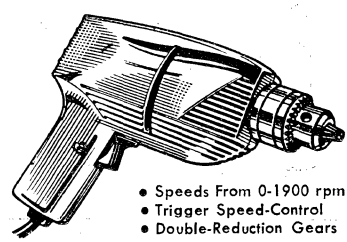
MODEL 7050 ¼" REVERSING DRILL

Do every job at the right speed! A squeeze of the trigger selects any speed from 0-2250 rpm. Flick a switch and direction changes. Reversing feature makes it ideal for driving or removing screws, nuts, bolts. Press a button, switch locks at any speed.

Also features maximum safety from shock. Double insulated—2 systems isolate all live electrical parts. Eliminates need for ground. Bearings: 2 roller, 1 needle, 1 sleeve. Capacity: steel, ¼"; hardwood, ½". 3.5-amps. Less bits. U.L. Listed. 115 VAC.
26 D 1659. Shpg. wt., 4 lbs.....33.95

7150 ⅜" DRILL. Above, except gearing and larger chuck to handle bigger jobs—steel, ⅜"; wood, ¾". Bearings: 2 roller, 2 sleeve, 2 needle. Speed, 0-1000 rpm. U.L. Listed.
26 D 1660. Shpg. wt., 5 lbs.....36.99

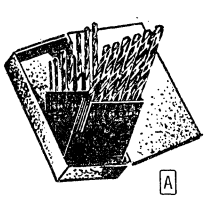
THOR Power, Versatility and Handling Ease



- Speeds From 0-1900 rpm
- Trigger Speed-Control
- Double-Reduction Gears

VARIABLE-SPEED DRILL WITH BALL-BEARINGS

MODEL 913VSC. Has the power, versatility, and handling ease for the most difficult jobs in home or shop. Continuously-variable fingertip speed-control from 0-1900 rpm. Operates with only a slight pressure on trigger. ⅜"-diameter cutting capacity in steel, ¾" in wood. Ball-bearing construction and double-reduction gears provide maximum torque and smoothness. Powerful 3-amp Therm-O-Weld motor resists burnout. Overall Length, 8½". With 6-ft. 3-wire power cord and plug. Less drill bit. U.L. Listed, C.S.A. Approved. For 105-125 V, 25-60 Hz AC.
26 D 3107. Shpg. wt., 4¾ lbs.....25.50



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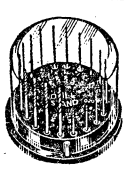


B

[A] HIGH-SPEED DRILL BIT SETS

15-DRILL SET. 1⁄16" to ½" in 32nds. Index.
26 D 2137. Shpg. wt., 2¼ lbs.....14.50

29-DRILL SET. 1⁄16" to ½" in 64ths. Index.
26 D 3244. Shpg. wt., 1¼ lbs.....17.99

26 D 2200. Shpg. wt., 3¾ lbs.....24.99

60-NUMBER SIZE DRILL SET. 1 to 60. Index.
26 D 2208. Shpg. wt., 5 oz.....7.95

HIGH-SPEED 5-DRILL SET. ¼" to ½" in 16ths.
26 D 2289. Shpg. wt., 2 lbs.....11.95

17-DRILL SET. 1⁄16" to ¼" in 64ths; 5⁄16, ⅜, 7⁄16", ½. ¼" shank. Steel index.

12-PIECE DRILL SET. Sizes from 1⁄16" to ¼" in 64ths. Includes center punch. Pouch.
26 D 3238. Shpg. wt., 9 oz.....5.35

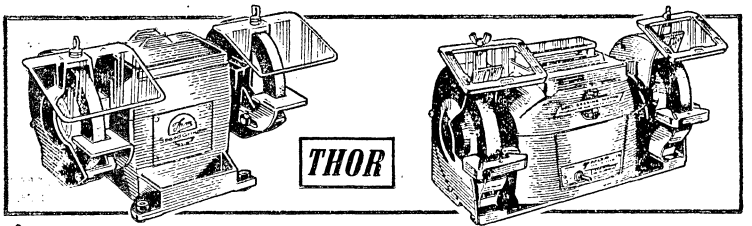
13-PIECE DRILL SET. 1⁄16" to ½" in 32nds. Drill sizes over ¼" have ¼" shank. With roll-up pouch. Shpg. wt., 3 lbs.
26 D 3239.....13.50

[B] MINIATURE SET. Includes twenty drills from No. 61 (.039") to No. 80 (.0135"). With index. Shpg. wt., 6 oz.
26 D 2291.....7.95

JOBBER'S-LENGTH HIGH-SPEED DRILL BITS FOR ¼" DRILLS

Stk. No.	Size	EA.	Stk. No.	Size	EA.	Stk. No.	Size	EA.	Stk. No.	Size	EA.
26 D 1756	1⁄16"	.18	26 D 1761	⅛"	.29	26 D 1765	3⁄16"	.42	26 D 1611	5⁄16"	1.05
26 D 1758	5⁄64"	.19	26 D 1762	9⁄64"	.30	26 D 1766	7⁄32"	.51	26 D 1612	⅜"	1.49
26 D 1759	3⁄32"	.20	26 D 1763	5⁄32"	.35	26 D 1767	15⁄64"	.55	26 D 2998	7⁄16"	2.05
26 D 1760	7⁄64"	.22	26 D 1764	11⁄64"	.37	26 D 1768	¼"	.55	26 D 1614	½"	2.49

Bench Grinders, Power Saws and Sprayers



THOR UTILITY BENCH GRINDER

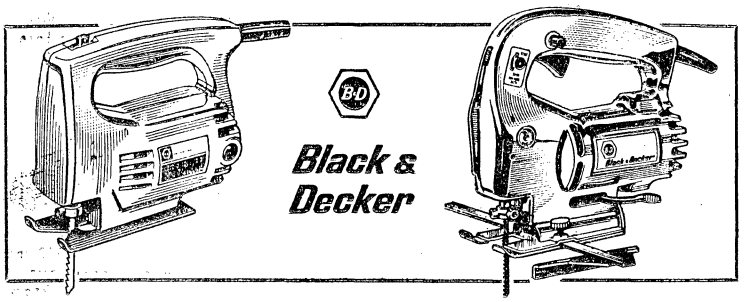
MODEL 946. Durable, light-duty, 4½" bench-type utility grinder with burnout-proof, shaded-pole motor. 3450 rpm, no-load. Easy-to-carry aluminum alloy housing, rubber feet. Includes cast-in water-cooling tray, adjustable tool rests, removable end-guards, dust shields and protective eye shields. Flat front design permits simultaneous grinding with both wheels (40 and 70-grit). Wheels are 4½x½" with ⅜" center holes. Overall length, 9¼". With 6-ft., 3-wire power cord and plug. U.L. Listed. C.S.A. approved. For 110-125 volts, 60 Hz AC. Shpg. wt., 11 lbs.

26 D 3181 X.....17.95

THOR HEAVY-DUTY GRINDER

MODEL 927. For difficult jobs. Powerful ⅓-hp, 6.5 amp-motor won't burn out. Has 3450 rpm no-load speed. With lightweight aluminum alloy housing, rubber footed base. Includes removable plastic quench tray, die-cast tool rests with angle guides; also has parts tray, reinforced eye shields, adjustable spark arrestors. Complete with two grinding wheels (46 and 75-grit), measuring 6x¾" with ½" center holes. Overall length, 16". With 6-ft., 3-wire power cord and plug. U.L. Listed, C.S.A. approved. For 110-120 volts, 60 Hz AC. Shpg. wt., 27 lbs.

26 D 3182 X.....34.95



LOW PRICED JIGSAW

MODEL U153. This versatile jigsaw is a time-saver and one of the most useful of power tools. Well-balanced and easy to handle, it will do difficult jobs efficiently and quickly. Makes straight, curved, and scroll cuts easily and perfectly in wood, metal, plastics, and other modern materials. Features rugged 1/7-hp, 2.4 amp motor that operates at 3000 strokes per minute for fast, accurate cutting. Has ⅝" stroke length and a capacity of 1" in hardwood, 1½" in softwood. Comfortable grip handle with top-mounted on-off switch gives you perfect control of saw. Includes rough wood cutting blade, hex wrench and holder. For 110-120 volts, 60 Hz AC. Shpg. wt., 4 lbs.

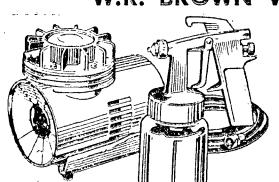
26 D 2349.....17.77

VARIABLE-SPEED JIGSAW

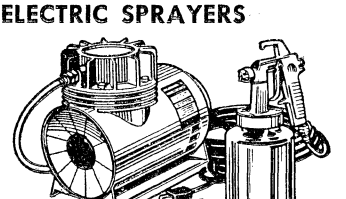
MODEL U-257. Features speed-control dial for selection of speed to suit each job. Dial can be adjusted while cutting. There are an infinite number of settings to 3000 spm. Gives professional results easily. Trigger-switch can be locked "ON" at any speed selected, eliminating tiresome finger pressure. Capacity in hardwood is 1", softwood, 2". Offers easier pocket-cutting with better control. Allows slowing-down on tight corners and speeding-up on straight cuts. Tilting shoe with quick-change clamp is calibrated to bevel 0-45°. With combination rip-fence and circle-guide, blade for coarse wood, allen wrench and holder. 2.5-amp, ¼-hp motor. 115 VAC. Wt., 5¾ lbs.

26 D 1203 X.....39.95

W.R. BROWN VERSATILE ELECTRIC SPRAYERS



For Shop or Home



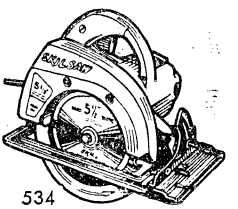
"Compact" Electric Sprayer. Outfit features internal-mix spray gun with fan-nozzle. Quiet operation; never needs oiling. For use with flat paint and enamel, oil and water-base paint, and varnishes. Equipped with a pint-size aluminum cup, adjustable trigger, and an 8-ft. detachable air hose. Compressor features long-life, heat-resisting diaphragm operation, plus sealed lubricated ball bearings, and replaceable air filter. Direct-drive motor has 6-ft. cord. Air delivery is 1.1 cubic feet per minute. U.L. Listed. For 110-120 volts, 60 Hz.

26 D 2363 X. Shpg. wt., 17 lbs.....34.95

⅓-hp Electric Sprayer Outfit. Sprayer has provision for internal or external mixing, gives outstanding performance in a variety of applications. Sprays all paints, enamels, lacquers, and household liquids. Spray gun has aluminum 1-quart cup, internal and external-mix nozzles. Oil-less type compressor has 1000-hour diaphragm, sealed ball bearings, easily removable air filter, and safety valve. Siphon or pressure feed. Air delivery, 2 cubic feet per minute. Lifetime-lubricated motor. 15-ft. air hose; chuck for inflating tires. 115 VAC. U.L. Listed.

26 D 3100 X. Shpg. wt., 30 lbs.....59.95

SKILSAW DELUXE POWER SAWS



Model 534 6½" Saw. Makes remodeling projects seem almost easy. Cuts 2" dressed lumber in seconds. Makes 45° bevel cuts too. Special sawdust ejection system directs sawdust and chips down to the floor. Other deluxe features include Vari-Torque clutch, convenient depth and bevel controls, bind-free lower blade-guard. Depth of Cut: 2⅜6" at 90°, 1¾" at 45°. Powerful 9-amp motor (5500 rpm, no load). Length: 9½". Supplied complete with hard-tooth combination blade, blade wrench, 3-wire power cord, plug. 115 V AC/DC.

26 D 1202 X. Shpg. wt., 11¾ lbs...27.88

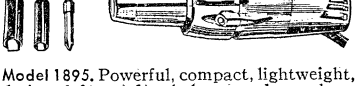
Model 536 6½" Saw. Has the power to handle any job from minor repairs to major remodeling and building jobs. Full 6½" blade and big 1¼-hp motor assure extra cutting capacity. Makes 45° bevel cuts in 2" dressed lumber. Vari-Torque clutch guards against motor burnout. Has easy-to-adjust depth and bevel controls; antifriction bearings throughout. Other deluxe features include sawdust ejection system, helical gears, bind-free lower guard. Rugged 9-amp motor (5500 rpm, no load). ⅝" round arbor. Hard-tooth combination blade, blade wrench, 3-wire cord, plug. 115 V AC/DC.

26 D 1113 X. Shpg. wt., 11¾ lbs...34.88

Model 537 7¼" Saw. Has 1½-hp motor for heavier-duty work. Full 7¼" blade gives extra cutting capacity. Cuts 2" lumber at 45° bevel. Has heavy-duty quadrant and ribbed shoe for extra rigidity and cutting accuracy. Features antifriction bearings, easy-to-adjust depth and bevel controls, Vari-Torque clutch, sawdust ejection system, bind-free lower guard. Rugged 10-amp motor (5200 rpm, no load). ⅝" round arbor. Hard-tooth combination blade, blade wrench, 3-wire cord, plug. 115 V AC/DC.

26 D 1112 X. Shpg. wt., 12½ lbs...36.88

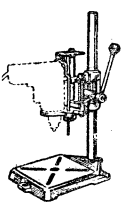
SHOPMATE REVERSIBLE ELECTRIC SCREWDRIVER



Model 1895. Powerful, compact, lightweight, designed for perfect balance and easy handling. Drives and removes #4 through #12 slotted-head and Phillips screws, quickly and easily. Perfect for light assembly, building, and repairing. Has fan-cooled "Lifeweld" 3-amp motor with positive clutch for full control. 100:1 gear reduction provides high troque. Ball-thrust and self-lubricated bronze bearings. No-load speed, 325 rpm. Instant release on-off, reversing switches. 8½" long. Two slotted head-finder screwdriver tips and Phillips bit. 3-wire cord. U.L. Listed. 117 VAC.

26 D 1200. Shpg. wt., 3¼ lbs.....29.95

THOR DRILL PRESS STAND

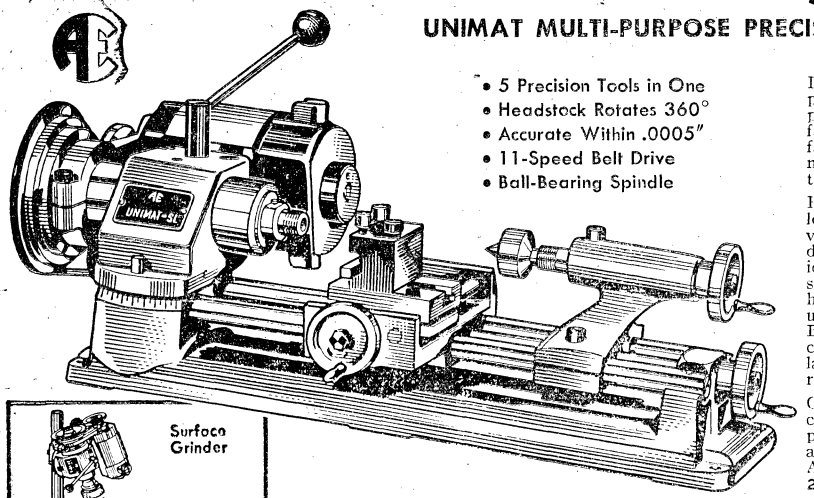


Model 580. Converts electric drill to powerful, lever-operated drill press. Has pinion-gear feed and spring return. Accepts ¼", ⅜", and compact ½" drills. Slotted work surface accepts drill vise or V-block. Base is drilled for mounting on bench or truck quickly and easily. Overall height, 18". Maximum feed, 3". Chuck to column distance, 3". Base, 6x6".

26 D 1226 X. Shpg. wt., 7 lbs.....11.95

Precision 5-in-1 Metal-Working Lathe

UNIMAT MULTI-PURPOSE PRECISION 3-INCH LATHE

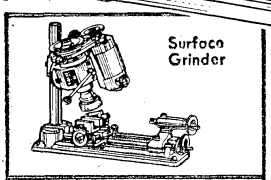


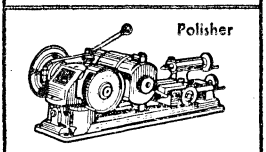
- 5 Precision Tools in One
- Headstock Rotates 360°
- Accurate Within .0005"
- 11-Speed Belt Drive
- Ball-Bearing Spindle

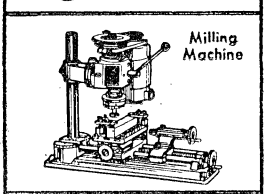
It's a lathe, drill press, milling machine, polisher and grinder . . . all in one compact, precision unit. Ideal for use in factory model shops. You can turn, face, grind, buff, saw, sand, thread, mill, drill . . . converts from one operation to another in seconds.

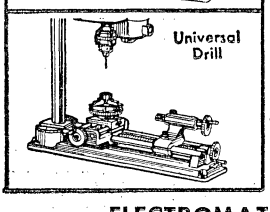
Headstock rotates and revolves 360°, locks at any angle, removes from bed for vertical set-ups. Has ball-bearing spindle accurate to .0005". Ball bearing idler assembly provides 11-speed drive system, powered by self-contained 1/10-hp, 115 VAC motor. Lathe takes pieces up to 3" diameter, 6.9" between centers. Drill takes pieces 6¼" high, drills to center of 6¼" circle. Also drills into large panels, plates and chassis by rotating head over end of bed.

Overall size, 14½x5x5". With drill chuck, roughing bit, wood chest, 40-page illustrated handbook. See full accessory listing below. For 115 volts AC. From Austria. Shpg. wt., 37 lbs.
26 D 1431 U.....139.50

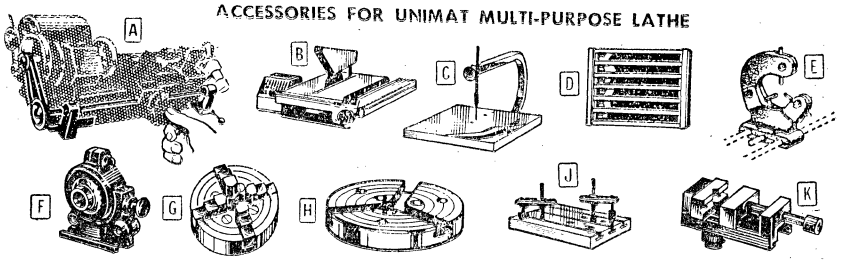








ACCESSORIES FOR UNIMAT MULTI-PURPOSE LATHE



A 1290 POWER FEED ATTACHMENT. Feeds carriage automatically for accurate, precision finishing. Wt., 6 lbs.
26 D 2443.....24.95

B 1240 CIRCULAR SAW ATTACHMENT. For straight, accurate cutting. With 6x8" table; rip fence; blade guard; arbor. Takes 2½" to 3½" blades. Shpg. wt., 4 lbs.
26 D 2448.....14.95

C 1080 JIG SAW. Has 6x8" table. With 12 assorted blades. Wt., 6 lbs.
26 D 2445.....19.90

D 2820 HI-SPEED ¼" BIT SET. For turning, facing, bore, cut-off. Set of six. Wt., 8 oz.
26 D 1650.....Set 10.90

E 1040 STEADY REST. Supports 1½" bars and tubing for machining, end drilling. 1 lb.
26 D 2444.....9.95

F 1260 INDEX HEAD. Divides, spaces for making gears, etc. Wt., 1 lb.
26 D 2446.....14.95

G 1002 4-JAW INDEPENDENT LATHE CHUCK. Takes pieces to 2¼". Key, mtg. adapter.
26 D 1690. Wt., 1 lb.....23.90

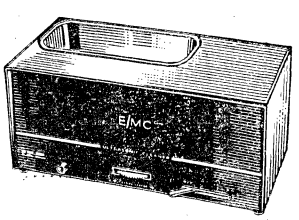
1001 3-JAW UNIVERSAL CHUCK. Takes pieces to 2¼".
26 D 2442. Wt., 1 lb.....24.95

H 1261 WORK PLATE. Holds work in lathe. Capacity, 2¾". With clamps. Wt., 1 lb.
26 D 2447.....6.50

J 1210 MILLING TABLE. 3x5". Mounts on cross slide, clamps work for milling. 2 lbs.
26 D 1689.....12.50

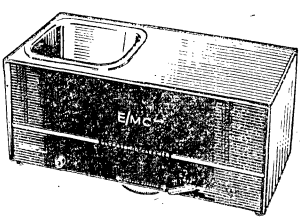
K 1010 MACHINE VISE. Fits cross slide or mill table. 1⅛" V-jaws. Wt., 13 oz.
26 D 1679.....9.50

ELECTROMATION COMPONENTS CORPORATION ULTRASONIC CLEANERS



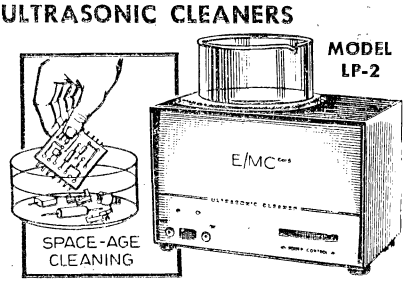
MODEL BP-1
HEAVY-DUTY ULTRASONIC CLEANER

Has all the features of the Model LP-1HD at left, plus extra power for perfect cleaning in industrial applications, and big 1-quart tank capacity. For continuous use in production lines and labs, for miniature components and mechanisms. Automatic 5-minute industrial time switch, power dial control. Operates at 90 kHz nominal, 50-watts RF input. Console, 11¾x6½x5". Tank, 8x3½x2½". For 115 V, 50-60 Hz AC.
26 D 3696. Shpg. wt., 7 lbs.....89.95



MODEL LP-1HD
INDUSTRIAL ULTRASONIC CLEANER

For removing grease, tar, wax, other substances from components, miniature mechanisms, and small instuments. Automatic 5-minute industrial time switch turns unit off when cleaning cycle is over. Compact console, 9½x5x4⅝", stainless steel top, sides, and tank. Tank, 3½x3½x2½", has 1-pint capacity. Power dial for low and high power. No tuning required. 90 kHz nominal, 40-watt RF input. 115 V, 50-60 Hz AC.
26 D 3695. Shpg. wt., 6 lbs.....69.95

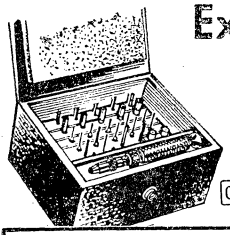


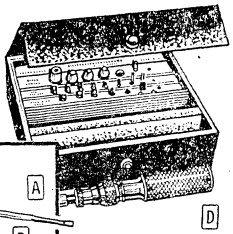
LOW-COST ULTRASONIC CLEANER

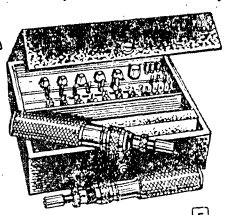
Home type cleaner for all kinds of delicate and intricate housewares. Gets inaccessible places even brushes and files miss. Convenient crystal beaker, stainless steel cabinet. Beaker removes easily for refilling, no need to move entire tank. Automatic heat cutoff prevents damage to delicate wares. Beaker is 3" diameter x 1½" deep. Holds up to ⅓-pt. fluid. Operates at 90 kHz. Console, 6x4x4". 115 V, 60 Hz AC.
26 D 1833. Shpg. wt., 6 lbs.....39.95

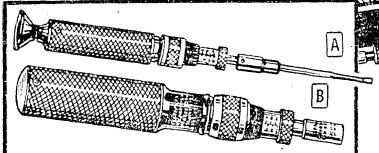
Exact Measuring Devices for Industry

TORQUE SCREWDRIVERS, WRENCHES, KITS BY TCI









PRECISION TORQUE SCREWDRIVERS

Precision engineered for industrial use. Impossible to over-torque—when torque limit is reached, unit releases automatically. Operate in both right and left direction. Can be dropped without damage.

A **TT-1 MINIATURE TORQUE JEWELER SCREWDRIVER.** Universal drive; range, 1 to 20 oz. in. Increments, ¼ oz. in. 3⅝" long.
26 D 1333. Shpg. wt., 4 oz. .41.95

B **TS-100 MINIATURE TORQUE STANDARD SCREWDRIVER.** ¼" female hex drive; range, 1 to 100 oz. in. Increments, 2 oz. in. Length, 6½". Shpg. wt., 8 oz.
26 D 1334. .32.81

TS-30. As above, except range is 1 to 30 lb. in. Increments, 1 lb. in. Wt., 8 oz.
26 D 1335. .32.81

ACCESSORY DRIVER KIT

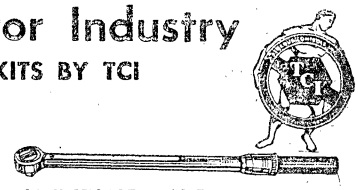
W-7-13 HEX SOCKET KIT. For TS-100, TS-30. ⅛, 5/32, 3/16, 7/32, ¼, 5/16, 11/32, ⅜, 7/16"; ¼" sq. female drive adapter.
26 D 1351. Complete Kit. Wt., 1 lb. 13.02

Torque screwdriver kits for laboratory and research work are precision-made tools designed for exact torque settings of a wide variety of fasteners. Special design makes driver impossible to over-torque—when torque limit is reached, unit releases automatically. Operate in right and left direction. Will not damage if dropped. Kits available in wide variety of size ranges.

C KIT TT-1-4A. 1 to 20 oz. in. range. One TT-1 miniature torque screwdriver and one each—Hex keys: .028, .035, .050, 1/16, 5/64"; Sockets: 5/64, 3/32, 7/64, ⅛, 5/32"; Drivers: .055, .040, .020, .080, .100"; Phillips: 0.1; Spline keys: .033, .048, S.048, S.060, .069, S.072, .074, S.096"; Adapters: 2 each universal to ¼" square. B-4 case.
26 D 1303. Shpg. wt., 3 lbs. .70.00

D KIT 2. 1 to 30 lb. in. range. One TS-30 miniature torque screwdriver and 1 each—Hex keys: .035, .050, 1/16, 5/64, 3/32, ⅛, 5/32"; Sockets: 7/64, ⅛, 3/16, ¼, 5/16; Drivers: .100, .134, .185, .214, .250; Phillips: 0.1; Adapters: HW-18, HW-19, B-1 case.
26 D 1322. Shpg. wt., 3 lbs. .59.10

E KIT 3. 1 oz. in. to 30 lb. in. range. 1 each TS-30, TS-100 torque screwdrivers. Hex keys: .028, 3/32, ⅛, 5/32". Sockets: 3/32, ¼, 5/16". Drivers: .080, .214, .250". 2 each—Hex keys: .035, .050, 1/16, 5/64". Sockets: 7/64, 5/32, 3/16". Drivers: .100, .134, .185". Phillips: 0, 1, 2 adapters. B-2 case.
26 D 1331. Shpg. wt., 3 lbs. 107.25



ADJUSTABLE DIAL-TYPE TORQUE WRENCHES WITH EASY-GRIP HANDLE

Dial-type torque wrenches with easy-grip knurled handle. Recessed adjustable dial is protected by heavy plastic. Accurate to within 4% of reading. Meet GGG-W-686b. With sturdy metal container.
*Square drive size. Avg. shpg. wt., 2 lbs.

Stock No.	Mfr's Type	*	Graduations	Length	EACH
26 D 2044	D-2600	⅛"	0-60 in. lb.	21¼"	34.95
26 D 2045	D-350 F	⅜"	0-50 ft. lb.	21¼"	34.95
26 D 2047	D-3250-F	½"	0-250 ft. lb.	24"	43.95

RELIABLE TORQUE WRENCHES

Ideal for automotive, aircraft, and general applications. Provide accurate linear torque ranges from 5 lb. in. to 150 lb. ft. Set and reset in seconds with patented locking mechanism. Sure-grip handle. Operate in right and left hand direction. Rachet head style. Available in pound-inch or pound-ft. styles. Shpg. wt., 2 lbs. *Square drive size.

POUND-INCH STYLES

Stock No.	Mfr's Type TCI-	*	Range	Length	EACH
26 D 2055	150R	¼"	5-150	9½"	27.50
26 D 2060	150R3/8	⅜"	5-150	9½"	29.95
26 D 2063	750R	⅜"	100-750	14¼"	25.95
26 D 2064	750R½	½"	100-750	14¼"	30.95
26 D 2066	1600R	½"	700-1600	18½"	31.95

POUND-FOOT STYLES

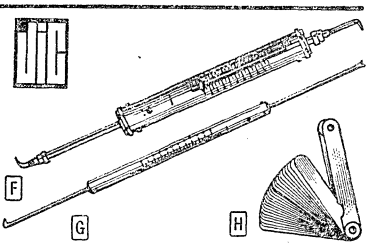
26 D 2067	75FR	⅜"	5-75	14¼"	27.50
26 D 2080	75FR½	½"	5-75	14¼"	28.50
26 D 2082	150FR	½"	10-150	18½"	30.50

JONARD INDUSTRIES PRECISION PUSH-PULL GAUGES

F GPP-1 0-1000 GRAMS. Specially designed for use where accurate measurement of tension and compression of spring loaded devices is required. Measures spring tension of relays, switches, contacts, and other spring loaded devices. Also measures triggers, pull pins, pushbuttons and may be used for fine wire pull tests. Has easy-to-read scale calibrated in 50 gram steps. Diameter, 5/8-inch, length, 9¼-inches.
26 D 1452. Shpg. wt., 6 oz. 29.80

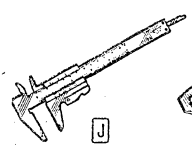
G GPP-20-110 GRAMS. Measures tension and compression of spring loaded devices with tension of from 0 to 110 grams. 5 gram steps. Diameter, ⅜", length, 11".
26 D 1453. Shpg. wt., 2 oz. 14.50

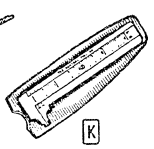
H T-720N STRAIGHT THICKNESS GAUGE. Contains 26 interchangeable blades of thickness, from .0015" to .025". Rounded ends. Length, 3", width, ½". Shpg. wt., 4 oz.
26 D 1455 .3.90

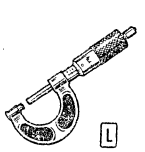


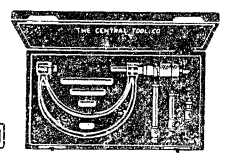
CENTRAL PRECISION CALIPERS AND MICROMETERS

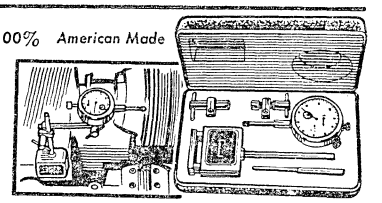
100% American Made











J CENTRAL 206A VERNIER CALIPER. Inside, outside and depth measurement. Reads 0-6" by thousandths; 0-150 mm.
26 D 3667. With case. 1 lb. 14.95

K CENTRAL 205 SLIDE RULE CALIPER. Measures by 32nds, 64ths. Brass.
26 D 3668. Wt., 8 oz. 3.59

L CENTRAL 12RL 0-1" MICROMETER. .001" graduations. Positive lock, friction stop, clamp ring locknut, zero adjust. Enameled, forged steel frame. Satin-chrome finish. Meets Fed. Spec. GGG-C-105.
26 D 1060. Wt., 5 oz. 14.95
26 D 2287. Type 22RL. As above, but 1-2". Frame stamped with decimal equivalents to 1/64ths. With 1" standard. 8 oz. 16.95

M CENTRAL MODEL 44L 0-4" RANGE PRECISION MICROMETER KIT. Designed for close inspection or machine work. Manufactured of finest tool steel. Careful workmanship throughout assures years of reliable service. Three interchangeable extensions adjust to compensate for wear.

Features friction stop, clamp ring locknut and knurled collars. Crowned anvil face. Durable satin-chrome finish. Rigid enameled forged steel frame. Graduations are in .001". Meets Federal Spec. GGG-C-105.

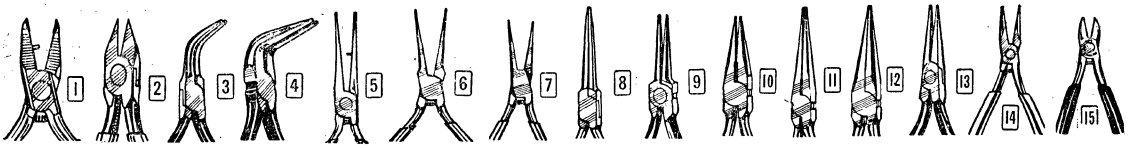
With measurement standards to check calibrations. Protective custom lined case with fitted compartments.
26 D 1211. Shpg. wt., 4 lbs. 39.95

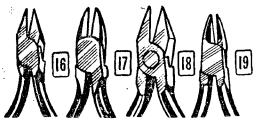
CENTRAL 1" RANGE DIAL INDICATOR SET WITH BASE

- Measure cam and valve guide wear
- Test disc brake, flywheel runout
- Large 2½" diameter indicator

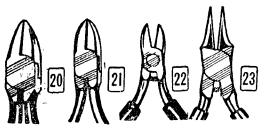
Full-range dial indicator set with magnetic base and revolution counter. Engineered to the highest standards for precise testing of a wide variety of equipment. Dial is continuous and balanced—may be rotated and locked for 0 setting at any point. Features lugged back. Complete set is packaged with all components in a fitted steel case.
26 D 2136. Shpg. wt., 2 lbs. 34.95

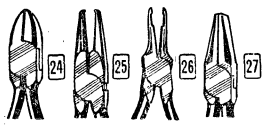
UTICA Hand Tools for the Electronics Industry

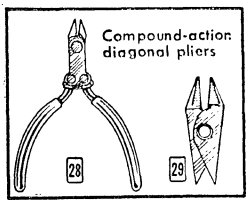


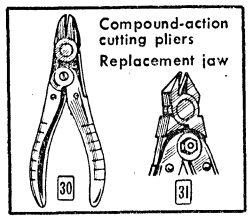


Deluxe quality drop-forged alloy-steel tools. Jaws electronically induction-hardened; edges hand-honed for delicate electronics work. Cross-coil spring holds pliers in open position; reduces operator fatigue and increases efficiency. Handles are primer coated and dipped in heavy Plastisol for smooth, comfortable grip and positive control. Heads and handles polished and precision connected. Needle-nose pliers have long reach for picking up small parts; dowel pin holds jaws in perfect alignment. Cutting pliers have angled edge best for snap cuts in hard-to-reach areas. Av. shpg. wt., 6 oz.









NEEDLE-NOSE AND CHAIN-NOSE PLIERS

Stock No.	Fig.	Mfr's Type	Length		Description	Asstd, Each	
			Overall	Tip-Pivot		1-5	6-Up
26 D 2953	1	66-5	5″	5/16″	Dyke oTip Cutting Pliers.ers	4.49	4.09
26 D 2963	3	776	6″	1 21/32″	Curved Long Needle-Nose Pliers	3.65	3,28
26 D 2965	4	888	6″	1 1/8″	Curved Chain-Nose Pliers	3.54	3.19
26 D 3142	5	774	5 1/2″	2 7/16″	Electronic Pick-Up and Wiring Pliers	4 05	3.64
26 D 3675	6	B5318	5 1/2″	1 3/4″	Fine Needle-Nose Pliers	3.98	3.58
26 D 3676	7	B5317	5″	1 1/8″	Thin Chain-Nose Pliers	3.24	2.92
26 D 3677	8	777	6″	2 39/64″	Long Needle-Nose Pliers	3.26	2.94
26 D 3143	9	778	6 1/2″	1 7/8″	Strong-Jaw Needle-Nose Pliers	3.30	2.98
26 D 3679	10	254	6 1/2″	1 7/8″	Long Chain-Nose Side Cutting Pliers	3.54	3.19
26 D 3139	11	654	5 1/2″	1 25/32″	Long Chain-Nose Side Cutting Pliers	3.30	2.99
26 D 3680	12	1033	6″	2 1/4″	Long Chain-Nose Pliers	2.84	2.56
26 D 3140	13	23	4″	2 9/32″	Short Chain Thin Nose Pliers	2.84	2.56
26 D 3141	14	23-6CSF	6″	2 7/32″	Short Chain-Nose Cutter, 6″ Handle	4.07	3.67

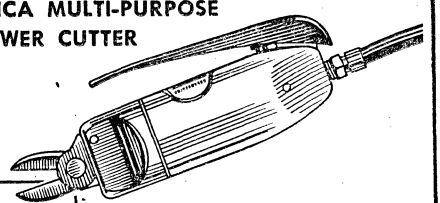
DIAGONAL CUTTING PLIERS

26 D.3681	15	34-6CSF	6″	1/2″	Midget Diagonal Cutters, 6″ Handle	5.27	4.75
26 D 2961	15	141	5″	25/32″	Sharp/Flush Cut Nose Diagonal Cutters	3.99	3.60
26 D 2962	16	47	4″	1/2″	Midget Flush Edge Cutting Pliers	3.99	3.60
26 D 1938	16	47-5CS	5″	1/2″	Flush Edge Cutting Pliers	4.05	3.65
26 D 2969	17	49	6″	3/4″	Semi-Flush Edge Cutting Pliers	4.52	4.09
26 D 2968	18	42	4″	21/32″	Flush Edge Cutting Pliers	4.29	3.88
26 D 3112	19	38	4″	7/16″	Midget Semi-Flush Edge Cutting Pliers	3.88	3.49
26 D 3113	20	44	5″	3/4″	Tapered Nose Semi-Flush Edge Cutters	3.45	3.12
26 D 3114	21	46	4″	1/2″	Thin Nose Semi-Flush Edge Cutters	3.12	2.81
26 D 3682	22	B5263	4″	1/2″	Thin Nose Flush Edge Cutting Pliers	4.05	3.65
26 D 3683	23	B5316	4″	21/32″	Tapered Nose Flush Edge Cutters	4.80	4.32
26 D 3684	24	41	6″	13/16″	Electrician's Diagonal Cutting Pliers	3.45	3.09

MISCELLANEOUS UTICA PLIERS

26 D 2964	25	262	5 1/2″	1″	Transverse End Cutting Nipper	4.09	3.69
26 D 2966	26	896	6″	1 5/16″	Electronic Cutting Pliers	4.05	3.65
26 D 2954	27	20	4 1/2″	1″	Flat-Nose Pliers	2.86	2.58
26 D 1943	28	470	5″	1/2″	Compound-Action Pliers	4.56	4.11
26 D 1945	29	441	5 1/2″	12/16″	Compound-Action Pliers	4.61	4.15
26 D 1994	30	447-4CS	4″	23/64″	Compound-Action Cutting Pliers	14.00	.....
26 D 1995	31	.....	.....	.....	Replacement Jaw for Model 447-4CS	6.50	.....

UTICA MULTI-PURPOSE POWER CUTTER



- For high-volume production
- Full-length trigger
- Interchangeable heads

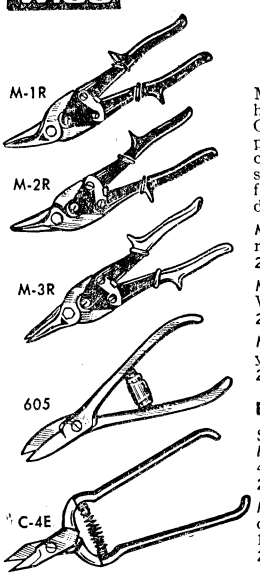
MODEL UA-200B5. Air activated high-power cutting tool with standard-edge diagonal cutting head. Includes 8′ hose and 1/8″ pipe fittings. Interchangeable heads, below.
26 D 2955. Shpg. wt., 8 oz.....78.40
26 D 2956. Cutter. Less head....68.75

MODEL B-6. Cutter hairline flush edge diagonal cutting head. 3 oz.
26 D 2957.1-5.Ea. 10.50 6-Up.Ea. 9.45

MODEL B-7. Cutter crimper head for printed circuits. 3 oz.
26 D 2958.1-5.Ea. 10.50 6-Up.Ea. 9.45

MODEL B-8. Diagonal cutting head, for plastics only. 3 oz.
26 D 2959.1-5.Ea. 10.50 6-Up.Ea. 9.45

WISS



METALMASTER QUALITY SNIPS AND ELECTRONIC SCISSORS

METALMASTER SNIPS

Made to transmit extra cutting power from handles to blades through compound leverage. Only 9 3/4″ overall, cut through metal with surprising ease. Cut straight lines, acute angles, complicated patterns, even perfect circles in sheet metal to 18-gauge (.049″). Hot drop-forged molybdenum steel cutters; steel handles far stronger than any hand power exerted.

MODEL M-1R. Makes 1 3/8″ cut to the left. With red plastic grips. Shpg. wt., 1 lb.
26 D 3176.....3.66

MODEL M-2R. Makes 1 3/8″ cut to the right. With green plastic grips. Shpg. wt., 1 lb.
26 D 3177.....3.49

MODEL M-3R. Makes 1 1/2″ straight cut. With yellow plastic grips. Shpg. wt., 1 lb.
26 D 3178.....3.49

ELECTRONIC AND FILAMENT SCISSORS

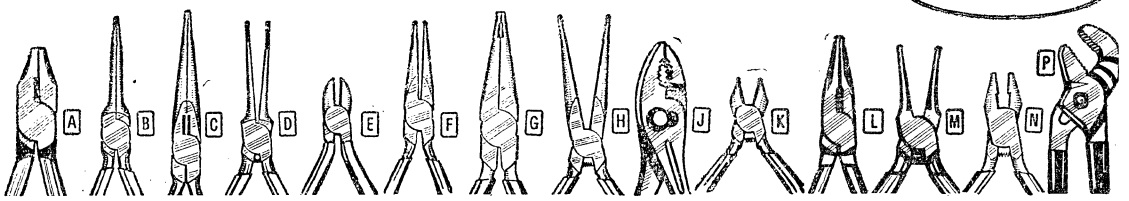
Solid, hot drop-forged steel blades.
MODEL 605. Straight blades, volute spring. 4 7/8″ long, cuts 1″. Shpg. wt., 1 1/8 lbs.
26 D 3179.....2.84

MODEL C-4E. Triangular pointed blades and coil spring. 6 1/2″ long; cuts 7/8″. Shpg. wt., 1 7/8 lbs.
26 D 3180.....3.15

Allied Has Complete Stocks of Tools for the Electronics Industry

Cushion-Grip Pliers and Pliers/Cutters

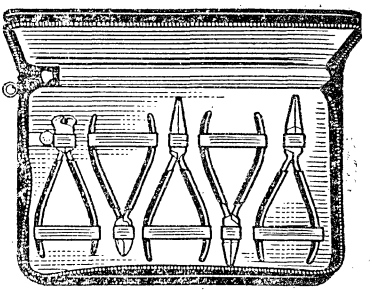
ALLIED



ALLIED TOOLS PRECISION CRAFTED FOR THE ELECTRONICS INDUSTRY

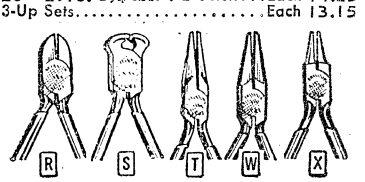
Have highly polished heads and shoulders. Accurately machined and ground for smooth action. Hammer forged from finest tool steel. Adjusted and tested for precision performance and durability. Heat-treated cutting edges provide optimum temper, fast, easy cutting action, and long wear. Vinyl cushion grips isolate worker from danger of electrical shocks. Offer nonslip grip, and comfortable, smooth feel. Extremely resilient grip is bonded to tool so it won't chip or peel. Resists chemicals, acid, grease, etc. All carry one full year guarantee. Pliers with * have cross-coil spring. Made in U.S.A.

Stock No.	Fig.	Lgth.	Description	Wt., Oz.	Asst'd 1-4	EACH 5-Up
26 D 2900	A	6½″	Electrician's Side Cutting Pliers	8	2.88	2.60
26 D 2901	A	8″	Electrician's Side Cutting Pliers	16	3.58	3.23
26 D 2908	B	6″	Long Needle or Snip-Nose Pliers	6	2.82	2.54
26 D 2912	C	7″	Extra-Long Chain-Nose Cutting Pliers	6	4.10	3.74
26 D 2915	D	6″	*Long-Nose Pliers	3	3.78	3.42
26 D 2902	E	4½″	Diagonal "Oblique" Cutting Pliers	2	2.55	2.30
26 D 2903	E	5″	Diagonal "Oblique" Cutting Pliers	3	2.65	2.39
26 D 2904	E	6″	Diagonal "Oblique" Cutting Pliers	3	2.87	2.57
26 D 2910	F	6″	Long Chain Needle-Nose Pliers	3	2.47	2.25
26 D 2909	F	6″	Long Chain Needle-Nose Pliers, Cutter	3	2.95	2.68
26 D 2913	G	5″	*Radio, Ignition Long-Nose Cutting Pliers	3	3.68	3.32
26 D 2916	H	7″	*Extra-Fine Long-Nose Pliers	3	2.99	2.69
26 D 2924	J	6″	Satin-Finish Combination Pliers	5	.92	.83
26 D 2925	J	8″	Satin-Finish Combination Pliers	9	1.21	.87
26 D 2926	J	6″	Satin-Finish Thin-Nose Combination Pliers	5	1.46	1.30
26 D 2905	K	4½″	*Diagonal Needle-Point Cutting Pliers	2	3.60	3.23
26 D 2906	K	5″	*Diagonal Needle-Point Cutting Pliers	3	3.63	3.25
26 D 2911	L	5″	Short Chain Needle-Nose Cutting Pliers	3	3.14	2.81
26 D 2914	M	5″	*Slim Nose Pliers	3	3.39	3.05
26 D 2917	N	4½″	*Needle Point Diagonal Flush Cut Pliers	6	3.48	3.13
26 D 2927	P	10″	Tongue-N-Groove Utility Pliers	16	3.05	2.75



PRECISION PLIERS SET

Five professional 4½″ pliers in zippered leatherette case. Comfortable, crack and peel-proof vinyl cushion grips. Smooth polished heads and handles of drop-forged fine-grain tool steel. Fig. R is for close cutting; S, end cutting; T, W and X, smooth jaws.
26 D 2918. 1¼ lbs. 1-2 Sets.....Each 14.25
3-Up Sets.....Each 13.15



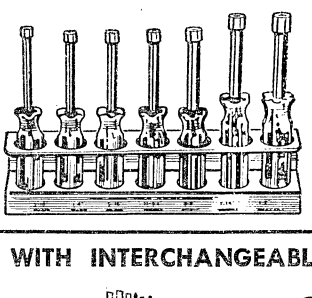
INDIVIDUAL PLIERS

All included in set above. Each, 5 oz.

Stock No.	Fig.	Description	Asstd. EA. 1-4	Asstd. EA. 5-Up
26 D 2919	R	Diag. Cutter	2.70	2.40
26 D 2920	S	End-Cut Nipper	3.05	2.73
26 D 2921	T	Chain Nose	2.44	2.20
26 D 2922	W	Flat Nose	2.52	2.28
26 D 2923	X	Round Nose	2.54	2.28

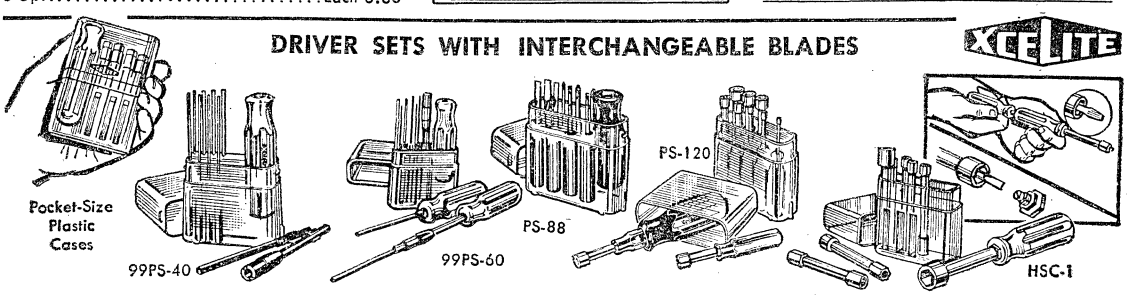
8-PIECE NUTDRIVER SET

A high-quality line made for Allied by nationally known manufacturer, guaranteed for one year. Kit includes: 7 nutdrivers: 3/16″, ¼″, 5/16″, 11/32″, 3/8″, 7/16″, and ½″ in self-supporting rack. Feature molded, color-coded "Amberyl" plastic handles. Nickel-chrome plated drivers. Shafts are 6¾″, except 6⅞″ on 3/16″ and ½″ drivers. Drop-forged from tool steel and heat-treated for hardness. Accurately machined. Shpg. wt., 1¾ lbs.
26 D 1787. 1-4.....Each 6.95
5-Up.....Each 6.60



DRIVER SETS WITH INTERCHANGEABLE BLADES

XCELITE



99PS-40 ALLEN SCREWDRIVER SET

Twelve-piece set in plastic case. Servicemaster handle, nine 4″ blades and 4″ extension shaft. Far greater torque than "L" keys. Alloy steel blades are precision formed: .050″, 1/16″, 5/64″, 3/32″, 7/64″, ⅛″, 9/64″, 5/32″, 3/16″. Locking device—blades fit snugly, remove easily. Plastic U.L. Listed handle. 11 oz.
26 D 1757.....Each 7.10

99PS-60 BRISTOL SCREWDRIVER SET

Eleven-piece set in pocket-size plastic case. For Bristol multiple-spline socket screws. Includes handle; 9 interchangeable Bristol screwdriver blades (.048″/4-flute thru .183″/6-flute); 4″ extension blade.
26 D 1749. Shpg. wt., 11 oz.....Each 6.75

PS-88 SCREWDRIVER SET

Ten pieces: 5 slotted screwdrivers—3/32″, 1/8″, 5/32″, 3/16″, ¼″; 3 Phillips—#0, 1, 2. All above 3½″ pocket size. Hollow-handle (1x3⅛″) "torque amplifier" slips over tool for grip, and power of standard drivers. Plastic case. Shpg. wt., 11 oz.
26 D 2579.....Each 4.20

PS-120 NUTDRIVER SET

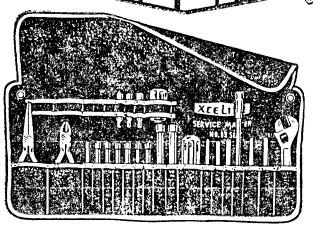
Twelve pieces: 10 color-coded nutdrivers—3/32″, 1/8″, 5/32″, 3/16″, 7/32″, ¼″, 9/32″, 5/16″, 11/32″, 3/8″. All 3½″ pocket size. Also "torque amplifier" handle, case described above. Shpg. wt. 11 oz.
26 D 2194.....Each 5.85

HSC-1 HOLLOW NUTDRIVER SET

- Eight Interchangeable Nutdrivers
- Thru-Drilled Amber Plastic Handle
- Pocket-Size Plastic Carrying Case

Versatile set features drilled handle—an 8″ screwdriver blade can be passed completely through the handle and shaft. Simplifies work where combination locknut and slotted screw adjustments are required. Hollow shafts permit installation or removal of nuts over protruding bolts. Nickel chrome finished shafts in 8 hex sizes: 3/16″, ¼″, 5/16″, 11/32″, 3/8″, 7/16″, ½″, 9/16″. Handle is 4⅛″ long—shockproof, breakproof, U.L. Listed. Blades snap in and out easily.
26 D 1936. Wt., 13 oz.....Each 8.85

Screwdrivers and Nutdrivers



99SM SERVICE MASTER SET

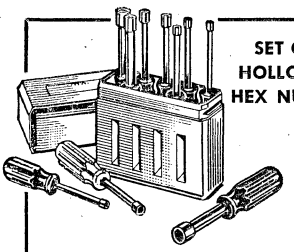
- Versatile 23-Piece Servicing Tool Set
- Plastic Roll-Up Pouch with Pockets

Complete 23-piece set of tools meets almost every servicing need for radio, TV, other equipment. Provides a variety of quick-change tools and tool combinations to speed up work.

Includes: 6" long-nose pliers; 5" diagonal pliers; 6" adjustable wrench; 9 regular nutdrivers from 3/16" through 1/2" in 1/16" steps; 1/4" stubby nutdriver; 5/16" stubby nutdriver; 3/8" stubby nutdriver; 3/16" slotted screwdriver; 1/4" slotted screwdriver; No. 1 Phillips screwdriver; 1/8"-3/8" reamer; 1/4"-1/2" reamer; 8" extension blade; regular handle; stubby handle.

Amber plastic handles are breakproof and shockproof. In handy, durable, plastic-coated canvas roll-up pouch with individual pockets for each piece. Shpg. wt., 2¾ lbs.

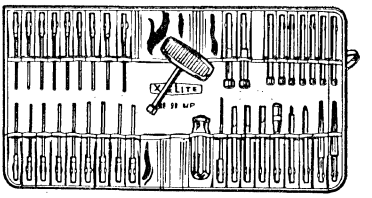
26 D 1162.....26.85



SET OF TEN HOLLOW-SHAFT HEX NUTDRIVERS

NO. HS6-18. Set of 10 nutdrivers with hollow shafts for tightening nuts on long screws. Case-hardened sockets, high-carbon steel shafts. Plastic handles have firm grip, are U.L. shockproof-approved. Sizes and colors: 3/16" black; 7/32" brown; 1/4" red; 9/32" orange; 5/16" amber; 11/32" green; 3/8" blue; 7/16" brown; 1/2" red; 9/16" orange. Plastic carrying case. Shpg.wt., 2 lbs.

26 D 1199.....11.63

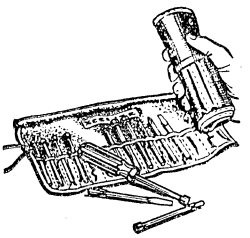


99MP MULTI-PURPOSE TOOL SET

- Includes Both Regular and "T" Handles
- 39-Piece Set in Compact, Canvas Case

Includes most-needed tools in plastic-coated canvas case. Regular handle, tee handle, 10 regular nutdrivers 5/32" through 1/2"; 9 Allen hex-type screwdrivers .050" through 3/16"; 9 Bristol multiple-spline screwdrivers .048" through .183"; 1/4", 5/16", and 3/16" slotted screwdrivers; #1 and #2 Phillips screwdrivers; 1/8-3/8" and 1/4-1/2" reamers, awl scriber, extension blade.

26 D 1507. Shpg. wt., 4 lbs.....28.35



99PR NUT AND SCREWDRIVER SET

13 chrome-plated pieces in plastic roll-up pouch. Contains: 9 nutdrivers from 3/16" to 1/2" in 1/32" steps; 2 single-end screwdrivers, 3/16" and 1/4" size regular screw blades; 2 single-end Number 1 and 2 Phillips screwdrivers; plastic handle. Shpg. wt., 2 lbs.

26 D 1259.....9.42

26 D 1272. Model 99X10 7" Extension. For use with 99PR nut and screwdriver set above. Extends shaft lengths of nutdrivers and screwdrivers to reach hard-to-get-into places. Shpg. wt., 5 oz.....96

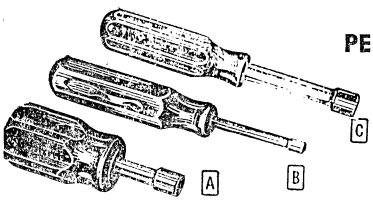
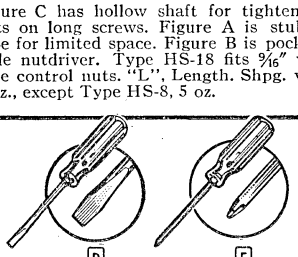


Figure C has hollow shaft for tightening nuts on long screws. Figure A is stubby type for limited space. Figure B is pocket-style nutdriver. Type HS-18 fits 9/16" volume control nuts. "L", Length. Shpg. wt., 6 oz., except Type HS-8, 5 oz.

PERFECTLY SIZED HEX NUTDRIVERS FOR FASTER SERVICING

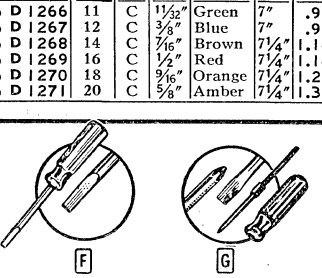
Stock No.	Mfr's Type	Fig.	Size	Handle	L	EA.
26 D 1220	P-3	B	3/32"	Blue	3½"	.54
26 D 1221	P-4	B	1/8"	Red	3½"	.54
26 D 1222	P-5	B	5/32"	Amber	3½"	.54
26 D 2263	P-6	B	3/16"	Black	3½"	.54
26 D 2264	P-7	B	7/32"	Brown	3½"	.54
26 D 1141	P-8	B	1/4"	Red	3½"	.54
26 D 2266	P-9	B	9/32"	Orange	3½"	.54
26 D 2267	P-10	B	5/16"	Amber	3½"	.54
26 D 2269	P-11	B	11/32"	Green	3½"	.54
26 D 2272	P-12	B	3/8"	Blue	3½"	.54
26 D 1300	S-8	A	1/4"	Red	3⅛"	.75

Stock No.	Type HS-	Fig.	Size	Handle	L	EA.
26 D 1648	6	C	3/16"	Black	6⅛"	.99
26 D 1649	7	C	7/32"	Brown	6⅛"	.99
26 D 1264	8	C	1/4"	Red	7"	.99
26 D 1646	9	C	9/32"	Orange	7"	.99
26 D 1265	10	C	5/16"	Amber	7"	.99
26 D 1266	11	C	11/32"	Green	7"	.99
26 D 1267	12	C	3/8"	Blue	7"	.99
26 D 1268	14	C	7/16"	Brown	7¼"	1.14
26 D 1269	16	C	1/2"	Red	7¼"	1.14
26 D 1270	18	C	9/16"	Orange	7¼"	1.20
26 D 1271	20	C	5/8"	Amber	7¼"	1.35



HIGH-QUALITY SCREWDRIVERS

- Precision-Ground Tips for Greatest Strength
- Rugged, Forged Chrome-Vanadium Steel Blades
- Shockproof, Breakproof Amber Plastic Handles



D ROUND-SHAFT SCREWDRIVERS. Winged design prevents turning of blade in handle. In lengths from 4¼" to 12".

Stock No.	Mfr's Type	Shaft Size Dia.	Shaft Size Length	Overall Length	Shpg. Wt.	EACH
26 D 1142	R-182	1/8"	2"	4½"	3 oz.	.39
26 D 1147	R-184	1/8"	4"	6½"	3 oz.	.45
26 D 1148	R-186	1/8"	6"	8½"	4 oz.	.51
26 D 1150	R-188	1/8"	8"	10½"	4 oz.	.60
26 D 3281	R-3163	3/16"	3"	6⅝"	3 oz.	.66
26 D 3282	R-3164	3/16"	4"	7⅝"	3 oz.	.72
26 D 3283	R-3166	3/16"	6"	9⅝"	4 oz.	.81
26 D 3284	R-3168	3/16"	8"	11⅝"	4 oz.	.90
26 D 1279	R-144	1/4"	4"	8"	6 oz.	.93
26 D 1280	R-146	1/4"	6"	10"	6 oz.	1.02
26 D 1281	R-148	1/4"	8"	12"	7 oz.	1.08

E PHILLIPS SCREWDRIVERS. All have chrome-vanadium steel blades; precision points. *Stubby type. †With pocket clip.

Stock No.	Mfr's Type	Shaft Tip	Shaft Length	Overall Length	Shpg. Wt.	EACH
26 D 1223	P-12S†	No. 0	2"	4¼"	3 oz.	.45
26 D 1154	X-101	No. 1	3"	6⅝"	5 oz.	.78
26 D 1155	X-108	No. 1	6"	9⅝"	5 oz.	.90
26 D 1156	X-102	No. 2	4"	7⅞"	6 oz.	.96

E PHILLIPS SCREWDRIVERS (Cont'd)

Stock No.	Mfr's Type	Shaft Tip	Shaft Length	Overall Length	Shpg. Wt.	EACH
26 D 1157	X-1020	No. 2	10"	13¾"	8 oz.	1.32
26 D 1158	X-103	No. 3	6"	10¼"	10 oz.	1.35
26 D 1159	SX-101*	No. 1	1 7/16"	2¾"	3 oz.	.72
26 D 1160	SX-102*	No. 2	1 5/16"	3¼"	5 oz.	.82

F SET-SCREW TYPE SCREWDRIVERS. Narrow-blade screwdrivers fit standard set-screws. Have pocket clips.

Stock No.	Mfr's Type	Shaft Size Dia.	Shaft Size Length	Overall Length	Shpg. Wt.	EACH
26 D 1129	R-3323SS	3/32"	3"	5¼"	2 oz.	.39
26 D 1136	R-184SS	1/8"	4"	6¼"	2 oz.	.45

G COMBINATION-BLADE SCREWDRIVERS. With handle.

Stock No.	Mfr's Type	Blade Combination	Length	Shpg. Wt.	EACH
26 D 1260	CR1	3/16" Slotted; #1 Phillips	7"	4 oz.	1.50
26 D 1261	CR2	1/4" Slotted; #2 Phillips	7"	5 oz.	1.50
26 D 1262	CR3	5/16" Slotted; #3 Phillips	7"	10 oz.	1.50

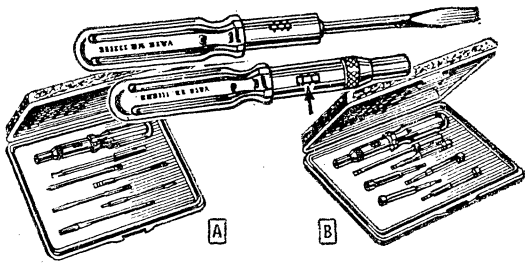
Depend on Allied for Quality Tools at Low Prices

Speed Up Production with These Hand Tools

FAMOUS FOR EXPERTLY CRAFTED TOOLS FOR PRECISION WORK

VACO

SCREWDRIVER AND NUTDRIVER KITS

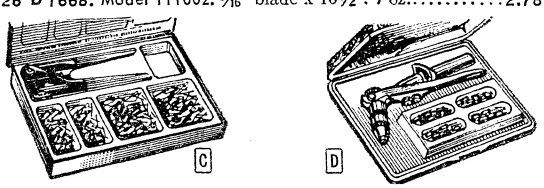


A MODEL 516101 SCREWDRIVER KIT WITH RATCHET HANDLE. 7-pc. kit includes 3 regular blades, 1/8x4", 3/16x4", 1/4x5"; 2 Phillips blades, No. 1, 2; 5" extension; ratchet handle. Molded plastic case.
26 D 2238. Shpg. wt., 1½ lbs.....7.59

B MODEL 516103 NUTDRIVER KIT WITH RATCHET HANDLE. Features interchangeable hex nutdriver blades from 1/4" to 7/16", plus 5" extension. Ratchet handle speeds up nut setting on radio, TV applications as well as assembly line installations. Deluxe molded blue plastic case. Shpg. wt., 1½ lbs.
26 D 2237.....8.99

MODEL 516014 DELUXE RATCHET-HANDLE/SNAP-DRIVER KIT (Not illus.). 14-piece kit recommended for radio, TV, appliance servicemen as well as industrial use. Includes 7 nutdrivers; 2 Phillips, 3 regular screwdriver blades; 5" extension; ratchet handle. Easy-to-store plastic roll case. Shpg. wt., 2 lbs.
26 D 2236.....12.99

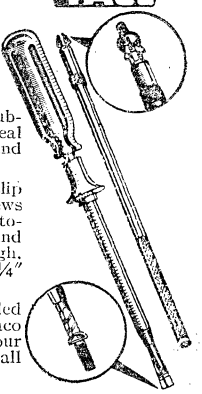
RATCHET SCREWDRIVERS. 3-way for quick, easy insertion or removal.
26 D 1667. Model 111001. 1/4" blade x 10". 7 oz.....2.56
26 D 1668. Model 111002. 5/16" blade x 10½". 7 oz.....2.78



C MODEL 575100 POW'RIVETER KIT. Designed for the serviceman who is looking for quality fastening at an economical cost. Kit contains Model 495 Pow'Riveter Tool plus an assortment of 55 Pow'Rivets. With deluxe unbreakable plastic box. Shpg. wt., 2 lbs.
26 D 2556.....7.95

D MODEL 175002 PROFESSIONAL POW'RIVETER. Offers exclusive features for unequalled performance. Streamlined head reaches into confined quarters or deep openings. Provides choice of stroke adjustments for single long stroke or short power strokes. In heavy-duty storage pouch with supply of Pow'Rivets.
26 D 1417. Shpg. wt., 3 lbs.....20.89

VACO SLOT SCREW LAUNCHERS



- Removes Stubborn Screws Easily
- Ideal for Working in Tight Quarters

Use this handy Screw Launcher for stubborn screws in hard-to-get-at places. Ideal for assembly and production work, repair and maintenance, or for the home workshop.

Features superb gripping power and non-slip driving action for setting or removing screws in tight quarters without slipping. Easy-to-grip "Comfordome" handle adds power and comfort. Has double-blade bit made of tough, spring steel. Available in 1/8", 3/16" and 1/4" blade diameters.

Three popular blade lengths with color-coded handles for easy size identification. Use Vaco Phillips Screw Launchers, available in four popular lengths to hold, start or retrieve all cross-slotted screws with ease and speed.

Stock No.	Mfr's Type	Shaft Size Dia.	Shaft Size Lgth.	Overall Length	Wt, Oz.	EACH 1-5	EACH 6-9	EACH 10-Up
26 D 1117	K23	1/8"	3"	5¾"	1	1.16	1.12	1.08
26 D 1118	K28	1/8"	8"	10¾"	1½	1.56	1.49	1.42
26 D 1119	K34	3/16"	4"	7½"	2	1.68	1.61	1.54
26 D 1182	K36	3/16"	6"	9½"	2½	1.72	1.64	1.56
26 D 1310	K38	3/16"	8"	11½"	3	1.76	1.68	1.60
26 D 1314	K44	1/4"	4"	7⅝"	3	1.76	1.68	1.60
26 D 1315	K46	1/4"	6"	9⅝"	3½	1.84	1.76	1.58
26 D 1316	K48	1/4"	8"	11⅝"	4½	1.87	1.79	1.71

VACO PHILLIPS SCREW LAUNCHERS

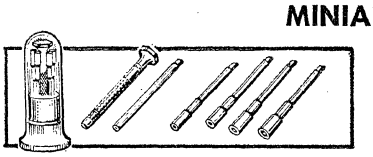
Stock No.	Mfr's Type	Overall Size	Wt., Oz.	EACH 1-5	EACH 6-9	EACH 10-Up
26 D 1829	K13	3 inches	1	1.58	1.51	1.44
26 D 1830	K15	5 inches	2	1.84	1.77	1.69
26 D 1845	K16	7 inches	2	1.92	1.83	1.75
26 D 1846	K19	9 inches	3	1.99	1.89	1.81

MODEL 1550 SNAP-RING KIT

You won't have to reuse worn "C" snap-rings that have lost their spring when you own this complete snap-ring kit. Includes 20 different most used snap-ring sizes. You get a total of 109 internal and 112 external snap-rings. Kit also includes one internal snap-ring plier and one external snap-ring plier. Compartmented metal box with hinged cover for snap-rings and pliers, and identification labels. Shpg. wt., 2 lbs.
26 D 1418.....13.20

MINIATURE PRECISION HAND TOOL SETS

Moody

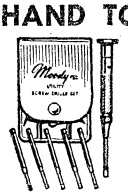


BW-5 MAGNETIC SOCKET WRENCH SET. Includes 5 interchangeable steel hex wrenches and a magnetized, swivel-top handle with screw-type chuck. Sizes: 5/64", 3/32", 7/64", 1/8", 5/32". Shpg. wt., 5 oz.
26 D 2021.....Each 2.59
12 Sets or More.....Each 2.39

OE-5 OPEN-END WRENCH SET. Five off-set open-end steel wrenches, chuck-type handle and plastic case. Wrench sizes: 5/64", 3/32", 7/64", 1/8", and 5/32". Shpg. wt., 5 oz.
26 D 1126.....Each 1.64
12 Sets or More.....Each 1.47

SC-5 SCREWDRIVER/AWL SET. Five interchangeable blades that fit universal, swivel-type handle with screw-type chuck. Blades include: 4 screwdriver types in sizes .055", .070", .080", and .100"; plus a 1" awl. Plastic container. Shpg. wt., 5 oz.
26 D 1152.....Each 1.29
12 Sets or More.....Each 1.16

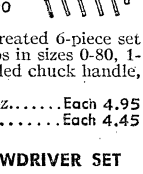
#52 UTILITY SCREWDRIVER SET. Consists of a precision screwdriver with six interchangeable blades from .025" to .100". Knurled handle for firm grip. Blades are nickel-plated, heat treated steel.
26 D 1556. 4 lbs.....1.90



TS-5 TINY TAP SET. Heat-treated 6-piece set in plastic case. 5 steel taps in sizes 0-80, 1-72, 2-56, 3-48, 4-40. Knurled chuck handle, torque hole for leverage.
26 D 1647. Shpg. wt., 5 oz.....Each 4.95
12 Sets or More.....Each 4.45

JS-6 JEWELER'S SCREWDRIVER SET

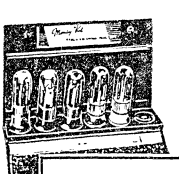
Six jeweler's drivers with precision steel blades (.025", .040", .055", .070", .080", and .1"), knurled handles, grooved chuck. Made to Federal specifications GGG-S-121. Case, 3/4x4½x3¾".



26 D 1384. Shpg. wt., ½ lb.....Each 2.89
12 Sets or More.....Each 2.69

Moody

TOOL OUTFIT



Consists of six individual Tiny Tool Sets—enclosed in separate plastic containers with chuck-type handle.

Includes all of the following sets:

SC-5 Screwdriver and Awl Set, Sizes: .055", .070", .080", .100"; and .1" Awl.

PA-5 Phillips Driver and Allen Wrench Set, Phillips Sizes: #0, #1; Allen Sizes, #4, #6, #8.

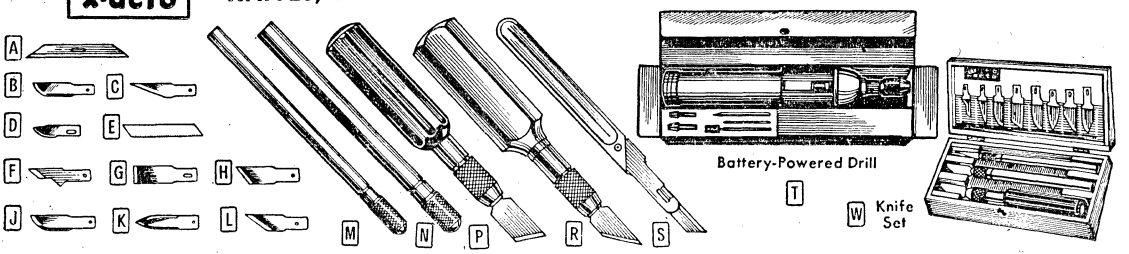
SW-5 Socket Wrench Set, Hex Socket Sizes: 5/64", 3/32", 7/64", 1/8", 5/32".

OE-5 Open-End Wrench Set, 5 Sizes: 5/64", 3/32", 7/64", 1/8", 5/32".

TS-5 Tap Set: 0-80, 1-72, 2-56, 3-48, 4-40 taps. #70 Tap Drill Set with 3/64", #53, #50, #47, and #43 taps.
26 D 2022. Shpg. wt., 1 lb.....14.95

Quality Knives, Blades and Tools

x-acto KNIVES, BLADES AND TOOLS DESIGNED FOR ELECTRONICS USE



REPLACEMENT KNIFE BLADES

Nos. 10 to 13, 16 fit No. 1 knife at right; No. 8 fits No. 8 knife; others fit No. 2, 5, and 6. 2 oz.

Stock No. Pkg. of 5	Fig.	No.	Description	Pkg. 5	Stock No. Pkg. of 100	Pkg. 100
26 D 1911	A	8	Reversible Blade	.27	26 D 2010	5.20
26 D 2836	B	10	Eraser Blade	.53	26 D 2019	9.00
26 D 2837	C	11	Fine Angle Blade	.53	26 D 2027	9.00
26 D 2838	D	12	Correction Blade	.53	26 D 2028	9.00
26 D 2839	E	13	Precision Saw	.53	26 D 2030	9.00
26 D 1926	F	16	Etching Blade	.53	26 D 2032	9.00
26 D 2840	G	18	½" Chisel Blade	.53	26 D 2033	9.00
26 D 2859	H	19	Deburring Blade	.53	26 D 2034	9.00
26 D 2860	J	22	Trimming Blade	.53	26 D 2038	9.00
26 D 2866	K	23X	Double-Edge Blade	.67	26 D 2043	11.40
26 D 2871	L	24	Close Corner	.53	26 D 2042	9.00

INTERCHANGEABLE-BLADE KNIVES

M NO. 1 KNIFE. For light to medium work. 5" long, 5/16" dia. With #11 blade. Shpg. wt., 3 oz.
26 D 2523 ..... .59

N NO.2 KNIFE. Medium to heavy use. 5" long, 7/16" dia. With #22 blade.
26 D 2526. Shpg. wt., 3 oz..... .72

P NO. 5 KNIFE. For heavy work. 4¾" long. With #19 blade.
26 D 1927. Shpg. wt., 3 oz..... 1.13

R NO. 6 KNIFE. For heavy work. 4¾" long. With #24 blade.
26 D 1928. Shpg. wt., 3 oz..... 1.80

S NO. 8 KNIFE. Reversible blade. 5⅜" long. With #8 blade.
26 D 1929. Shpg. wt., 3 oz..... .27

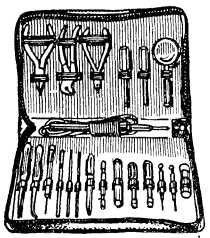
T CORDLESS POWER DRILL SET

Battery-powered drill for plastic, wood, light metal. Grinds, drills, polishes, deburs, carves. Three collets hold #80 to 3/32" bits. Uses 2 "C" batteries. With case, grinder, bit, punch.
26 D 2438. Shpg. wt., 1 lb. 4.49
18 D 5078. Batteries. 10 oz... 2 for .33

W TYPE 82 KNIFE SET

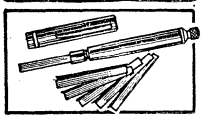
Includes Nos. 1, 2, and 5 knives plus nine assorted extra blades. For a variety of production-line applications, including wire-stripping, deburring, trimming potting compounds, prototype construction, and engraving. Handy wood chest. Shpg. wt., 12 oz.
26 D 2522..... 4.25

JONARD ELECTRONIC SERVICE TOOLS



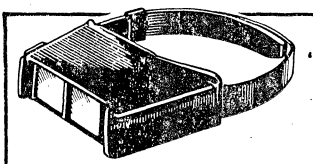
K-600 20-PIECE ELECTRONIC TOOL SET

Designed and specially produced for assembly, service, and repair of electronic equipment. Speeds up handling of complex components. Set contains chain-nose, groove-grip, and diagonal cutting pliers; standard and Phillips screwdrivers; magnifier; soldering iron; straight and bent-nose tweezers; solder aid; alignment tool; 2 needle files; pin vise; solder core; 3/16" and ¼" nut drivers; 2 jewelers screwdrivers; and pen burnisher with 12 blades. Durable leather zippered-case for easy portability.
26 D 1997. Shpg. wt., 2 lbs.. .....32.90



POCKET-TYPE CONTACT BURNISHERS

Six blades stored in plastic pen, 4½x⅜" dia.
26 D 1998. PB-7 Pen and 6-0.007" Blades..3.78
26 D 1999. PB-3 Pen and 6-0.0035" Blades. 3.98
26 D 1904. B-7 Blades for PB-7 .Pkg. of 25 3.55
26 D 1905. B-3 Blades for PB-3..Pkg. of 25 3.65

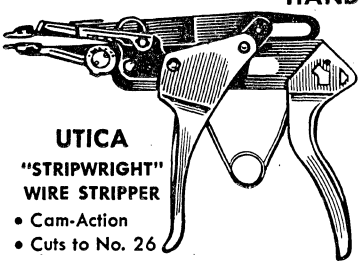


"SIGHT MASTER" 3-DIMENSIONAL MAGNIFIERS

A wonderful help for anyone who must do close work. Offer three-dimensional magnification up to 3½ times. Feature precision-ground and polished prismatic lens. Headband is adjustable to ensure comfortable fit. You choose from four different magnification powers. Av. shpg. wt., 1 lb.

Stock No.	Distance	Magnifies	EACH
26 D 3615	14"	1¾X	4.95
26 D 3616	10"	2¼X	4.95
26 D 3617	8"	2¾X	5.95
26 D 3618	4"	3½X	5.95

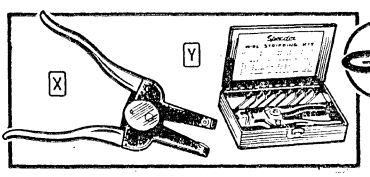
HANDY WIRE STRIPPERS IN EVERY PRICE RANGE



UTICA "STRIPWRIGHT" WIRE STRIPPER

- Cam-Action
- Cuts to No. 26

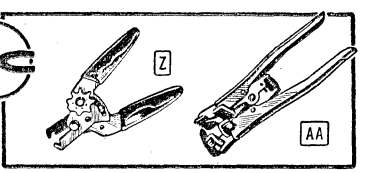
MODEL SW-1. Prevents wire nicking; strips teflon wire and most solid and stranded wires. Calibrated dial adjusts from No. 12 through No. 26. Ideal for working in limited access areas. Comfort-grip handles.
26 D 1680. Shpg. wt., 7 oz.. 16.90



X MODEL 766 WIRE STRIPPER ALONE. Strips #10 through #20 wire.
26 D 1387. Shpg. wt., 1¼ lbs.....5.93

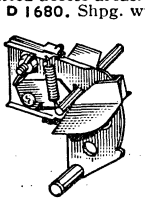
X MODEL 766A WIRE STRIPPER ALONE. Above, but for #14 through #30 wire.
26 D 1388. Shpg. wt., 1¼ lbs.....5.93

Y GC 766K WIRE-STRIPPER OUTFIT. Includes: Model 766 stripper with automatic delayed return; 7 blades strip #8 to #30 wire; blade guide; plastic storage case.
26 D 1389. Shpg. wt., 2¼ lbs.....13.16



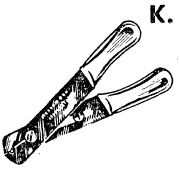
Z GC 802 WIRE STRIPPER. For stripping No. 10 through No. 22 wires. Features automatic stop return and cutter. With narrow, easy-grip handles. Shpg. wt., 8 oz.
26 D 1341.....5.93

AA GC 760 "STRIP-ER-CLIP." Fine wire stripping tool has safeguard to prevent accidental nicking or cutting. 8-stop gauge adjusts instantly to strip and clip wires from 12 to 26 gauge. Shpg. wt., 8 oz.
26 D 2273.....1.49



BONDER-TONGUE Cable Stripper

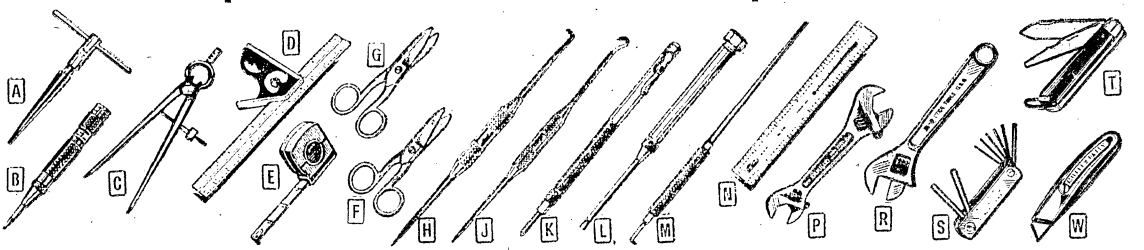
TYPE S-1. Rotary coaxial-cable stripper handles any job quickly and easily. Rugged spring action holds cable firmly in place. Strips coaxial cable up to ½" diameter. Convenient built-in scale permits exact stripping measurements. Takes single-edge razor blade. Shpg. wt., 4 oz.
26 D 2169.....3.45



K. MILLER LOW COST WIRE STRIPPERS

MODEL 101-S. Strips insulation or cuts wire up to No. 8, solid or stranded. Spring lock holds blades closed when stripper is not being used. Size, 5" long . . fits in pocket easily. Shpg. wt., 4 oz.
26 D 1392.....1.27
26 D 1338. Model 100. Above, without spring action. Shpg. wt., 4 oz.....97

Popular Hand Tools for Shop or Plant



A HENRY HANSON 120 HAND REAMER. May be used with drill—T-handle can be removed. 1/2" shank. 1/8" tip. 5 1/2" long.
26 D 1390. Shpg. wt., 9 oz.....1.49

B G-H CENTER PUNCH. Light or heavy adjustment. Spring-loaded. 5x1/2" dia.
26 D 1382. Shpg. wt., 5 oz.....3.49
26 D 1383. Extra Point.....47

C 6" STEEL DIVIDERS. Tempered spring and tapered fulcrum for rigidity, accuracy. Adjusting nut. Replaceable points.
26 D 1324. Wt., 6 oz.....3.75

D 12" COMBINATION RULE. Etched steel. Graduated to 32nds. Head locks on 1" blade. Scriber in head. Wt., 1 3/4 lbs.
26 D 1308.....84

E LUFKIN "LOKMATIC" TAPE RULES. Lever-Lok, ball bearing rewind, end-hooks. Graduated to 1/16". Strong, steel rule. Vinyl and metal case. Width, 1/2" except *3/4".

Stock No.	Type	Feet	Oz.	EACH
26 D 3045	W728	8	7	1.80
26 D 3046	W7210	10	8	2.07
26 D 3047	W7212	12	8	2.47
26 D 3048	W7312*	12	10	3.33
26 D 3049	W7316*	16	10	3.97

F J. WISS 175-E ELECTRICIAN'S SCISSORS. Quality electrician's scissors, 5" long, 1 3/4" cut length.
26 D 1301. Wt., 3 oz.....2.97

G J. WISS 175-ES ELECTRICIAN'S SCISSORS. Like 925 below left, but with wire-stripping notches on back of blade.
26 D 1297. Shpg. wt., 3 oz.....2.70

H MACHINIST SCRIBER. Tapered hook and straight points, heat-treated and hardened. Knurled aluminum handle. Meets Gov. Spec. GGG-S-131C. 8 1/4" long.
26 D 1309. Wt., 6 oz.....49

J HOOKED-POINT SCRIBER. One end fully-hooked, one straight. Tapered.
26 D 2288. Wt., 6 oz.....49

K MOODY 46 CARBIDE POCKET SCRIBER. Reversible tip, lock nose, clip.
26 D 3663. Wt., 1 oz.....1.49

L MOODY 50 POCKET INSULATED SCREWDRIVER. Has durable hollow nylon handle. Lock chuck holds reversible blade.
26 D 3664. Shpg. wt., 1 oz.....1.29

M MOODY MHS-2 ADJUSTABLE SLEEVE SCRIBER. Sleeve scriber with adjustable knurled handle locks anywhere. Straight and right-angle points. 8 1/2". Meets Fed. Spec. GGG-S-00131. Shpg. wt., 2 oz.
26 D 3665.....69

N 6" RULE AND WIRE GAUGE. Graduated to 64ths. Has B&S wire gauge, decimal equivalents. Shpg. wt., 2 oz.
26 D 1320.....55
26 D 1323. 12" Stainless Steel Bench Rule. (Not illus.) Both sides graduated to 64ths. 7/8" wide. Shpg. wt., 2 oz.....1.19

P DIAMOND ADJUSTABLE WRENCH. 6" double-end diamond adjustable wrench —1/2" and 3/4" jaw capacities. Thickness: 1/8" at small end; 7/32" at large end. Made of drop forged alloy tool-steel, nickel-chrome plated with sides of heads buffed. Meets Fed. Spec. Shpg. wt., 6 oz.
26 D 1263.....3.59

R UTICA 91 ADJUSTABLE WRENCHES. Drop forged alloy steel, chromed heads. Meet Fed. Spec. GGG-W-631. *Thickness.

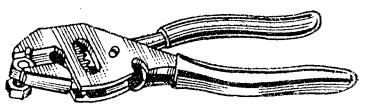
Stock No.	Tip (*)	Size	Jaw Open	Shpg. Wt.	EACH
26 D 1461	1/8"	4"	1/2"	2 oz.	2.24
26 D 1462	3/16"	6"	3/4"	4 1/2 oz.	2.29
26 D 1463	15/64"	8"	15/16"	8 oz.	2.55
26 D 1464	9/32"	10"	1 1/8"	1 lb.	3.24
26 D 1465	11/32"	12"	1 5/16"	1 1/2 lbs.	4.73

S HEX-KEY WRENCH SET. Nickel-chrome steel, sizes .050" to 3/16".
26 D 1128. Wt., 4 oz.....98

T ELECTRICIANS' KNIFE. Tempered tool-steel 2 1/2" blades: combination screwdriver-wire scraper, and spear shape type. Length, 3 3/4".
26 D 1424. Wt., 5 oz.....1.49

W MILLERS FALLS UTILITY KNIFE. Reversible blade. 5" long. 5 blades.
26 D 2655. Wt., 8 oz.....83
26 D 1171. Pkg. of 5 Blades. 2 oz.....37

VACO PLIERENCH DOES THE WORK OF MANY TOOLS



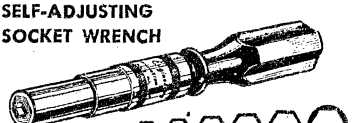
- Provides 1 Ton of Gripping Power
- Jaws Always Remain Parallel
- Securely Grips Any Surface

MODEL 86070 MASTER PLIERENCH. Precision tool securely grips any surface. Fits all U.S.S. or metric sizes; does not mar surfaces. 8 1/2" long.
26 D 1712. Shpg. wt., 1 lb.....7.95
26 D 1713. Model 86060 Jr. Plierench. As above, but 7" long. Wt., 12 oz.....6.25
26 D 1714. Model 86071 Plierench Kit. Contains master plierench with 3 accessory jaws in plastic pouch Wt., 1 3/4 lbs.....13.50

THERMOGRIP GLUE AND CALK GUN

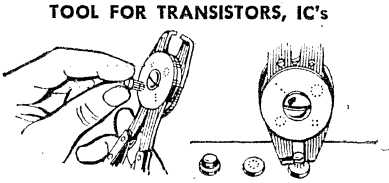
Provides fast, durable glue bond. Electric gun takes glue stick, melts it, feeds glue from tip. Makes permanent, waterproof bond. Glues wood, plastic, leather, metal, etc. Calks, too—sealer sticks give water and dust-tight calking. With 4 glue, 3 sealer sticks. 115 V, AC/DC.
26 D 2435. Shpg. wt., 1 lb.....4.98
EXTRA STICKS. Pkg. of 60. 12 oz.
26 D 3188. Glue Sticks.....Pkg. 1.98
26 D 3189. Calk Sticks.....Pkg. 1.98

SIZE-WISE COMPACT SELF-ADJUSTING SOCKET WRENCH



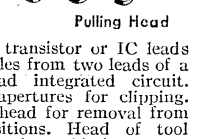
Utility of 4-piece socket wrench set. Self-adjusting action instantly selects the right socket to fit any of seven sizes of hex-head bolts or nuts from 1/4" to 7/16". Tempered steel sockets; anchored springs for positive action. Insulated handle. 5 3/4" long.
26 D 3279. Shpg. wt., 8 oz.....2.49

TRAN-SEM ELECTRONIC HAND TOOL FOR TRANSISTORS, IC's



Makes cutting any transistor or IC leads quick, simple. Handles from two leads of a diode to a ten-lead integrated circuit. Leads insert into apertures for clipping. Employs a pulling head for removal from limited access positions. Head of tool serves as a heat sink when soldering.
26 D 1657. Shpg. wt., 8 oz.....14.75

HP MODEL 500 NUT CRACKING TOOL

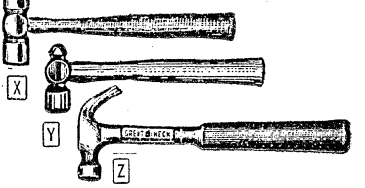


Removes rusted, stripped or otherwise damaged nuts. Cannot damage bolts. Cracks nuts from 5/16" to 1 3/16". Provides up to 25,000 lbs. of pressure for effortless removal—a real work saver.
26 D 1583. Shpg. wt., 1 1/4 lbs.....5.95

ADEL METAL "NIBBLING" TOOL

A real time-saver. "Nibbles" holes, slots or openings in up to 18-gauge steel, aluminum or other soft metals up to 1/16". Excellent for making square or rectangular mounting holes for connectors, etc. Leaves safe, smooth, flat edges. Minimum hole size is 7/16" diameter. Durable construction; punch is replaceable. Shpg. wt., 8 oz.
26 D 1153. 1-11.....Each 4.15
12-Up.....Each 3.95
26 D 1130. Replacement Punch for Above. Easy to install. Shpg. wt., 2 oz.....2.12

HAMMERS FOR ALL PURPOSES



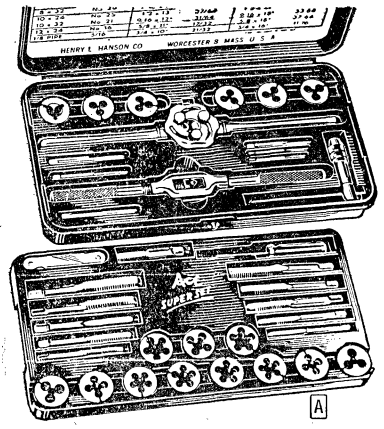
X SOFT-FACE HAMMER. Soft plastic faces will not mar aluminum or other soft metals. Has steel head and hickory handle; 1 3/8" diameter plastic faces. Faces are of red vinyl and amber tenite. 12 3/4" long.
26 D 1161. Shpg. wt., 1 lb.....3.44

Y BALL PEEN HAMMER. Strong head of drop-forged steel. Sturdy hickory handle. Black baked enamel. 14" long.
26 D 1577. Shpg. wt., 1 1/2 lbs.....1.98

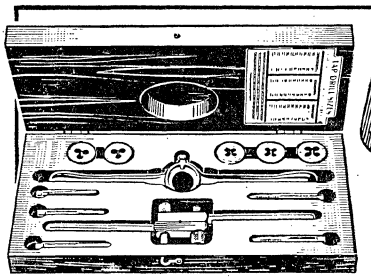
Z CLAW HAMMER. Balanced one-piece steel construction; rubber-cushioned handle. Precision tempered claws. 13" long.
26 D 1299. Shpg. wt., 1 1/2 lbs.....3.53

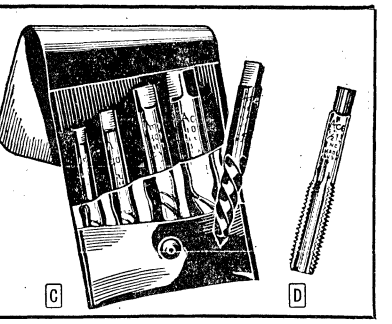
Taps, Dies, Punches, Cutters

HENRY HANSON "ACE" TAPS AND DIES AND SCREW-EXTRACTOR SET



A


B


C D

A MODEL 614V TAP AND DIE SET. A complete set of taps and dies, plus all essential accessories. Precision-made set consists of one each, tap and die: 4-36, 6-32, 8-32, 10-32, 10-24, and 12-24 (Machine Screw Standard); ¼-20, 5/16-18, 3/8-16, 7/16-14, and ½-13 NC (U.S. Standard); ¼-28, 5/16-24, 3/8-24, 7/16-20, and ½-20 NF (S.A.E. Standard); ⅛" pipe. Also includes die stock, tap and reamer wrench, "T" tap wrench, screwdriver, and pitch gauge. All parts of this precisely crafted set are made of high-tempered, carbon steel. Wt., 4 lbs.
26 D 1391.....30.95

B S-21 RADIO TAP AND DIE SET. One each tap & die: 6-32, 8-32, 10-24, 12-24, ¼-20. Tap and die wrenches. Mahogany box.
26 D 1318. Shpg. wt., 3 lbs. 10.95

S-613 TAP AND DIE SET. (Not illus.). One each tap and die: 4-36, 6-32, 8-32, 10-24, 10-32, 12-24. 2 tap wrenches, die wrench.
26 D 1288.....18.45

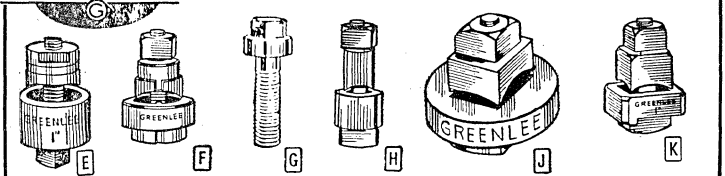
C MODEL S-35P SCREW-EXTRACTOR SET. 5 extractors remove broken screws 3/8" to 5/8", bolts, studs, ⅛" and ¼" pipe. Alloy steel. In plastic case. 1 lb.
26 D 2652.....2.50

D INDIVIDUAL TAPS AND DIES. Made of tough carbon steel. Right-hand thread. Shpg. wt., 2 oz.

Size	Tap	EACH	Die	EACH
4-36	26 D 2214	.45	26 D 2225	.66
6-32	26 D 1525	.42	26 D 2226	.66
8-32	26 D 1526	.45	26 D 2227	.66
10-32	26 D 2219	.48	26 D 2228	.66
10-24	26 D 2223	.54	26 D 2229	.66
¼-20	26 D 2224	.57	26 D 2242	.73

26 D 2246. Tap Wrench. "T" handle unit for above taps. 2 oz..... .69

STRONG, SMOOTH-CUTTING CHASSIS PUNCHES



E F G H J K

E TYPE 730 ROUND PUNCHES. Permit easy rapid cutting of round holes in metal chassis for sockets, switches, controls, plugs meters, transformers, panel lights, and other components. Punches cut smooth openings in sheet metal, bakelite, hard rubber and composition. Cut through metals up to 16-gauge thick. Extremely easy to use, just turn cap screw to cut hole—can be operated with only an ordinary wrench. No reaming or filing necessary. *Indicates meter cutout. Av. shpg. wt., 1½ lbs.

Stock No.	Hole Size	Lead Size	EACH
26 D 1337	½"	¼"	2.85
26 D 1349	5/8"	¼"	2.85
26 D 1600	9/16"	¼"	2.85
26 D 1306	11/16"	3/8"	2.85
26 D 1340	¾"	3/8"	2.85
26 D 1307	13/16"	3/8"	2.85
26 D 1342	7/8"	3/8"	2.85
26 D 1601	15/16"	3/8"	3.20
26 D 1343	1"	3/8"*	3.20
26 D 1360	1 1/16"	3/8"	3.35
26 D 1344	1 1/8"	3/8"	3.35
26 D 1373	1 5/32"	3/8"	3.35
26 D 1345	1 3/16"	3/8"	3.35
26 D 1347	1 1/4"	3/8"	3.35
26 D 1348	1 3/8"	3/8"	4.15
26 D 1374	1½"	3/8"	4.55
26 D 1312	1 5/8"	¾"	5.50
26 D 1326	1¾"	¾"	6.30
26 D 1327	2"	¾"	8.35
26 D 1375	2¼"	¾"	9.30
26 D 1602	2½"	¾"	15.10
26 D 1385	2 25/32"*	¾"	13.75

F TYPE 732 "KEYED" PUNCHES. Insert punch in drilled hole, turn with wrench. Require ½" hole except *¼" hole. 1½ lbs.

Stock No.	Size	EA.	Stock No.	Size	EA.
26 D 1386	*15/32"	6.40	26 D 1380	1 11/64"	7.20
26 D 1379	15/16"	6.70	26 D 1381	1 17/64"	8.50

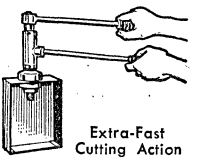
G BALL-BEARING DRIVE SCREWS.
26 D 1605. AV112-BB. For 1" and 1½" punches. Wt., 1 lb.....1.35
26 D 1168. AV249-BB. For 1 7/16", 1 5/8" and 1¾" punches. Wt., 1 lb.....3.25

H Type 733 "D" PUNCHES. For cutting "D" shape hole with ordinary wrench in chassis up to 16-gauge. Wt., 2 lbs.
26 D 1973. For ½" hole.....5.20
26 D 1974. For 5/8" hole.....5.50

J 731R MINIATURE RELAY-SOCKET PUNCH. Cuts clean, smooth holes for mounting miniature relay sockets. Needs only an ordinary wrench to do the job. Simply insert punch into a 9/16" drilled hole, and turn it with wrench. Cuts holes in metals with up to 16-gauge thickness. Hole dimensions: .861"x1.018". Shpg. wt., 10 oz.
26 D 2276.....15.00

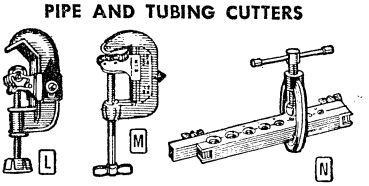
K TYPE 731 SQUARE PUNCHES. Cut square hole in up to 16-gauge metal with wrench. Drive screw requires ½" hole. Hardened tool steel. Wt., 2 lbs.
26 D 1397. For ½" hole.....6.90
26 D 1399. For ¾" hole.....7.50
26 D 1408. For 1" hole.....9.10

GREENLEE TYPE 1804 RATCHET KNOCKOUT PUNCH-DRIVER


Extra-Fast Cutting Action

Anti-friction lead-thread of this punch driver gives you 6 to 8 times faster cutting action than the ordinary wrench method. For use with standard punches ½" to 3", and Greenlee 730 chassis punches, 1 1/16" and larger (see list at left). For 10-gauge maximum or lighter material. Comes equipped with driver assembly, leverage and ratchet handles, and three adapter screws. Operates in any position and under any conditions. Complete with metal case with compartment for smaller punches. Less punches. Wt.: Actual, 6½ lbs.; shpg., 13 lbs.
26 D 1603.....63.50

PIPE AND TUBING CUTTERS


L M N

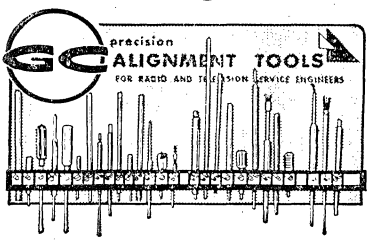
L TUBING CUTTER. Cuts clean and smooth. May be used for copper, brass or aluminum tubing and thinwall conduit. Cuts ⅛-inch to 1⅛-inch diameter. Comes equipped with automatic built-in reamer for smoother cuts. Meets all Federal specifications.
26 D 2140. Wt., ½ lb.....2.19

M TUBING AND PIPE CUTTER. Cuts 5/8-inch to 2⅛-inch diameter copper, brass or aluminum tubing plus thinwall conduit. Cuts 3/8-inch to 1-inch diameter iron or steel pipe. Adjustable jaws have wing-type handle for a more secure grip.
26 D 2141. Wt., 2 lbs.....4.59

N FLARING TOOL. Meets Society of Automotive Engineers specifications. Makes a clean 45° flare. May be used on soft copper, brass or aluminum tubing from 3/16-inch to 5/8-inch overall diameter.
26 D 2139. Wt., 2 lbs.....3.49

You can always depend on Allied for everything in electronics. We maintain large stocks of electronics tools and hardware, at lowest prices.

TV Alignment Tools, Kits and Service Aids



G-C TYPE 9200 ALIGNMENT TOOL KIT

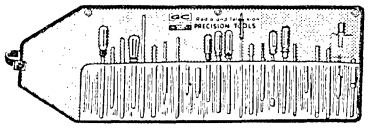
- 27 Most-Needed Radio-TV Alignment Tools
- Tools are Precision-Made of Finest Materials
- With Convenient Wall-Mounting Steel Panel
- Each Tool in Individually Marked Slot

Wall mounting kit includes 27 most needed radio-TV alignment tools. Tools are housed in sturdy, 3-color steel panel with 2-hole mounting. Each tool has an individually marked slot in the panel—desired tool can be located in seconds. All tools are precision made of the finest materials including low-loss plastics and extra-hard bone fiber; tips are hardened spring steel.

Kit includes: various length alignment screwdrivers; special short tools; alignment wrenches; channel tuners; core aligners; oscillator adjustment tools; trimmer and IF aligners; solder probe; nylon replacement tip for long reach aligner; hex tools; and a host of other useful tools.

Holding panel mounts conveniently on workshop wall. Size of panel is 9¾" high and 18¾" wide. Shpg. wt., 3 lbs.

26 D 1831 X..... 17.52



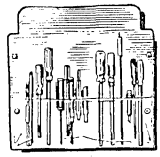
G-C TYPE 8283 TV TOOL KIT

- 25 TV Alignment Tools Most Often Required
- For Faster, Easier TV Servicing
- Case Rolls Up, Easily Fits in Caddy

Complete 25-piece master deluxe alignment tool kit for television use. In handy roll-up case; each tool has a slot of its own. Ideal for TV service engineers; can easily be taken on service calls. Consists of high-quality, precision-made tools, none over 9" in length. Kit includes: K-Tran tool; core aligner; long-reach aligner; flexible wand; short tool; and other helpful TV alignment tools. Shpg. wt., 1 lb.

26 D 1001..... 15.83

G-C TYPE 8280 TV TOOL KIT

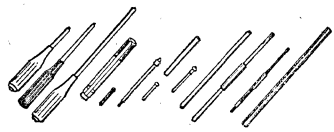


- For Fast Alignment
- 16 Most-Needed Tools
- Handy Roll-Up Case

Roll-case of 16 most popular TV alignment tools. Kit includes: "Shorty" duplex aligner; tuning wand; core aligner; oscillator tool; long-reach aligner; ⅛" sq. socket wrench; K-Tran tool; 0.100 hex wrench; recessed screwdriver; and others. Tips of Delrin, extra-hard bone fiber, or hardened spring steel. Wt., 8 oz.

26 D 1002..... 10.30

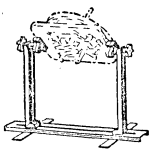
OSCILLOSCOPE ALIGNMENT TOOL KIT



Kit contains 14 tools that cover most any oscilloscope alignment needs. Indispensable in aligning Tektronix and other scopes. Includes: 4¾", 6½" and 10¼" nylon ceramic capacitor alignment tools; two slug and piston capacitor tools with recessed tips; 4½" alignment tool with recessed tip; trimmer adjustment tool; 2¼" alignment tool tip and 3" and 7" extension handles; long-reach 0.075 hex wrench; double-ended 0.100 hex wrench; duplex aligner with one end for thin, other end for standard diameter studs; ¼" hex socket neutralizing wrench. Sturdy plastic carrying pouch. 1 lb.

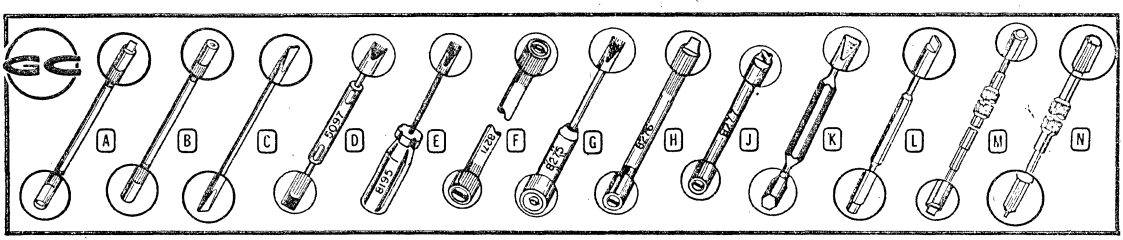
26 D 3060..... 11.50

G-C CHASSIS CRADLE



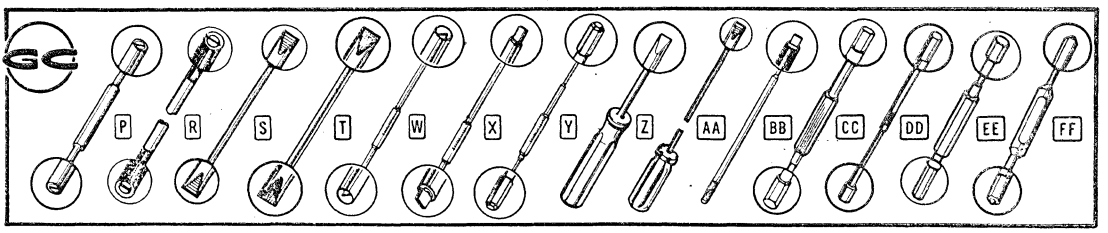
An important servicing aid for radio and TV repair shops. Adjustable cradle holds radio or TV chassis securely; permits 360° rotation for easy accessibility from any angle. Size, 24" long, 14" high, and 12½" wide. Shpg. wt., 7 lbs.

26 D 3710 X..... 7.95



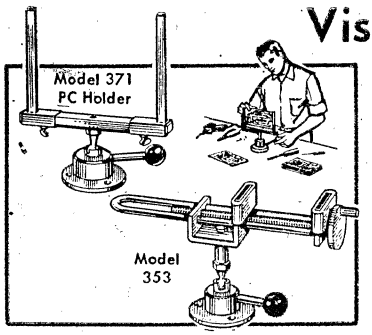
TV ALIGNMENT AND ADJUSTMENT TOOLS

Stock No.	Type	Fig.	Description	Oz.	EA.
26 D 1021	5000	A	Alignment screwdriver	3	.46
26 D 3122	5003	B	RCA coil, pushbutton screwdriver	3	.58
26 D 3123	5004	C	Delrin all-wave set aligner	3	.48
26 D 1015	5097	D	K-Tran and IF aligner	3	.76
26 D 1020	8195	E	Channel tuning tool	3	.78
26 D 2496	8271	F	Stackpole stud-type core aligner	3	.66
26 D 1014	8275	G	Zenith universal aligner	3	.57
26 D 1011	8276	H	Short duplex aligner	3	.57
26 D 2497	8277	J	2⅝" duplex aligner	3	.57
26 D 1013	8282	K	Zenith .100 hex wrench and aligner	3	.37
26 D 3124	8605	L	Capacitor/tuner hex and screwdriver	3	.63
26 D 1010	8606	M	Zenith-Admiral Delrin 5" hex wrench	3	.48
26 D 1062	8606L	N	11" Delrin hex wrench	3	.63



Stock No.	Type	Fig.	Description	Oz.	EA.
26 D 3125	8721	P	9" standard/thin stud aligner	9	.78
26 D 1019	8722	R	7" duplex #4 and #6 stud aligner	3	.65
26 D 1017	8728	S	12" fiberglass screwdriver	3	.54
26 D 1016	8728A	S	7" Delrin plastic screwdriver	3	.42
26 D 1087	8729	T	16" fiberglass screwdriver	3	.69
26 D 3250	8867	W	I.F. aligner #4, #6 recessed blades	3	2.42
26 D 3251	8868	X	7" standard screwdriver (7/64" blade)	3	1.26
26 D 3252	8869	Y	7" double hex aligner .100" and .125"	3	2.10
26 D 3126	8987	Z	7" blade plastic screwdriver	3	.67
26 D 2499	8988	AA	12" blade plastic screwdriver	3	.97
26 D 3253	9089	BB	5¾" thin-end metal-tipped aligner	3	.57
26 D 1012	9091	CC	5" double-end .125" hex wrench	3	.48
26 D 3254	9091L	CC	11" double-end .125" hex wrench	3	.70
26 D 3128	9295	DD	11" Delrin .100" hex wrench	3	.67
26 D 1008	9296	EE	11" nylon .075" hex wrench	4	.66
26 D 3129	9300	FF	.075" hex coil slug and alignment	3	.48

Vises, Staplers, Parts Boxes



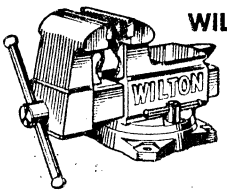
WILTON PC BOARD HOLDER

MODEL 371. Mounts on Midget "PowRarm" No. 345 (supplied). Specially designed for rapid, low-cost printed circuit production. Brackets adjust horizontally 3" to 6". V-grooved vertical posts (⅛" wide, 3/16" deep) permit insertion and removal of workpiece without readjustments.
26 D 2211. Wt., 2 lbs.....12.55

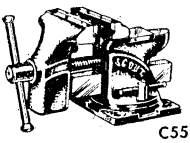
ELECTRONICS VISE ON "POWRARM"

MODEL 353. Mounts on Midget "PowRarm" No. 345 (supplied). For use with small subassemblies and PC boards. Holds work firmly but gently; jaws are rubber-wrapped to protect workpiece. Constructed of heavy-gauge steel with double slide bar—opening adjusts to 6½" with crank handle.
26 D 2210. Wt., 3 lbs.....15.60

WILTON UTILITY BENCH VISES



640 Series



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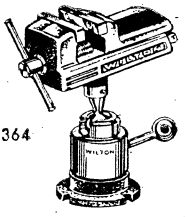


364

640 SERIES UTILITY VISES

Replaceable hardened steel pipe jaws; serrated top jaws; swivel base; 3/16" slide.

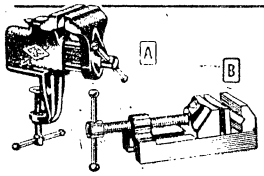
Stock No.	Mfr's Type	Jaw W.	Opening	For Pipes	Wt., Lbs.	EACH
26 D 2315 X	643½	3½"	4"	⅛-2"	19	12.45
26 D 2316 X	644	4¼"	4½"	⅛-2½"	26	18.95
26 D 2318 X	645	5"	5½"	⅛-2½"	34	21.55

364 VISE AND POSITIONER

Utility vise mounted on "PowRarm" positioner. One-hand release of positioner levelbar permits rotating or tilting of workpiece; tightening freezes workpiece solidly in place. Positioner is cadmium-plated steel. For work to 15 lbs. Vise has smooth steel jaws; 2¼" wide, open to 2¼".
26 D 1149. Wt., 5 lbs.....18.25

MODEL C55 LOW-COST BENCH VISE

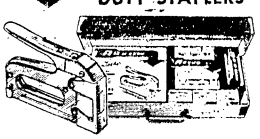
Features removable steel-insert 4½" jaws with serrated faces, built-in pipe jaws, precision screw drive. Swivel base locks firmly. Sturdy anvil has forming horn. Max. opening, 4¼". Takes pipes ½" to 3" dia.
26 D 1489 X. Wt., 19 lbs.....7.95
26 D 2203 X. C53½. Above, but 3½" jaw. Max. opening, 3"; pipes ½"-2". 11 lbs. 6.38



A **BRINK & COTTON 149 MIDGET VISE.** Sturdy clamp vise holds small parts securely. Smooth action. Clamps to any bench up to 2" thick. Jaws 1¾" wide; open to 1¾".
26 D 1317. Shpg. wt., 2¾ lbs.....1.99

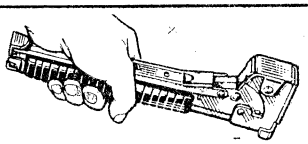
B **MILLERS FALLS 217 DELUXE VISE.** Holds work on drill press bed or work bench. Sturdy steel jaws, 2⅜" wide, with parallel faces extending to 3⅛". Fine thread.
26 D 1321. Shpg. wt., 5 lbs.....8.99

ARROW HEAVY-DUTY STAPLERS

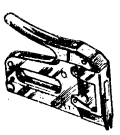


T-50MP Stapling Gun Kit

C **T-50MP KIT.** Has T-50 stapler with double leverage action; screen, shade attachments; staple lifter; 5000 staples.
26 D 1466. Shpg. wt., 4¾ lbs.....14.95
26 D 2653. T-50 Alone. 2¼ lbs.....10.95
26 D 2307. T-55 Medium-Duty Staple Gun Alone. Shpg. wt., 2¼ lbs.....7.95



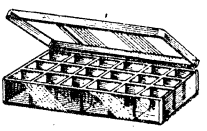
HT-50M Heavy Duty Hammer Tacker. Used like a hammer, automatically staples with each blow. All steel, chrome finish. Takes T-50 staples: ¼", 5/16", ⅜" and ½".
26 D 1509. Shpg. wt., 2½ lbs.....15.40



T-25 Wire Stapler. For all kinds of low-voltage wires to ¼" diameter. Tapered head for easy stapling. Grooved blade positions wire. Size, 5½x7¾". Wt., 2¼ lbs.
26 D 1467......13.95

STAPLES. *Indicates for ceiling tile. 1 lb.

Stock No.	For Model	Size	Quantity	EACH
26 D 2337	T50, T55	¼"	5000	2.13
26 D 1273	T50, T55	⅜"	5000	2.34
26 D 2343	T50, T55	½"	5000	2.76
26 D 2654	T50, T55	*	5000	3.19
26 D 2344	JT-21	¼"	5000	2.65
26 D 2365	JT-21	5/16"	5000	2.65
26 D 2366	T-25	⅜"	5000	3.40
26 D 2387	T-25	9/16"	5000	3.83
26 D 2390	T-75	9/16"	1000	1.91
26 D 2409	T-75	⅝"	1000	1.91
26 D 2410	T-75	⅞"	1000	2.13

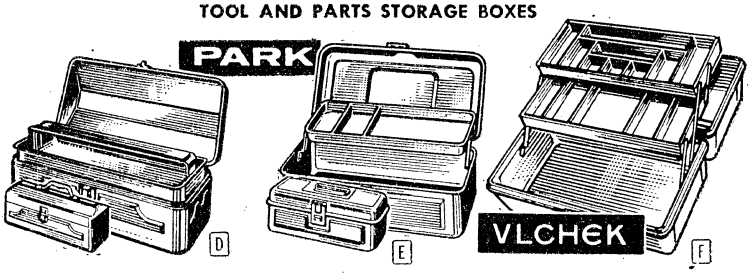


VLCHEK PLASTIC PARTS STORAGE BOXES

Stock No.	Type	*No.	Comp. Sizes	Overall Size	Lbs.	EA.
26 D 2375	P250	1	5⅞x3⅝"	6¼x4x1 11/16"	1	.42
26 D 2378	P203	6	1¼x3 15/16"	8¼x4½x1⅜"	1½	.54
26 D 2379	P210	9	8—1⅜x1⅝"; 1—1⅛x3¼"	7x3¾x1¼"	1	.41
26 D 2094	P812	12	2x4 3/16x2 1/16"	13⅛x9x2 5/16"	1	2.04
26 D 2380	P201	12	6—1¼x1¼"; 4—1¼x2"; 2—1½x3 15/16"	8¼x4½x1⅜"	1½	.54
26 D 2381	P612	12	6—1 5/8x1 15/16"; 6—1⅝x4"	11x6¾x1¾"	2½	1.26
26 D 2382	P200	18	1¼x1¼"	8¼x4½x1⅜"	1½	.54
26 D 2383	P618	18	1 5/8x1 15/16"	11x6¾x1¾"	2½	1.28
26 D 2384	P818	18	12—2x2"; 6—2x4 3/16"	13⅛x9x2 5/16"	3	2.07
26 D 2385	P824	24	2x2"	13⅛x9x2 5/16"	3½	2.13
26 D 2095	P166	36	1½x1 1/16x1 9/16"	10x7x1 13/16"	3½	1.41

Rugged, all-plastic boxes with hinged tops. Lightweight, scratch-resistant, easy to clean. One to 36 compartments. Molded of clear polystyrene—"see-thru" feature lets you find what you're looking for. Strong hinge. P250 has removable cover. *Total compartments.

TOOL AND PARTS STORAGE BOXES



D E F

D PARK 15" STEEL UTILITY BOX

MODEL 151T. Handy case for small hand tools. Has lift-out tote-tray. Full-length, electrically welded hinges. Deep drawn seamless construction. Rust-fighting enamel finish. 5⅜x15x6½". Shpg. wt., 5 lbs.
26 D 3660 X......3.49

E PARK 132 TWO-TRAY TOOL BOX

General-purpose steel utility box with rugged nickel-plated hardware. Trays have full cantilever action. 13½x5¾x6½".
26 D 3152 X. Wt., 5 lbs.....2.95
26 D 3153 X. Model 131 Single Tray Tool Box. As above, but with single tray. Size, 13½x4½x6½". Shpg. wt., 3 lbs.....1.95

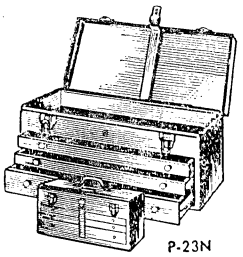
F VLCHEK PLASTIC BOXES

MODEL 1212 TWO-TRAY PARTS BOX. Lightweight, all-purpose small-parts caddy. Boxes and trays are almost indestructible, won't shatter or crack. Impervious to gasoline, oil and salt water. Box opens flat, can't tip. Full-length trays have full cantilever action. Top tray has 9 compartments, bottom has 6. Features retractable handle. Heavy-duty "snap ease" latch. Green case, 12⅜x7x6". Shpg. wt., 2½ lbs.
26 D 1772 X......3.98

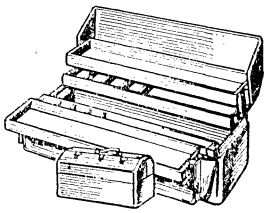
MODEL 1211 SINGLE-TRAY PARTS BOX. Similar to above, but with single 9-compartment tray. 12⅜x7x4⅝".
26 D 3156 X. Wt., 2¼ lbs.....2.98

All-Purpose Tool Chests

PARK



P-23N



2180

MODEL P-23N 3-DRAWER MECHANIC'S CHEST

Heavy-gauge steel chest with electrically-welded seams. Drawers have full suspension slides. Drawers are securely locked when cover is closed and lock hasp and strap are in place. Overall size, 8½x20x10¼". Till in top, 1½x18¼x8½". Drawers are 1½x18¼x7½"; hardware plated. Full-grip steel handle. Silicon-treated baked green enamel finish fights rust. Wt., 18 lbs.

26 D 2506 X. 12.95

26 D 2149 X. Model P-22M. Similar to above but has only two drawers. Size, 2⅜x18¼x7½". Shpg. wt., 16 lbs. 11.95

MODEL 2180 21-INCH 4-TRAY TOOL BOX

Four-tray tool box with huge storage capacity. 21" wide for long items. Has 2 full, and 2 partially partitioned cantilever trays. Storage space below trays. Constructed of heavy-gauge steel with electrically-welded seams. Integral full-length hinge. Two drawbolts, plus padlock eye. Heavily plated hardware. Silicon-treated baked green enamel finish. Size, 10x21x8½".

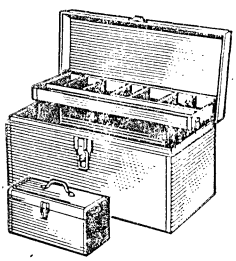
26 D 2144 X. Shpg. wt., 13½ lbs. 11.95

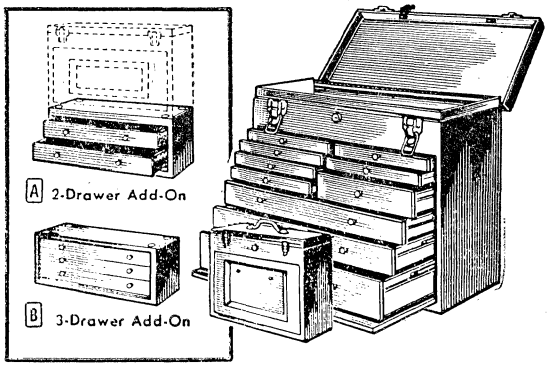
26 D 1774 X. Similar to above, but smaller. Overall size, 10x17x8½". Shpg. wt., 11 lbs. 10.95

MODEL 18-C CANTILEVER TRAY TOOL BOX

All-purpose box with large partitioned cantilever tray for small parts with space for tools below tray. Ideal for shop, car or boat tools. Electronically-welded heavy-gauge steel with cap end construction for extra strength and durability. Lid has integral full-length hinge. Heavy-duty one-piece construction drawbolt with eye for padlocking. Rugged steel carrying handle. Silicon treated baked enamel finish prevents rust and corrosion. Box keeps your tools in order and protects them from damage and theft. Overall size, 8x18x9". Shpg. wt., 9 lbs.

26 D 3150 X. 5.95





MODEL 1000 TEN-DRAWER MACHINIST'S CHEST

- Full-Suspension Drawer Slides
- Pin-Tumbler Lock with Keys
- Removable Felt-Lined Drawers
- Electrically-Welded Case

Loaded with storage space to protect all your tools. Removable front panel slides into bottom compartment when open. Felt-lined drawers on sturdy full-suspension slides remove easily for cleaning. Rugged electrically-welded heavy-gauge steel case with brown baked-on enamel finish that fights rust. One-piece drawbolts, plus pin tumbler lock with keys. Till in top, 4x20x8½". Drawers are 7½" deep. Six drawers, 1x8⅝"; one, 2x8⅝"; three are 18¼" wide by 1½", 2⅜", and 3" high. Overall, 17½x20x8⅝" deep.

26 D 2507 U. Shpg. wt., 40 lbs. 34.95

MODEL 700 7-DRAWER CHEST. Similar to above, with four drawers, 1x8⅝"; one, 2x8⅝"; one, 1½x18¼"; and one, 2⅜x18¼". All drawers are 7½" deep. Overall, 13¼x20x8½" deep.

26 D 2508 U. Shpg. wt., 30 lbs. 29.95

ADD-ON MACHINIST CHESTS

A MODEL 2000 2-DRAWER CHEST. Add-on chest provides more storage area without taking up extra bench space. Can be used with any model machinist chest. Full-suspension drawer slides with spring retainer for easy drawer removal. Removable front panel locks when cover is closed, stores below drawers when open. Pin-tumbler lock with 2 keys. Has two felt-lined drawers, 18¼x2⅜x7½" deep. Overall, 20x7¾x8½" deep; cap., 1318 cu. in.

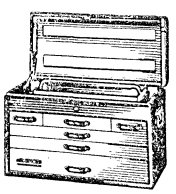
26 D 3712 X. Shpg. wt., 15 lbs. 12.95

B MODEL 3000 3-DRAWER CHEST. Same as above, but with three drawers, 18¼x1½x7½" deep. Overall, 20x7¾x8½" deep.

26 D 3739 X. Shpg. wt., 16 lbs. 14.95

Rem Line TOOL CHESTS AND CABINETS FOR STRENGTH AND MAXIMUM STORAGE

1160



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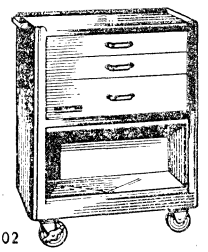


9002

MODEL 1160 12-DRAWER CHEST

Has three full-width, plus nine small drawers. One-piece I-beam slides permit full drawer opening. Divided tote tray, side handles, plated hardware, cylinder lock, L-braced corners. Spot welded cold rolled steel. Gray, with red removable drawers. 26x12⅝x19⅝".

26 D 3945 Z. Wt., 85 lbs. 69.95

MODEL 1100 6-DRAWER CHEST

Six big, removable flush-to-front drawers are 12½" front to back. Three drawers are full-width. Divided tote tray has tubular handle. Cylinder lock. Cold rolled steel, spot welded. Gray; red drawers. 26x12⅝x15½".

26 D 3932 Z. Wt., 61 lbs. 43.50

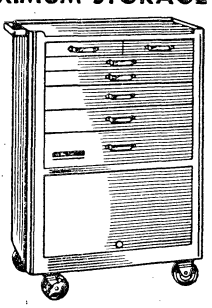
3-DRAWER ROLLER CABINET

MODEL 9002. Provides large storage space, plus full mobility; tools can be rolled right to the work area. Has three full-width drawers, with top two divided for convenience, plus a big covered panel compartment for bulky tools and equipment. Flush-to-front drawers offer maximum storage capacity; lock when panel is locked. One-piece wrap-around construction, with heavy die-formed 16-gauge base. Side handle fits either side of cabinet. Cylinder lock with keys for protection of valuable tools. Baked-on charcoal silicon pigskin finish body, red enamel drawers. Has 4" composition casters for easy rolling. 26¾x17x32¾" high. Wt., 93 lbs.

26 D 3947 Z. 52.50

MODEL 9502 7-DRAWER ROLLER CABINET

- Five Full-Width Drawers, 16¾" Deep
- Storage Compartment with Sliding Panel
- Baked-on Charcoal Silicon Finish
- Rolls Easily on 4" Composition Casters



One of the handiest shop aids ever. Rolls right to the work area on 4" composition casters. For use in repair garages, work shops, home, factory and many other places. Seven roomy, flush-to-front drawers offer room to spare for large tool collections. Five drawers are full-width, two are divided. Sliding panel covers 26¼x12x17"; bottom storage compartment, locks all drawers when closed. Cylinder lock.

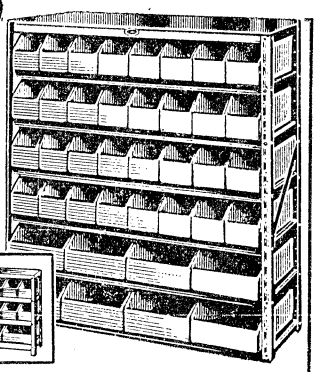
Durably constructed 1-piece I-beam drawer slides, side handle. Baked-on red enamel drawers and baked-on charcoal silicone pigskin-finish body. Two top drawers, each 10½x1¾x16¾". Two drawers, each 21½x1¾x16¾". Two drawers, each 21½x2⅞x16¾". One drawer: 21½x4½x16¾". Overall size: 26¾x17x38" high. Shpg. wt., 121 lbs.

26 D 3949 Z. 79.95

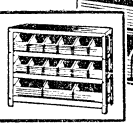
Shelving, Cabinets, Workbench, Carts

EDSAL

- Provide the Most Storage Space at Least Cost
- 40 Drawers in All
- 32 Big 4x11" Drawers and 8 Jumbo 8x11" Drawers
- Heavy-Duty All-Steel Frame



15-Drawer Low-Cost Cabinet



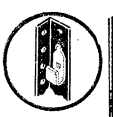
JUMBO-SIZE 40-DRAWER CABINET

Handy parts cabinet has 40 drawers—32 big 4x11" and 8 jumbo-size 8x11" drawers in a portable frame. 4½" high one-piece drawers are sturdy corrugated-board. Stop-tab built into rear of cabinet keeps drawers from being pushed in or pulled out too far. Heavy-duty all-steel frame is 37x36 x12". Shipped knocked down. Easy-to-assemble.

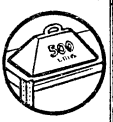
26 D 2145 Z. Shpg. wt., 37 lbs.....17.95

MEDIUM-SIZE 15-DRAWER CABINET. Same general features and construction as cabinet above. Includes 12 big 4x11" drawers and 3 jumbo-size 8x11" drawers. Each drawer is 4½" high. Space-saving size—overall cabinet dimensions are only 26x21x12" deep. Shipped knocked down.

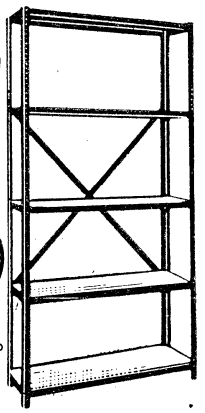
26 D 2470 X. Shpg. wt.,24 lbs..... 6.98



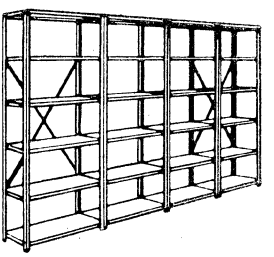
"Kwik-Klip" for Easy Shelf-Height Adjustment



Each Shelf Can Hold Up to 500 lbs.



STEEL STORAGE RACKS



Use these Compact Racks Singly or in Space-Saving Rows

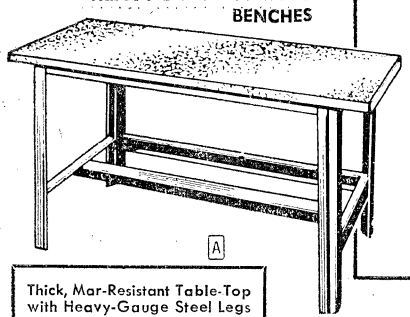
- Very Easy to Assemble
- Rust-Resistant Finish
- Extra Shelves Available

DELUXE HEAVY-DUTY STEEL STORAGE RACKS

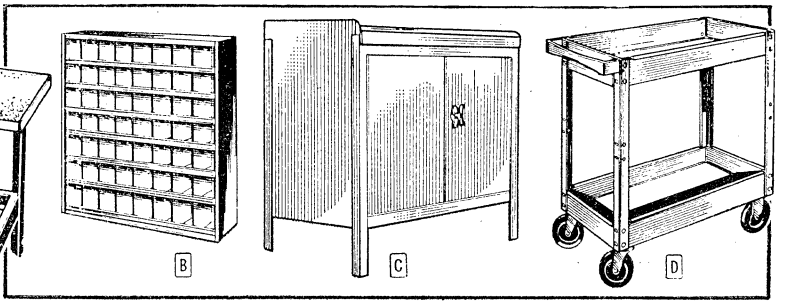
Provide compact storage facilities. Units are complete and independent. Easy to assemble—just bolt the tops and bottoms; shelves are held by unique "Kwik-Klip" fasteners. With 5 shelves; extra shelves, listed below. Posts are punched at intervals for easy shelf height adjustment. 75" high, 36" wide; choice of depth. Gray enamel finish. Deluxe shelves hold up to 500 lbs. each.

26 D 1783 U. With 12"-Deep Shelves. 47 lbs.....9.95
26 D 1784 Z. With 18"-Deep Shelves. 60 lbs.....12.95
26 D 1781 U. 12" Extra Shelf. 6 lbs.....1.69
26 D 1782 U. 18" Extra Shelf. 8 lbs.....2.19

HEAVY-DUTY ASSEMBLY BENCHES



Thick, Mar-Resistant Table-Top with Heavy-Gauge Steel Legs



WORKBENCHES

A 5' WIDE WORKBENCH. 1" thick mar-resistant table-top. Cross-braced and self-supporting. 1-piece heavy-gauge steel legs. Gray, baked-enamel finish is rust-resistant. 34½" high, 60" wide, 24" deep. Order drawers, below. Shipped knocked down. Can be assembled by anyone—no experience needed. Goes together quickly with only simple hand tools. Wt., 76 lbs.

26 D 2563 Z......19.95

STEEL TOP BENCHES

Rugged steel-top benches are suited to every type of heavy-duty bench work—perfect for factory, shop or other industrial applications. Boasts heavy-gauge steel construction to assure you of many years of maintenance-free service. Benches are easily cleaned, will not gouge, become oil soaked, splinter or crack.

Braced and self-supporting. 1-piece heavy-gauge steel legs. Stand 33" high. Rust-resistant gray baked-enamel finish. Shipped knocked down. Assembles easily.

MODEL 5301. 48x30" steel top.
26 D 2260 Z. Shpg. wt., 101 lbs.....29.95

MODEL 5303. 60x30" steel top.
26 D 2261 Z. Shpg. wt., 110 lbs.....34.50

MODEL 5305. 72x30" steel top.
26 D 2262 Z. Shpg. wt., 126 lbs.....35.95

26 D 1103 X. Steel Drawer. For benches above. 18¼x23⅞x5⅜". 22 lbs.....11.98

B 56-COMPARTMENT STAND OR WALL MOUNT SORTING CABINET

MODEL B49. Versatile cabinet solves the sorting problems of offices, mail rooms and shops. Feature 56 separate compartments that are adjustable on 1" centers with snap fasteners. Dividers can be moved to left or right in 1" increments to handle changes in work flow, or can even be removed entirely for wider spacing. Front of each shelf has 1" lip to prevent overflow. Convenient, full-width label holders for compartment identification. Gray, baked-enamel finish. Each compartment is 5¼x4x8¾" deep. Overall, 37½x34¾x9" deep.

26 D 2274 Z. Shpg. wt., 60 lbs.....29.95

C METAL STORAGE CABINET/WORK TABLE COMBINATION

MODEL 59243. Storage cabinet/work table combination serves a wide variety of uses in shops or offices. Provides a handy metal storage cabinet ensuring safe, secure, locked-in storage of valuable tools, materials or papers. Extra-quality chrome-plated door handle features a built-in cylinder lock. Large double doors swing open for easy access to cabinet.

Smooth, sturdy top may be utilized as an all-around work table. Has back and side edge guards to prevent tools and parts from sliding off. Vises, grinders, office machines and small power tools can be easily mounted on top. Constructed of durable, heavy-gauge steel with gray baked-enamel finish. Overall size, 34" high, 36" wide, 24" deep. Cabinet has 18 cu. ft. of storage space. One center shelf, adjustable 1½". Shipped knocked down, assembles easily with ordinary tools.

26 D 1100 Z. Shpg. wt., 110 lbs.....42.50

MODEL 59242 STORAGE CABINET/WORK TABLE. Similar in construction to above, but has single door storage cabinet. Overall size, 34" high, 24" wide, 24" deep.

26 D 1102 Z. Shpg. wt., 80 lbs.....28.75

MODEL 630 STORAGE CABINET/WORK TABLE. Space-saving steel cabinet features 3 adjustable shelves. Door with lock in handle. 34" high, 21" wide, 15½" deep.

26 D 1707 Z. Shpg. wt., 46 lbs.....19.95

D TYPE SC-2024 HEAVY-DUTY SERVICE CART

Rugged, material-handling cart saves steps, time and money in stock rooms, offices. Has 5" heavy-duty, hard-rubber casters—two stationary and two that swivel. Two reversible pan-type trays have rolled edges. Comfortable, formed-steel tubular handle. Finished in gray, phosphatized, baked-on enamel. 32" high. Trays are each 3½" high, 24" wide, and 36" long. 56 lbs.

26 D 1710 Z......24.95

26 D 1711 Z. Type SC 2016. As above, but trays are each 3½x16x30". 32 lbs.....19.95

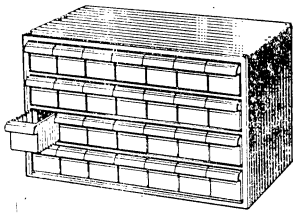
Storage Drawers and Cabinets for Every Need

SPACE-SAVING MODULAR CABINETS . . THE FLEXIBLE WAY TO STORE PARTS

A-M AKRO-MILS

MODULAR CABINETS EXPAND STORAGE CAPACITY AND SAVE SPACE, TIME, LABOR, MONEY

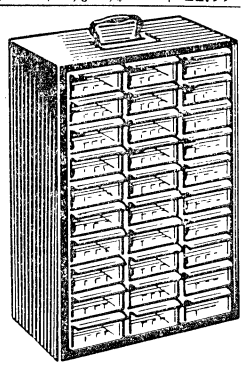
- Drawers Divide To Any Size, Have Safety Catches
- Cabinets Can Be Stacked Vertically
- Welded Frame



Space-saving modular cabinets can be used individually on any flat surface, in rows, or stacked vertically. Keyhole slot permits wall mounting. Rugged, welded steel frame. Opaque gray drawers easily divide to any size with slotted dividers, have no sharp corners; will not bend, sag or crack. Opened drawer is anchored by safety chain to prevent spilling. Gray hammertone finish does not peel or chip. All cabinets are 11x17⅞x11" to permit easy combination and provide a custom, built-in look. Shpg. wt., 22 lbs. each.

Stock No.	Mfr's Type	Drawers No.	Drawers HxWxD	EACH
26 D 1459 X	18-956	6	4¾x5¼x11"	19.99
26 D 1486 X	18-608	8	4¾x4x11"	19.99
26 D 1495 X	18-228	28	2⅛x2¼x11"	22.99

30-DRAWER PARTS CABINET

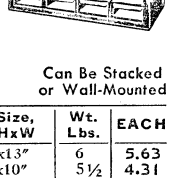


Versatile parts cabinet has hundreds of uses—provides ample storage space for small parts and components, hardware or just about anything. Sturdy construction features a rigid, welded steel frame with durable enamel finish.

"See-Thru" non-spill plastic drawers allow easy identification of contents at a glance. Each drawer is 1¼x2¾x5¾" deep. With plastic dividers, labels. Carrying handle. Overall, 9¾x17x6⅝".

24 D 9028 D. Shpg. wt., 9 lbs. 5.49

UTILITY CABINETS

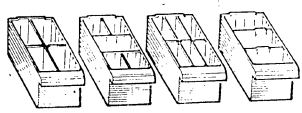


Welded steel-frame cabinets are rugged. Have clear styrene plastic drawers, 2¾x5¾x1¼" each, except *2x2¾x5½". Have adjustable divider that locks tightly in place. Safety tab prevents accidental spilling. Can be wall-mounted. Baked-on silver-gray hammertone finish. With labels and one divider per drawer. All drawers are 6" deep.

Can Be Stacked or Wall-Mounted

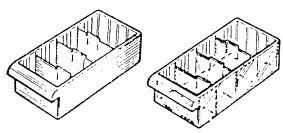
Stock No.	Mfr's Type	No. of Drawers	Size, HxW	Wt. Lbs.	EACH
26 D 2502 X	*11-266	16	9x13"	6	5.63
26 D 1739 X	11-118	18	9x10"	5½	4.31
26 D 1780 X	11-124	24	9x13"	7	5.63
26 D 1975 X	11-148	48	18x13"	12	8.95

MODULAR Design



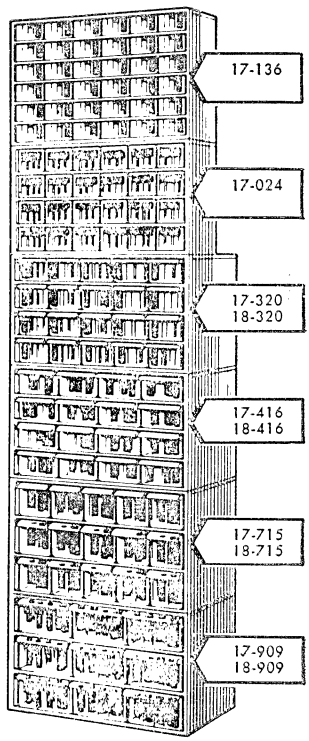
DRAWERS DIVIDE TO ANY SIZE

Dividers are slotted so drawers can be divided lengthwise, crosswise, or crisscross to provide desired size and arrangement of compartments. No sharp corners to cut hands. Will not sag, bend, or crack no matter what you fill them with. Opened drawer anchored by safety catch to prevent spilling.



LOCATE ANY ITEM FAST

Choice of opaque drawers or transparent drawers that let you see inside at a glance. An infinite variety of lengthwise, crosswise, and crisscross compartments and slots for easy labeling. Lets you find stored items with no wasted motion. No searching parts "piles". Eliminates inventory confusion.



MODULAR CABINETS—THE FLEXIBLE WAY TO STORE SMALL PARTS

Akro-Mils introduces a new meaning to storage flexibility. Space-saving cabinets, with built-in look, reduce storage costs and promote greater labor, inventory and production efficiency. Can be used individually on any flat surface, in rows, or stacked vertically, thanks to matching recesses stamped into tops. Keyhole slot permits wall-mounting. Welded steel frame ensures a lifetime of hard usage. Gray hammertone finish does not peel or chip. All cabinets are 17⅞" wide* to permit easy combination. Av. shpg. wt., 15 lbs.

Cabinet H&D*	Drawers No.	Drawers HxWxD In.	With "See-thru" Drawers Stock No.	Type	EACH	With Opaque Drawers Stock No.	Type	EACH
11½x6"	36	1⅛6x2¾x5⅞	26 D 2501 X	17-136	13.49	.....	.....	.....
9⅛x6"	24	2x2¾x5¾	26 D 1700 X	17-024	13.49	.....	.....	.....
11x11"	20	2⅛x3⅛x11	26 D 1705 X	17-320	19.99	26 D 1724 X	18-320	19.99
11x11"	16	2½x4x11	26 D 3749 X	17-416	19.99	26 D 1732 X	18-416	19.99
11x11"	15	3½x3⅛x11	26 D 1720 X	17-715	19.99	26 D 2504 X	18-715	19.99
11x11"	9	3½x5¼x11	26 D 1721 X	17-909	19.99	26 D 2503 X	18-909	19.99

CROSS DIVIDERS FOR AKRO-MILS MODULAR CABINETS

Dividers are slotted so drawers can be divided lengthwise, crosswise, crisscross. Practically any required shape, size within dimensions of drawer can be obtained. **Package of 25, except *50.**

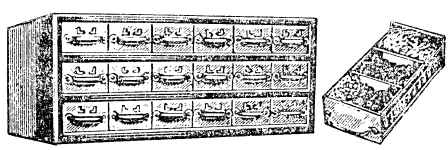
Stock No.	Type No.	For Cabinet No.	Per Pkg.
26 D 3094	42-101	17-136; 18-136*	1.50
26 D 3095	40-401	17-024; 18-024	1.20
26 D 3096	42-301	17-320; 18-320	1.20
26 D 3097	42-401	17-416; 18-416	1.50
26 D 3098	43-101	17-715; 18-715	1.80
26 D 3099	43-301	17-909; 18-909	1.95

EQUIPTO HEAVY-DUTY STORAGE CABINETS

Model 11. Ideal for systematic small parts storage. Drawers are jam-proof; have two cross-dividers that adjust to any 1" interval; large easy-grip handles; label holders. Drawer size, 11x5⅜x3⅛". Cabinet, 13¾x34x12". Heavy-duty, all-steel; olive-green finish. Can be stacked.
26 D 3705 Z. Shpg. wt., 62 lbs. 31.95

Model 22. Same as Model 11, except drawer length is 17", cabinet depth, 18".
26 D 3720 Z. Shpg. wt., 84 lbs. 39.95

Model 8. Same as model 11, except has 8 drawers and cabinet size is 9½x23¼x12". Same easy-access parts storage arrangement.
26 D 3706 U. Shpg. wt., 29 lbs. 19.50



18-Drawer Cabinet

Hardware for the Electronics Industry

SHEET METAL SCREWS. Hex head. Nickel-plated. Slotted, self-tapping. In packages of 100. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	Description	PER PKG/100 1-9	10-49	50Up
26 D 2593	6090-C	4x½″	.99	.79	.71
26 D 1032	6091-C	6x¼″	1.05	.84	.76
26 D 3730	6092-C	6x⅜″	1.07	.86	.77
26 D 1033	6093-C	6x½″	1.13	.90	.81
26 D 3200	6094-C	6x¾″	1.22	.98	.88
26 D 3731	6095-C	8x⅜″	1.25	.99	.89
26 D 1034	6096-C	8x½″	1.29	1.03	.93
26 D 3732	5696-C	8x⅝″	1.30	1.04	.94

ROUND HEAD MACHINE SCREWS. Nickel-plated steel. In packages of 100. 3 oz.

26 D 1024	6005-C	4-36x¼″	.59	.47	.42
26 D 2596	6005-AC	4-40x¼″	.59	.47	.42
26 D 2597	6005-BC	4-40x½″	.66	.53	.48
26 D 3733	6005-CC	4-40x¾″	.77	.62	.56
26 D 1026	6006-C	4-36x½″	.66	.53	.48
26 D 1027	6008-C	6-32x¼″	.64	.51	.46
26 D 1030	6009-C	6-32x½″	.74	.59	.53
26 D 3737	6010-C	6-32x¾″	.86	.69	.62
26 D 2600	6011-C	6-32x1″	.99	.79	.71
26 D 3734	7141-C	6-32x1¼″	1.22	.98	.88
26 D 3736	7148-C	6-32x2″	1.80	1.44	1.30
26 D 2350	6013-C	8-32x¼″	.87	.70	.63
26 D 2601	6014-C	8-32x⅜″	.93	.74	.67
26 D 3747	6015-C	8-32x½″	.99	.79	.71
26 D 3748	6016-C	8-32x¾″	1.11	.85	.80
26 D 2603	6017-C	8-32x1″	1.27	1.07	.96
26 D 3745	6020-C	10-32x½″	1.13	.90	.81
26 D 3746	6021-C	10-32x¾″	1.36	1.09	.98
26 D 2605	6022-C	10-32x1″	1.49	1.19	1.07
26 D 2607	7131-C	2-56x½″	.59	.47	.42
26 D 2351	7132-C	2-56x¾″	.72	.58	.52
26 D 3744	7130-C	2-56x¼″	.56	.45	.41

OVAL HEAD RACK AND CABINET SCREWS. Nickel-plated steel. Supplied in packages of 100. Av. shpg. wt., 1 lb.

26 D 3758	6540-C	6-32x½″	.74	.59	.53
26 D 3759	6541-C	6-32x¾″	.86	.69	.62
26 D 3760	6542-C	8-32x¾″	1.11	.89	.80
26 D 3761	8848-C	10-32x½″	1.13	.90	.81
26 D 3762	5693-C	10-32x⅝″	1.23	.98	.88
26 D 3763	6543-C	10-32x¾″	1.32	1.06	.95

BINDING HEAD MACHINE SCREWS. Nickel-plated steel. In packages of 100. Average shpg. wt, 4 oz.

Stock No.	Mfr's Type	Description	PER PKG/100 1-9	10-49	50Up
26 D 2352	7160-C	2-56x¼″	.62	.50	.45
26 D 2353	7161-C	2-56x½″	.68	.55	.50
26 D 2618	7170-C	4-40x¼″	.63	.50	.45
26 D 3753	7171-C	4-40x½″	.66	.53	.48
26 D 3754	7172-C	4-40x¾″	.77	.62	.56
26 D 3201	7163-C	4-36x¼″	.74	.59	.53
26 D 3202	7164-C	4-36x½″	.74	.59	.53
26 D 3203	7165-C	4-36x¾″	.74	.59	.53
26 D 2620	7151-C	6-32x3/16″	.67	.54	.49
26 D 1035	7152-C	6-32x¼″	.64	.51	.46
26 D 1371	7153-C	6-32x⅜″	.69	.55	.50
26 D 1037	7118-C	6-32x½″	.74	.59	.53
26 D 3755	7173-C	6-32x¾″	.86	.69	.62
26 D 3756	7158-C	8-32x5/16″	.93	.74	.67
26 D 1038	7119-C	8-32x⅜″	.93	.74	.67
26 D 2623	7120-C	8-32x½″	.99	.79	.71
26 D 3757	7176-C	10-32x½″	1.13	.90	.81

NYLON SCREWS

ROUND HEAD MACHINE SCREWS. High-dielectric strength. In pkg. of 100. 8 oz.

26 D 1750	9902-C	4-40x¼″	3.62	2.89	2.60
26 D 1752	9903-C	4-40x½″	3.62	2.89	2.60
26 D 1753	9904-C	4-40x¾″	3.71	2.97	2.67
26 D 1769	9905-C	6-32x¼″	3.62	2.89	2.60
26 D 1770	9908-C	6-32x⅝″	3.71	2.97	2.67
26 D 1996	9909-C	6-32x¾″	3.71	2.97	2.67
26 D 1775	9910-C	8-32x⅜″	3.78	3.02	2.72
26 D 1777	9911-C	8-32x½″	3.78	3.02	2.72
26 D 1778	9912-C	8-32x¾″	3.78	3.02	2.72
26 D 1789	9913-C	10-32x½″	3.78	3.02	2.72
26 D 1790	9914-C	10-32x1″	3.94	3.15	2.84

BINDING HEAD MACHINE SCREWS. Chemical, abrasion resistant. Pkgs. of 100. 8 oz.

26 D 1791	9917-C	4-40x¼″	3.62	2.89	2.60
26 D 1793	9918-C	4-40x½″	3.62	2.89	2.60
26 D 1794	9920-C	6-32x¼″	3.62	2.89	2.60
26 D 1795	9921-C	6-32x⅜″	3.71	2.97	2.67
26 D 1796	9922-C	6-32x½″	3.71	2.97	2.67
26 D 1797	9924-C	6-32x¾″	3.71	2.97	2.67
26 D 1798	9925-C	8-32x⅜″	3.78	3.02	2.72
26 D 1800	9926-C	8-32x½″	3.78	3.02	2.72
26 D 1805	9927-C	8-32x¾″	3.78	3.02	2.72
26 D 1806	9928-C	10-32x½″	3.78	3.02	2.72

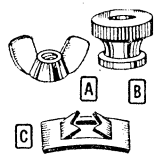
INTERNAL LOCK WASHERS. Cadmium-plated internal lock washers. Star-type. Supplied in packages of 100. O.D. indicates outside diameter. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Screw Size	O.D.	PER PKG/100 1-9	10-49	50Up
26 D 3767	7322-C	No. 2	....	.85	.68	.61
26 D 3768	7323-C	No. 3	....	.74	.59	.53
26 D 1073	7324-C	No. 4	¼″	.54	.43	.39
26 D 1045	7326-C	No. 6	9/32″	.52	.42	.38
26 D 1046	7328-C	No. 8	21/64″	.57	.46	.41
26 D 1047	7330-C	No. 10	⅜″	.57	.46	.41
26 D 2354	7332-C	¼″	15/32″	.77	.62	.56
26 D 2355	7334-C	⅜″	11/16″	1.15	.92	.83
26 D 2356	7335-C	⅜″	9/16″	1.52	1.22	1.10
26 D 2357	7338-C	15/32″	19/32″	1.90	1.52	1.37

EXTERNAL LOCK WASHERS. Cadmium plated for long life and durability. Supplied in packages of 100. Average shpg. wt., 2 oz.

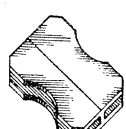
26 D 3221	7354-C	No. 4	....	.52	.42	.38
26 D 3222	7356-C	No. 6	....	.52	.42	.38
26 D 3223	7358-C	No. 8	....	.57	.46	.41
26 D 3224	7360-C	No. 10	....	.57	.46	.41

WING, KNURLED THUMB AND TINNERMAN SPEED NUTS. Wing nuts are nickel-plated steel. Knurled thumb nuts are nickel-plated brass. All are supplied in packages of 100. Average shpg. wt., 8 oz.



Stock No.	Mfr's Type	Fig.	Hole Size	PER PKG./100 1-9	10-49	50-Up
26 D 2358	6658-C	A	6-32	3.22	2.58	2.42
26 D 2359	6655-C	B	6-32	2.75	2.20	1.98
26 D 2360	6052-C	C	No. 6	.95	.76	.69
26 D 2364	6053-C	C	No. 8	.95	.76	.69

TV FUSE CLIPS



Durably constructed fuse clips for a wide variety of electronic uses. Supplied in packages of 100. Av. shpg. wt., 5 oz.

26 D 2367. 1-9.....18.00
10-49..14.40 50-Up..12.96

EYELETS. High-quality brass. Supplied in packages of 100. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	Shank Dia.	Length Under Head	Head Dia.	PER PKG. of 100 1-9	10-49	50-Up
26 D 3764	7251-C	.087″	⅛″	.145″	.34	.27	.24
26 D 3765	7252-C	.087″	5/32″	.145″	.46	.36	.32
26 D 3766	7257-C	.123″	5/32″	.197″	.64	.51	.46

CABLE HOLDER CLAMPS. Nickel-plated. Supplied in packages of 100. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	For Cable Dia.	Mtg. Hole	PER PKG. of 100 1-9	10-49	50-Up
26 D 3903	6251-C	⅛″ to 3/16″	No. 6	1.23	.98	.88
26 D 3904	6252-C	3/16″ to ¼″	No. 8	1.40	1.12	1.01
26 D 3905	7503-C	¼″ to 5/16″	No. 6	1.57	1.26	1.13
26 D 3907	6253-C	5/16″ to ½″	No. 6	1.51	1.21	1.09

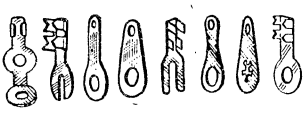
CORD STRAIN RELIEFS. Will fit P.O.S.J. cord. Supplied in packages of 100. Av. shpg. wt., 3 oz.

Stock No.	Mfr's Type	PER PKG. of 100 1-9	10-49	50-Up
26 D 3206	6675-C	6.25	4.99	4.49

VINYL GROMMETS. Resistant to temperature, oils, chemicals. Supplied in pkgs. of 100. Av. shpg. wt., 8 oz.

Stock No.	Mfr's Type	O.D.	I.D.	Groove Width	PER PKG. of 100 1-9	10-49	50-Up
26 D 3908	7030-C	11/32″	⅛″	1/16″	1.08	.86	.77
26 D 3909	7032-C	7/16″	3/16″	1/16″	1.20	.96	.86
26 D 3910	7034-C	9/16″	¼″	1/16″	1.59	1.27	1.14
26 D 3911	7036-C	⅝″	⅜″	1/16″	1.73	1.38	1.24

TINNED SOLDERING LUGS



High-quality low-cost tinned soldering lugs designed for use with screws listed in tables facing page. Types having No. 8 holes also take No. 6 screws. Figures E, H and L may be crimped and used as solderless lugs. In packages of 100. Av. wt., 2 oz.

Stock No.	Mfr's Type	Fig.	Hole Size	Lgth.	PER PKG. of 100 1-9	10-49	50-Up
26 D 2401	1021-AC	H	No. 10	1 1/16″	1.42	1.14	1.07
26 D 2624	1021-BC	E	No. 6	2 1/32″	1.26	1.01	.91
26 D 2626	5703-C	F	No. 6	9/16″	1.07	.86	.77
26 D 2342	5704-C	F	No. 8	9/16″	1.99	1.59	1.43
26 D 3793	5705-C	F	No. 10	1 3/16″	1.99	1.59	1.43
26 D 3207	7445-C	E	No. 8	⅝″	1.43	1.14	1.03
26 D 3794	8473-C	E	No. 10	1 1/16″	1.39	1.11	.99
26 D 2628	1021-CC	F	No. 6	1 1/16″	1.10	.88	.79
26 D 2629	1021-FC	G	No. 6	9/16″	1.10	.88	.79
26 D 3795	7451-C	G	No. 8	9/16″	1.05	.84	.76
26 D 3208	5706-C	G	No. 4	9/16″	1.99	1.59	1.43
26 D 3796	7441-C	L	No. 6	1 1/16″	1.40	1.12	1.01
26 D 2402	7442-C	L	No. 8	1 1/16″	1.35	1.08	.97
26 D 3797	8633-C	D	.....	1 1/16″	1.96	1.57	1.41
26 D 3209	8466-C	H	No. 6	1 9/32″	1.86	1.49	1.34
26 D 3210	7454-C	J	No. 6	⅞″	.78	.62	.56
26 D 3798	7455-C	J	No. 8	⅞″	1.03	.82	.74
26 D 3799	7456-C	J	No. 10	⅞″	1.03	.82	.74
26 D 3211	7462-C	K	No. 6	5/8″	1.27	1.02	.92
26 D 3212	7463-C	K	No. 8	5/8″	1.27	1.02	.92
26 D 2403	7118-CW	.....	No. 8	.....	1.57	1.26	1.13
26 D 2404	7169-C	G	No. 10	1 1/16″	1.02	.82	.74

Use the Services of the Allied Facility Nearest You

Hardware for the Electronics Industry

SNAP-ACTION HOLE PLUGS. Nickel-plated.*Screen vent type. In packages of 100. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Hole Size	PER PKG. of 100 1-9	10-49	50-Up
26 D 2642	1711-AC	1/4"	2.65	2.12	1.91
26 D 2643	1711-BC	5/16"	2.84	2.27	2.04
26 D 2644	1711-C	3/8"	3.01	2.41	2.17
26 D 3790	1712-C	1/2"	3.65	2.92	2.63
26 D 2646	1713-C	5/8"	3.92	3.14	2.83
26 D 3791	1714-C	3/4"	3.95	3.16	2.84
26 D 3792	1715-C	1 1/4"	7.65	6.12	5.51
26 D 2649	*1708-C	1"	25.34	20.27	18.24

STEEL HEXAGON NUTS. Nickel-plated steel. Accurately threaded. In packages of 100. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Thread	Width	Thickness	PER PKG. of 100 1-9	10-49	50-Up
26 D 2335	7225-C	2-56	3/16"	1/16"	.81	.65	.59
26 D 3769	7226-C	3-48	3/16"	1/16"	.81	.65	.59
26 D 1039	6041-C	4-36	1/4"	3/32"	.81	.65	.59
26 D 2635	6041-AC	4-40	1/4"	3/32"	.81	.65	.59
26 D 2407	8804-C	4-40	3/16"	1/16"	.80	.64	.58
26 D 1043	6042-C	6-32	1/4"	3/32"	.81	.65	.59
26 D 3214	7320-C	6-32	5/16"	7/64"	.88	.70	.63
26 D 1044	6043-C	8-32	1/4"	3/32"	.81	.65	.59
26 D 3770	7232-C	8-32	5/16"	7/64"	.88	.70	.63
26 D 3215	7233-C	8-32	11/32"	1/8"	.86	.69	.62
26 D 1042	6044-C	10-32	3/8"	5/64"	1.15	.92	.83
26 D 2413	6049-C	10-32	3/8"	1/8"	1.07	.86	.77
26 D 3775	6050-AC	3/8-32	9/16"	3/32"	1.74	1.39	1.25
26 D 3776	6050-BC	15/32-32	9/16"	5/64"	2.14	1.71	1.54
26 D 2408	7235-C	1/4-20	7/16"	3/16"	1.48	1.18	1.03

BRASS HEXAGON NUTS. Solid brass, not plated. Supplied in packages of 100. Av. shpg. wt., 8 oz.

26 D 2430	7241-C	2-56	3/16"	1/16"	1.20	.96	.88
26 D 3771	7244-C	4-40	1/4"	3/32"	1.40	1.12	1.01
26 D 3772	7245-C	6-32	1/4"	3/32"	1.39	1.11	.99
26 D 2431	5697-C	6-32	5/16"	7/64"	1.70	1.36	1.22
26 D 2432	5698-C	8-32	1/4"	3/32"	1.42	1.14	1.03
26 D 3773	7248-C	8-32	5/16"	7/64"	1.67	1.34	1.21
26 D 3774	7249-C	10-32	3/8"	1/8"	1.83	1.46	1.31

MOUNTING NUTS. Nickel-plated steel. Supplied in packages of 100 nuts. Av. shpg. wt. per pkg., 8 oz.

26 D 2440	6050-AC	3/8-32	9/16"	3/32"	1.78	1.42	1.28
26 D 3777	6050-CC	15/32-32	.....	1/16"	4.12	3.30	2.99

NYLON HEX NUTS

26 D 1807	9953-C	2-56	3/16"	1/16"	5.72	4.58	4.12
26 D 1808	9954-C	4-40	1/4"	3/32"	5.84	4.67	4.20
26 D 1809	9955-C	6-32	5/16"	7/64"	5.95	4.76	4.28
26 D 1811	9956-C	8-32	7/16"	1/8"	6.06	4.85	4.37
26 D 1812	9957-C	10-32	3/8"	1/8"	6.13	4.90	4.41

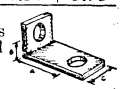
NYLON WASHERS

26 D 1813	9958-C	No. 4	1/4"	.050"	.66	.53	.48
26 D 1814	9959-C	No. 6	5/16"	.050"	.73	.58	.52
26 D 1820	9960-C	No. 8	3/8"	.050"	.97	.78	.70
26 D 1821	9961-C	No. 10	7/16"	.060"	1.12	.90	.81

SPADE BOLTS OR MOUNTING SCREWS. Nickel-plated steel. In packages of 100. Av. wt., 8 oz.

Stock No.	Mfr's Type	Thread	Overall LxW	PER PKG. of 100 1-9	10-49	50-Up
26 D 2489	6082-C	6-32	7/8x1/4"	3.45	2.76	2.48
26 D 2490	6084-C	8-32	15/32x11/32"	7.99	6.39	5.75

ANGLE BRACKETS. Quality constructed angle brackets for use in a wide variety of industrial ways. Supplied in packages of 100. Average shpg. wt., 10 oz.



Stock No.	Mfr's Type	Screw Size	Mtg. Ctr. to bend	PER PKG. of 100 1-9	10-49	50-Up
26 D 2494	6261-C	No. 6	1/4. 3/16"	1.35	1.08	.97
26 D 2495	6262-C	No. 6	3/8. 1/4"	1.69	1.35	1.21
26 D 2498	6263-C	No. 6	1/2. 7/16"	1.90	1.52	1.37

SPLIT LOCK WASHERS. Cadmium plated. Supplied in packages of 100. Av. shpg. wt., 2 oz.

Stock No.	Mfr's Type	Screw Size	O.D.	PER PKG. of 100 1-9	10-49	50-Up
26 D 3778	6503-C	No. 4	3/16"	.69	.55	.49
26 D 3779	6506-C	No. 10	5/16"	.64	.51	.46
26 D 3219	6504-C	No. 6	15/64"	.56	.45	.41
26 D 3220	6505-C	No. 8	11/32"	.56	.45	.41

METAL WASHERS. Nickel-plated metal washers. Designed for use with screw sizes indicated. Supplied in packages of 100 washers. Av. shpg. wt., 2 oz.

26 D 2631	6154-C	No. 4	9/32"	.54	.43	.39
26 D 2632	6155-C	No. 6	3/8"	.54	.43	.39
26 D 2633	6156-C	No. 8	7/16"	.59	.47	.42
26 D 3218	7306-C	No. 10	3/8"	.56	.45	.41
26 D 2634	6157-C	No. 10	1/2"	.59	.47	.42

FINISHING WASHERS. Nickel-plated cup type metal washers. Supplied in pkgs. of 100. Av. shpg. wt., 8 oz.

26 D 3780	6161-C	No. 6	7/16"	.56	.45	.41
26 D 3781	6162-C	No. 8	1/2"	.59	.47	.42
26 D 3782	6163-C	No. 10	9/16"	.67	.54	.49

EXTRUDED FIBRE WASHERS. Overall thickness, .062". Supplied in boxes of 100. Av. shpg. wt., 2 oz.

26 D 3225	6525-C	No. 6	5/16"	1.05	.84	.76
26 D 3226	6526-C	No. 8	3/8"	1.05	.84	.76
26 D 3227	6527-C	No. 10	7/16"	1.13	.90	.81
26 D 3228	6528-C	1/4"	1/2"	1.13	.90	.81
26 D 3229	6529-C	3/8"	5/8"	1.18	.94	.85

FLAT FIBER WASHERS. Have 1/32" thickness except Types 6516-C and 6517-C, 3/64". Wt. per pkg. of 100, 8 oz.

26 D 3783	6513-C	No. 6	1/4"	.59	.47	.42
26 D 3784	6514-C	No. 8	3/8"	.59	.47	.42
26 D 3785	6515-C	No. 10	3/8"	.59	.47	.42
26 D 3786	6516-C	No. 1/4"	1/2"	.64	.51	.46
26 D 3787	6517-C	No. 3/8"	39/64"	.92	.74	.67

RUSSELL INDUSTRIES RUBBER HARDWARE

RECESSED BUMPERS. Molded of a rubber and synthetic rubber compound. Eliminate rattles, microphonics, scratching of surfaces. Long life. Recessed design keeps nail or screw out of sight. *Indicates types supplied with washer insert. Supplied in packages of 100. 8 oz.

A B

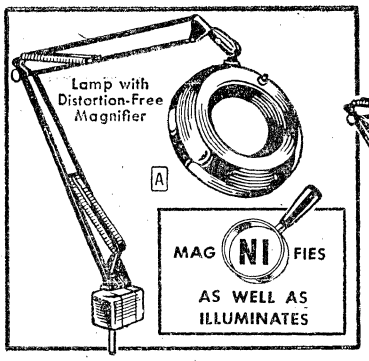
Stock No.	Fig.	Max. Dia.	Hgt.	Head Depth	Shaft Depth	Base Opening	Shaft Width	Per Pkg., 100 1-9	10-49
26 D 3983	A	3/8"	1/4"	3/16"	1/16"	1/4"	5/32"	1.98	1.58
26 D 3984	A	5/8"	1/2"	1/4"	1/4"	5/16"	5/32"	2.31	1.85
26 D 3985	*A	5/8"	1/2"	1/4"	1/4"	5/16"	5/32"	3.96	3.19
26 D 3986	A	5/8"	5/8"	7/16"	3/16"	5/16"	.147"	3.63	2.80
26 D 3991	*A	3/4"	3/8"	3/16"	3/16"	7/16"	3/16"	6.77	5.42
26 D 3992	*A	15/16"	5/8"	7/16"	3/16"	7/16"	7/32"	10.56	8.45
26 D 3993	B	3/8"	3/16"	3/32"	3/32"	5/16"	5/64"	.99	.79
26 D 3995	B	1/2"	1/4"	1/8"	1/8"	1/4"	1/8"	1.65	1.32
26 D 3996	*B	1/2"	1/4"	1/8"	1/8"	1/4"	1/8"	2.81	2.24
26 D 3997	*B	5/8"	5/16"	3/16"	1/8"	1/4"	3/16"	3.80	3.04
26 D 3998	B	5/8"	5/16"	3/16"	1/8"	1/4"	1/8"	2.15	1.72
26 D 3269	B	3/4"	3/8"	3/16"	3/16"	5/16"	5/32"	3.30	2.64
26 D 3960	*B	3/4"	3/8"	3/16"	3/16"	5/16"	5/32"	5.28	4.22
26 D 3961	*B	13/16"	1/2"	1/4"	1/4"	5/16"	5/32"	6.77	5.41
26 D 3962	B	1"	1"	5/8"	3/8"	5/16"	5/32"	8.42	6.73
26 D 3963	*B	1"	1"	5/8"	3/8"	5/16"	5/32"	10.89	8.71
26 D 3964	*B	1"	1 1/2"	5/8"	7/8"	5/16"	5/32"	16.23	12.94

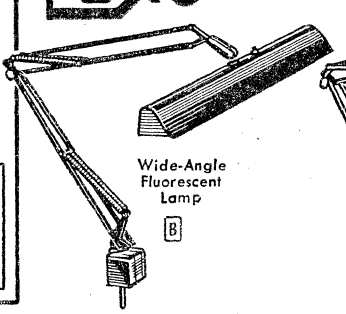
RUBBER GROMMETS. Used to prevent wire from touching the sides of chassis of electronic equipment. Supplied in packages of 100. Av. shpg. wt., 8 oz.

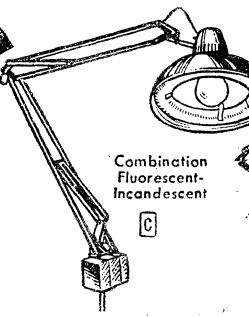
Stock No.	Mfr's Type	O.D.	I.D.	Groove W.	Groove Dia.	PER PKG., 100 1-9	10-49
26 D 3921	GOB-2104	11/32"	7/64"	1/16"	13/64"	1.49	1.19
26 D 3923	GOB-2105	11/32"	1/8"	1/16"	3/16"	1.65	1.32
26 D 3924	GOB-210	11/32"	1/8"	3/16"	1/4"	2.97	2.38
26 D 3925	GOB-215	7/16"	3/16"	1/16"	5/16"	1.98	1.58
26 D 3926	GOB-2173	1/2"	3/16"	1/16"	5/16"	2.48	1.98
26 D 3927	GOB-2172	1/2"	1/4"	1/32"	5/16"	2.48	1.98
26 D 3928	GOB-220	9/16"	1/4"	1/16"	3/8"	2.64	2.11
26 D 3929	GOB-2211	9/16"	9/32"	1/16"	13/32"	3.14	2.51
26 D 1822	GOB-3251	5/8"	1/4"	1/8"	3/8"	4.95	3.96
26 D 3937	GOB-2252'	5/8"	5/16"	1/16"	7/16"	3.96	3.17
26 D 3938	GOB-2258	5/8"	3/8"	1/16"	17/32"	3.14	2.51
26 D 1826	GOB-2261	3/4"	1/4"	1/16"	9/16"	4.29	3.43
26 D 3939	GOB-1101-1	3/4"	3/8"	1/8"	17/32"	5.45	4.36
26 D 3980	GOB-1101	3/4"	7/16"	1/16"	9/16"	4.46	3.56
26 D 1827	GOB-230	13/16"	1/2"	1/16"	5/8"	5.28	4.22
26 D 3981	GOB-1102	1 1/16"	1/2"	1/16"	13/16"	7.76	6.20
26 D 1828	GOB-1102-2	1 1/16"	1/2"	1/8"	13/16"	7.76	6.20
26 D 3982	GOB-1103	1 1/8"	5/8"	1/16"	7/8"	11.55	9.24
26 D 1835	GOB-1104	2 1/8"	1 1/2"	1/16"	1 3/4"	24.09	19.28
26 D 1837	GOB-1105	1 1/8"	13/16"	3/64"	15/16"	11.55	9.24

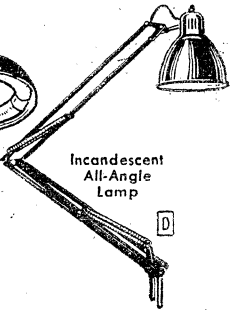
Write, Wire or Phone for Prices on Larger Quantities

LUXO® Adjustable Lamps







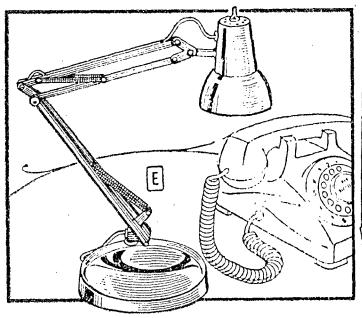


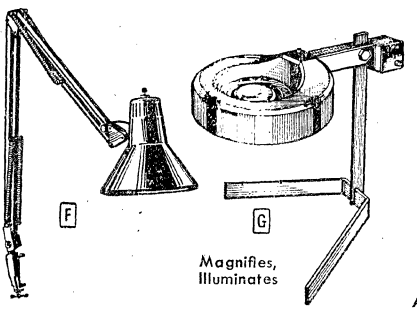
A MODEL LFM-1 MAGNIFIER LAMP. Fluorescent lamp with distortion-free 5" magnifier. Ideal for miniature component assembly, inspection. Spring-balanced 18" arms have 45" reach, sweep 360°. Move at a touch, then stay put. 3-diopter, bi-convex precision ground lens. Gray finish. U.L. Listed. With 6-ft. cord, fluorescent tube. Mtg. bracket below, right. For 110-120 V, 60 Hz. Wt., 8 lbs.
26 D 3169 X. 1-2.....Each 36.45 3-Up.....Each 32.90

B MODEL FL-1 FLUORESCENT LAMP. Sturdy 2-tube lamp for office, drafting room or home. Spring-balanced arms stay put. Full 45" reach. Swivels 360°. Gray finish. 6-ft. cord. Two fluorescent tubes. Order mounting brackets below, right. U.L. Listed. For 110-120 V, 60 Hz AC. Shpg. wt., 8 lbs.
26 D 3166 X. 1-2.....Each 25.95 3-Up.....Each 23.57

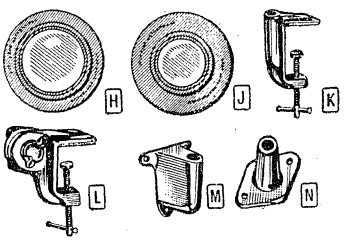
C MODEL LC-1 COMBINATION LAMP. Features circular fluorescent tube plus incandescent bulb. Fluorescent and incandescent lights can be used individually or together. 45" reach; sweeps 360°. Gray finish. U.L. Listed. With fluorescent tube. Order mounting brackets below. For 110-120 V, 60 Hz AC. Shpg. wt., 7 lbs.
26 D 3167 X. 1-2.....Each 26.95
3-Up.....Each 24.45

D MODEL LB-1 INCANDESCENT LAMP. Adjusts with slight touch of the hand, then stays put. Has 45" reach; swivels 360°. Vented 4½" shade. Disposable inner reflector. U.L. Listed. Uses standard incandescent bulbs. Order mounting bracket below. For 110-120 V, 60 Hz AC. Shpg. wt., 5 lbs.
26 D 2096 X. 1-2.....Each 16.50 3-Up.....Each 14.95





ACCESSORIES FOR LUXO LAMPS



E "LUXO LIL" DESK LAMP

- Improves Lighting and Efficiency
- Perfectly Balanced, Holds Position
- Vented Shade Keeps Cool Temperature

Petite-sized high-intensity lamp swings, swivels and stretches into the exact position you want, at the touch of a hand. Hundreds of uses in office, home or school. Directs light *exactly* where it's needed to improve lighting and efficiency. Vented design keeps shade cool even under continuous use. Fully extended, 24"; base, 7". Cheerful red finish. With 40S11 bulb. Shpg. wt., 5 lbs.
26 D 3278 X.....14.95
26 D 2376. Spare "Lil" Bulb. 4 oz.....66¢

F MODEL CS-1A CROWN LITE. Fine all-purpose lamp that adjusts with finger touch. Extends a full 40". Vented shade stays cool. Uses standard 60-watt incandescent bulb. Modern styling with attractive stone gray finish. Clamp mounting. For 110-120 V, 60 Hz. AC.
26 D 3168 X. Shpg. wt., 5½ lbs.....13.45

G HFM-ST HAND STAND MAGNIFIER. Combination fluorescent lamp and magnifier has 3-diopter, bi-convex precision ground 5" lens. Ideal for reading fine print, assembly work and inspection of miniature parts. Balanced hand stand. With cord and fluorescent tube. U.L. Listed. 117 VAC. 6 lbs.
26 D 2041 X. 1-2.....Each 31.35
3-Up.....Each 28.45

AUXILIARY LENSES. For use with HFM-ST or LFM-1 lamps. Clip onto underside of shade for more magnification. Plano-convex lens. With clip. *Diopter. Shpg. wt., 1 lb.

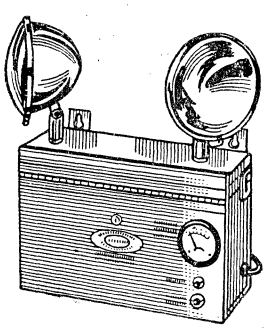
Stock No.	Type	*	Fig.	EACH
26 D 2134	1	4	H	6.56
26 D 2143	2	8	J	7.90

LAMP BRACKETS. For mounting Luxo adjustable lamps. Figures (K) and (L) are clamps; (M) and (N) are screw type. *Mounting surface. Shpg. wt., 1½ lbs.

Stock No.	Type	*	Fig.	EACH
26 D 2992	A	Flat	K	1.68
26 D 2995	F	Slanted	L	2.62
26 D 2993	B	Vertical	M	1.68
26 D 2994	C	Flat	N	1.68

BIG BEAM EMERGENCY LIGHTS FOR OFFICE, SHOP, FACTORY

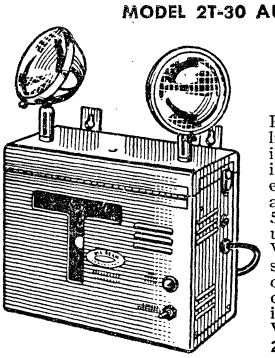
MODEL 2-75 POWER FAILURE LIGHT



- Covers 5000 sq. ft.
- No Maintenance Required
- Long-Life Dry Cell Battery

Insure against power failure with instant automatic emergency lights at low cost. Plugs into AC outlet. If power fails, two 7½-V battery-operated lights operate 5 hours; each covers 2500 sq. ft. Test switch checks 5" lights, battery. Steel cabinet, 11¾x4 7/16x7⅜"; 14⅜" high overall. Mtg. brackets, cord. U.L. Listed. Less battery. Wt., 8 lbs.
26 D 3690 X......27.40
18 D 5584. 4F5H Battery for Above Shgp. wt., 7½ lbs..4.86

MODEL 2T-30 AUXILIARY LIGHT



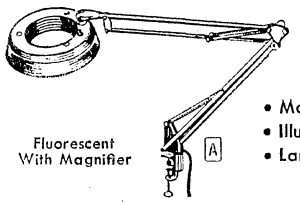
- Recharges on Standard 117 VAC Outlet
- Covers 10,000 sq. ft.

Extra heavy-duty emergency light gives you instant, automatic illumination when power supply is interrupted. Rechargeable emergency light battery operates at 30 amp. per hour (lead acid). 5" sealed beam heads illuminate up to 10,000 sq. ft. for 3¾ hours. Wall mounting bracket, test switch, power supply light, cut-off switch, and tapering rate charger. Gray baked enamel finish. Overall size, 12x6x15" high. Wt., 42 lbs.
26 D 3204 U......80.10

Allied Is America's Headquarters for Everything in Electronics

Lamps, Fixtures to Fit Every Need

SWING-O-LITE ADJUSTABLE MULTI-PURPOSE LAMPS

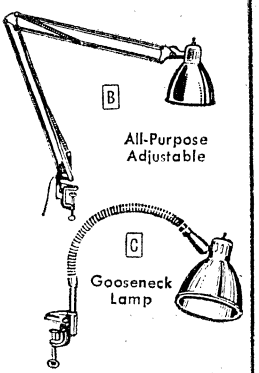


Fluorescent With Magnifier

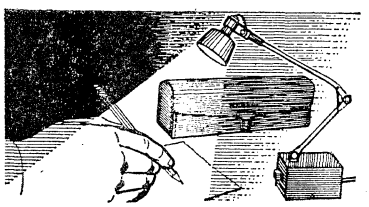
A MODEL BBM-9 FLUORESCENT MAGNIFIER LAMP. Provides distortion-free magnification and cool fluorescent light. Large 5" lens with 13" focus. Arms extend to 45" for full coverage. Spring-controlled and counter-balanced for easy positioning. All-metal construction with "C" mounting clamp. Finished in gray. Fluorescent tube included. U.L. Listed components. For 110-120 volts, 60 Hz AC. Shpg. wt., 10 lbs.
26 D 3175 U. 1-2.....Each 29.95
3-Up.....Each 26.95

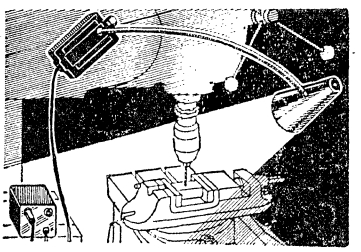
B MODEL BB45C ALL-PURPOSE LAMP. Low-cost lamp, perfect for the service bench, desk or workshop. Raises, lowers and turns at slightest pressure of the hand. Spring-controlled for proper flexibility, steady positioning. Arms extend to 45" for full coverage. Shade is vented for rapid heat dissipation. With "C" mounting clamp. Gray finish. Uses incandescent bulb. U.L. Listed components. 110-120 V, AC/DC. Shpg. wt., 5 lbs.
26 D 3173 X. 1-2...Ea. 13.95 3-Up...Ea. 12.60

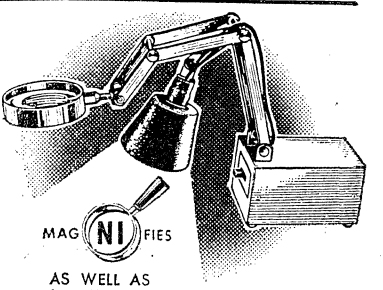
C GOOSENECK LAMP. Extreme flexibility lets you put light where it does the most good. Lamp shade rotates on joint to direct light. Gooseneck extends over 30° circle. Uses 60 to 100-watt bulb. All-metal construction. On-Off switch on top of vented shade. Finished in dove gray baked enamel. With "C" clamp for easy mounting. Uses incandescent bulb. U.L. Listed components. For operation from 110-120 volts, AC/DC. Shpg. wt., 5 lbs.
26 D 3174 X. 1-2....Ea. 8.15 3-Up....Ea. 7.58



ROXTER MINIATURE HI-INTENSITY LAMPS


Glare-Free Low Voltage Light Where You Want It





AS WELL AS ILLUMINATES

SUBMINIATURE HI-INTENSITY LAMP

MODEL 5979. Our smallest lamp. For use where space is extremely limited. Gives 80 fc intensity at 6"; up to 2000 fc when used with microscopes. Arm and reflector each swivel 180°; arm extends 10". Only 6½x 2x3½", folded. Weighted magnet-base. With three #55 6-V bulbs. Step-down transformer. For 105-130 VAC.
26 D 3198. Shpg. wt., 2 lbs.....9.50

MAGNETIC-BASE UTILITY LAMP

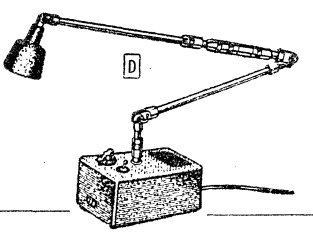
MODEL 6480. Magnetized base mounts directly on machines, etc. 12" chromed gooseneck adjusts to any position. 45 footcandles at 12". All-metal, black finish. Separate step-down transformer has on-off switch, pilot light. 5-ft. cord between lamp, transformer. With #93 bulb. For 115 VAC.
26 D 3196. Shpg. wt., 3 lbs.....16.95
26 D 3147. Extra Bulbs. 2 oz.....Pkg. 2/.49

HIGH-INTENSITY LAMP/MAGNIFIER

MODEL 7175. Concentrated glare-free light, almost the equivalent of daylight. Features 2½" magnifier with 7" focal length for close detail work. Magnifier arm swivels vertically and magnifier rotates on its axis. Independent movement of lamp head and magnifier. Hi-Lo switch for 500 or 250 footcandles. 2½x2½x10" folded. All-metal construction; nylon feet. With one 6-V #1133 bulbs. Built-in stepdown transformer. For 110-120 V, 60 Hz AC. Shpg. wt., 3 lbs.
26 D 1810.....19.95
26 D 3149. Extra Bulbs. Wt., 3 oz. Pkg. 2/.62

PROFESSIONAL HI-INTENSITY LAMP

MODEL 5900. Offers the ultimate in intensity, color, temperature and mechanical positioning. Five intensities—up to 7000 foot-candles. Plug-in lamp arm swivels 360° vertically and horizontally. AC convenience outlet on base. All-metal with neutral wrinkle finish; non-scratch nylon feet. Designed for safe, cool low-voltage operation. With one #1133 bulb. Built-in transformer. 110-120 V, 60 Hz AC.
26 D 3197. Shpg. wt., 3 lbs.....39.95



HIGH-INTENSITY LAMP WITH 4½" MAGNIFIER

MODEL 7176. As above, with big 4½" dia. lens. Equivalent to 200 watts in high range. With one #1133 6-volt bulbs. For 110-120 volts, 60 Hz AC.
26 D 2220. Shpg. wt., 3 lbs.....23.95

FLUORESCENT LIGHT FIXTURES

Includes Fluorescent Tubes

Fluorescent Tubes Included

MODEL 240 WORKSHOP FIXTURES

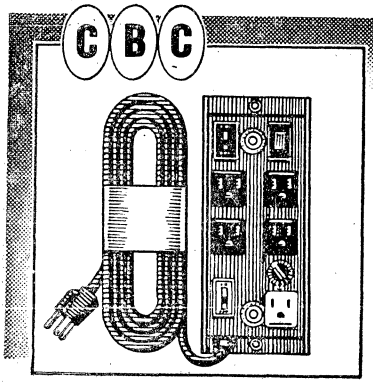
High-intensity rapid-start fluorescent fixture includes 6-ft. SJ power cord and pull-chain switch. Plugs into existing outlet, no wiring to do. With two 40-watt 48" T-12 fluorescent tubes. New "P" rated ballast with automatic thermal protection. Can be hung on chains, flush-mounted separately, or mounted end-to-end in rows. Includes knock-outs for wiring connectors. Size, 13x4¾x48" long. Complete with reflector, ballasts and fluorescent tubes. White enamel finish. U.L. Listed. For 110-120 volts, 60 Hz AC. Shpg. wt., 15 lbs.
26 D 1922 U.....Each 15.95 3-Up.....Each 14.45
MODEL 240 HRS. Same as above fixture, but without SJ power cord and switch. Shpg. wt., 15 lbs.
26 D 2546 U.....Each 13.95 3-Up.....Each 12.55

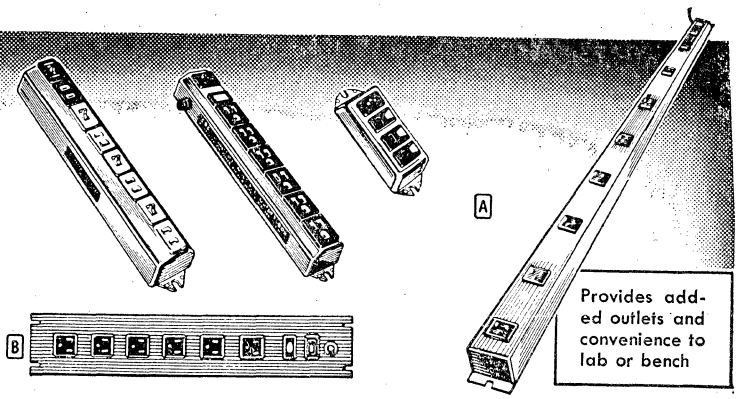
STRIP LIGHT FIXTURES

Can be mounted flush or suspended from walls or ceilings. New tilt-type sockets—completely wired. Normal power factor. Rapid start type with "P" rated ballast and automatic thermal protection (except Type ST-120 with pre-heat starter). White baked enamel finish. Size, 2¾" wide x1¾" deep. With fluorescent tube (Type ST-240 has two). U.L. Listed. For 117 VAC.

Stock No.	Mfr's Type	Watts	Lgth.	Wt., Lbs.	EACH 1-2	EACH 3-Up
26 D 1746 X	ST-120	20	24"	3½	4.09	3.69
26 D 1747 X	ST-140	40	48"	8	7.49	6.89
26 D 1748 X	ST-240	(2)40	48"	14	12.49	11.29

Multiple-Outlet Boxes and Electrical Devices





POWER CONTROL CENTER

Speedtrol. Controls the speed of portable electric belt sanders, drills, etc. . . any device or portable tool which uses an AC-DC universal motor, not exceeding 7 amps. Controls from 3% to 50% of full speed. Plugs into any 120 volt AC wall outlet. Just plug the power tool into the Speedtrol and it's ready for use. In "On" position, full speed is obtained. In "Off" position, speed can be brought down by rotating the control knob. Separate on-off switch controls entire unit including four independent AC "U" ground outlets. 5 amp. circuit breaker protects speed control section. 15 amp. circuit breaker for entire unit.
26 D 1731. Wt., 2½ lbs. **12.95**

B RACK-MOUNT CONTROL PANEL

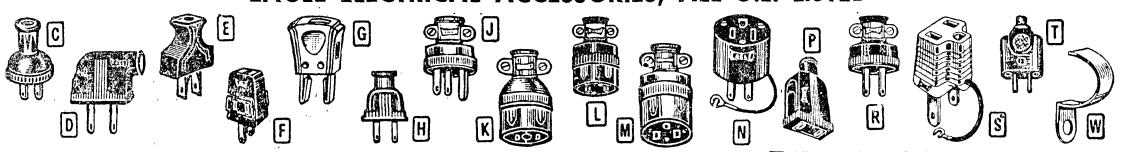
Rack mounted control panel has one master switch which controls power to six "U" type grounded outlets. Pilot light shows when power is on. 10′ cord. 3½x9″. 6 lbs.
26 D 1240. TR-MO-GD-10. Fuse type. **10.95**
26 D 1241. TR-MO-GD-CB-10. Circuit-breaker type. **11.95**

A CBC MULTIPLE-OUTLET CONVENIENCE BOXES

Extend electrical power to lab or bench. Rated 15 A @ 130 V. On/off switches. **Series MO and SS.** MO-3 has one switch for three 2-wire outlets and plug. SS and SS-CB have individually switched color-coded 2-wire outlets. MO-GD and MO-GD-CB have pilot light, switch, 3-wire, "U" ground outlets with 3-wire plug. 13x2x1½″, 10-ft. cord, except MO-3, 5x2x1½″, 6-ft. cord. **Series LL.** 4-ft. boxes with 3-wire "U" ground outlets, switch and neon pilot light, 10-ft. cord. 8 outlets or 15. LL-SS-GD-CB-8-10 has individually switched outlets. *Individual pilot lights. 49x2x1½″. Steel cases.

Stock No.	Mfr's Type	Lgth.	No. of Outlets	Outlets 2-Wire	Outlets 3-Wire	Fused	Circuit Breaker	Indiv. Switched Outlets	Wt., Lbs.	EACH
26 D 1951	MO-3	5″	3	X		X			1½	3.75
26 D 1950	SS	13⅛″	4	X		X		X	2¼	6.25
26 D 1948	MO-G-D*	13⅛″	6		X	X			2¾	7.95
26 D 1949	MO	13⅛″	6	X		X			2¼	6.25
26 D 2199	SS-CB	13⅛″	4	X			X	X	2¼	8.57
26 D 2197	MO-GD-CB*	13⅛″	6		X		X		2¾	10.29
26 D 2198	MO-CB	13⅛″	6	X			X		2¼	8.57
26 D 2250 X	LL-GD-8-10	49″	8		X	X			6	14.95
26 D 2252 X	LL-GD-CB-8-10	49″	8		X		X		6	15.95
26 D 2253 X	LL-GD-15-10	49″	15		X	X			6	18.95
26 D 2300 X	LL-GD-CB-15-10	49″	15		X		X		6	20.95
26 D 2301 X	LL-SS-GD-CB-8-10	49″	8		X		X	X	6	19.95
26 D 2302 X	LL-SS-PL-GD-8-10*	49″	8		X		X	X	6	20.95
26 D 1234	ML-SS-GD-10	13⅛″	7		X	X		X	3	15.50
26 D/1236	ML-SS-GD-CB-10	13⅛″	7		X		X	X	5	16.50

EAGLE ELECTRICAL ACCESSORIES, ALL U.L. LISTED



C RUBBER HANDLE PLUG. Approved for 2-wire 15 amp use. Use with Fig. L for extension cords. 2 per pkg. 8 oz.
26 D 3721. 1-9 Pkgs. . . . . Ea. .29
10-Up Pkgs. . . . . Ea. .26

D FLAT RUBBER SIDE-OUTLET PLUG. Prongs molded into vinyl; insulated binding screws. Rated 15 amps at 125 volts. 2 per pkg. Shpg. wt., 4 oz.
26 D 3722. 1-9 Pkgs. . . . . Ea. .33
10-Up Pkgs. . . . . Ea. .29

E BAKELITE PLUG. With finger-grip. Cap size, 1⅛x1 7/16x1 9/16″. Screw terminals. 15 amps. Brown. 2 per Pkg. 8 oz.
26 D 3723. 1-9 Pkgs. . . . . Ea. .23
10-Up Pkgs. . . . . Ea. .20

F VINYL CUBE TAP. Brass spring prongs. 3-way outlet. Rated 15 amps at 125 volts. Shpg. wt., 8 oz.
26 D 3724. 1-9 . . Ea. .22 10-Up . . . . Ea. .19

G JIFFY PUSH-PULL PLUG. No wire stripping. Push POSJ cable through hole in cap. Pull for positive connection. 6 oz.
26 D 2542. 1-9 . . Ea. .09 10-Up . . . . . Ea. .08

H FLAT RUBBER PLUG. Molded cap. Easily disassembled. Screw terminal wiring. Rated 15 amps at 125 V; 10 amps at 250 V. 2 per pkg. Shpg. wt., 6 oz.
26 D 3725. 1-9 Pkgs. . . . . Ea. .29
10-Up Pkgs. . . . . Ea. .26

J PARALLEL GROUND PLUG. Rubber handle. "U" ground. 3-wire. Two fit standard duplex receptacle. 2 oz.
26 D 3717. 1-9 . . Ea. .45 10-Up . . . . Ea. .40

K RUBBER LINE CORD CONNECTOR. Dia., 1¼″. Rated 15 amps at 125 volts. Cable clamp. Shpg. wt., 3 oz.
26 D 3603. 1-9 . . Ea. .35 10-Up. . . . Ea. .31

L LARGE PARALLEL-SLOTS CONNECTOR. Rubber handle cap. Bronze contacts. Cable clamp. Rated 15 amps at 125 volts. Shpg. wt., 3 oz.
26 D 3726. 1-9 . . Ea. .38 10-Up . . . . Ea. .33

M PARALLEL GROUND RUBBER CONNECTOR. 3 bronze contacts. 15 amps @ 125 V. Cord hole, 3/5″. Cable clamp. 3 oz.
26 D 3718. 1-9 . . Ea. .89 10-Up. . . . Ea. .80

N BAKELITE PARALLEL GROUND ADAPTER. Adapts 3-prong plugs for use in standard 2-prong AC outlets. Double-wipe contacts 15 amps @ 125 V 3¼″ lead with "C" lug. Shpg. wt., 3 oz.
26 D 3669. 1-9 . . Ea. .28 10-Up . . . . Ea. .24

P FLAT RUBBER CORD CONNECTOR. Matches Figs. D, H. Double-wipe contacts molded in vinyl. Insulated screws. 3 oz.
26 D 3727. 1-9 . . Ea. .38 10-Up . . . . Ea. .33

R LARGE RUBBER HANDLE PLUG. Cord hole dia., .600″. With cord clamps. 3 oz.
26 D 3728. 1-9 . . Ea. .23 10-Up . . . . . Ea. .20

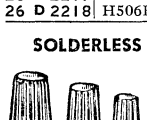
S VINYL PARALLEL GROUND ADAPTER. Same function as Fig. P. Lead with "C" lug. 15 amps @ 125 V. Wt., 3 oz.
26 D 3729. 1-9 . . Ea. .23 10-Up . . . . Ea. .20

T FUSED PLUG. Cylindrical receptacles hold two 10 amp glass fuses. Interchangeable with any standard AC plug. Less 3AG fuses (see Index). 3 oz.
26 D 3648. 1-9 . . Ea. .37 10-Up . . . . Ea. .35

W TYPE H500F G-C CABLE CLAMPS. Nickel plated; have #6 mtg. hole. *25 per pkg.; †20; ‡15. Av. wt., per pkg. 4 oz.

Stock No.	Type	Fit Cable	PER PKG. 1-9	PER PKG. 10-Up
26 D 2215	H502F*	⅛″ to 3/16″	.39	.36
26 D 2216	H503F†	3/16 to ¼″	.39	.36
26 D 2217	Z7243‡	¼″ to ½″	.39	.36
26 D 2218	H506F‡	5/16″ to ½″	.39	.36

SOLDERLESS WIRE-CONNECTORS



Solderless phenolic wire connectors. Strip two wire ends; push into connector, screw cap down—wires are firmly interconnected. U.L. Listed. Av., 1¼ lbs. Per Pkg. of 12.

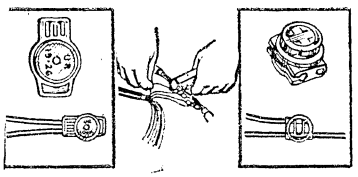
Stock No.	Wire Size	PKG. 12
26 D 3701	16-18	.15
26 D 3702	14-18	.19
26 D 3703	12-18	.28

Depend on Allied for All Your Industrial Electronic Needs

Electrical Accessories

3M COMMUNICATION ELECTRICAL CONNECTORS

SCOTCHLOK® U-SERIES COMMUNICATION CONNECTORS



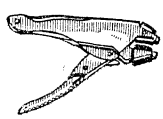
Type UR for Cutting-in Service

Type UG for Bridge Joints

Communication connectors designed to replace twist and solder jointing. Connections cannot work loose or slip. "Live Spring" joint produces a firm, insulated, gastight connection. Self-stripping U element removes insulation as it enters sleeve. Transparent sleeves. UR pigtail for cutting-in; UG has side slot for bridge (tap) without interrupting downstream service; U1R and U1B for inline splicing of full pairs. Order crimping tool below. Supplied in Boxes of 100. Shpg. wt., 2 lbs.

Stock No.	Mfr's Type	Wire Size Solid	Wire Size Strand.	Per Box of 100 1-9	Per Box of 100 10-Up
26 D 1581	UR	#19-26	#20-24	6.17	5.20
26 D 1584	UG	#19-26	#20-24	6.17	5.20
26 D 1585	U1R	#19-24	#19-22	34.40	28.95
26 D 1595	U1B	#16-19	#16-19	34.40	28.95

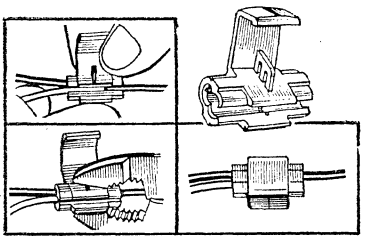
CRIMPING TOOL FOR ALL SCOTCHLOK CONNECTORS



This light, handy crimping tool insures proper connector actuation every time on all Scotchlok brand connectors. For extra convenience, a wire cutter is incorporated in the tool. Lightweight for fatigue-free use. Size: 5½" long. Shpg. wt., 6 oz.

26 D 1643.....3.35

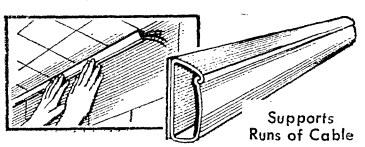
SCOTCHLOK 560 SELF-STRIPPING LOW-VOLTAGE CONNECTOR



Excellent for low-voltage control systems, sound installations, autos and boats. Fast installation. Handles 18 to 14-gauge wire in tap inline or pigtail. Hinged snap-over cover for protection, self stripping "U" grip, pre-insulated plastic body, tin-plated brass element. Uniform conductor contact area for dependable service. Side slot for easy wire placement. Temperature rating 85°C maximum. 13/16x17/32x3/8". Pkg. of 100. Shpg. wt., 1 lb.

26 D 1597. 1-9 Pkgs.....Each 5.31
10-Up Pkgs.....Each 4.47

SCOTCHFLEX® CABLE DUCT

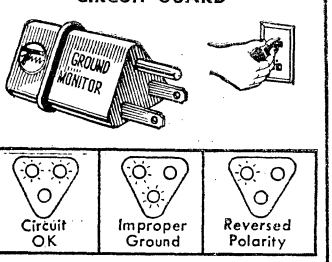


Supports Runs of Cable

Designed for supporting and bundling either horizontal or vertical runs of cable and wire. For training wire and cable in equipment chassis. Made of tough vinyl backing with foam pressure sensitive adhesive. 1" length. 4.8 oz. static load. Up to ⅜" bundle range. 10 per box Wt., 8 oz.

26 D 1615.....Box .73

DEARBORN THREE-WIRE CIRCUIT GUARD

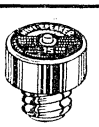


Tests if proper ground and polarity are available from 115-volt 3-wire power outlets. Determines true path back to ground for safe operation of portable power tools, appliances, office and laboratory equipment and for grounding travel trailer frames. Plug into 3-wire receptacle and lights on circuit indicate: Circuit Okay; Improper Ground; Improper Neutral; Reversed Polarity; Reversed Ground and Power; Power is Off. One piece molded plastic construction. Shpg. wt., 6 oz.

26 D 3670.....5.95

MINI-BREAKER® CIRCUIT BREAKER

Converts fuse box into circuit breaker panel

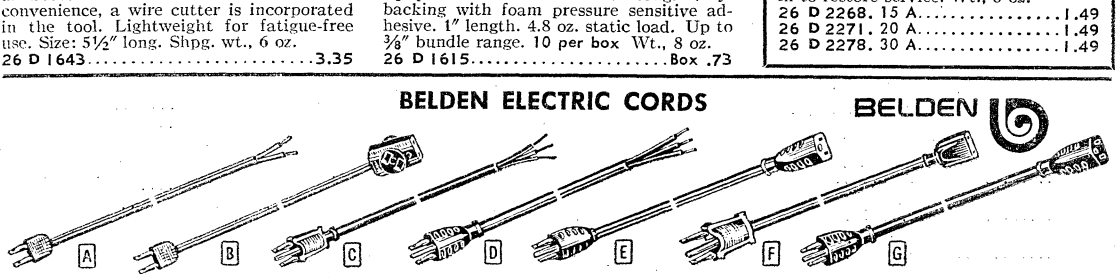


Converts any Edison base fuse box. Has built-in time delay for handling temporary starting loads and line surges. Simply replace fuse with Mini-Breaker of proper rating. When overload occurs button pops out. Just push button back in to restore service. Wt., 3 oz.

26 D 2268. 15 A.....1.49
26 D 2271. 20 A.....1.49
26 D 2278. 30 A.....1.49

BELDEN ELECTRIC CORDS

BELDEN



2-CONDUCTOR VINYL LINE CORDS

17106, 17109 for lamps, radios, and small appliances. Molded plug at one end; other end is stripped. Type 17156 is 3-way cube tap cord. All are brown color. Letters in Type No. indicate cordage. *Gauge. All are U.L. Listed. Av. shpg. wt., ¼ lb.

Stock No.	Mfr's Type	Fig.	Ft.	*	EACH 1-9	EACH 10-Up
26 D 2854	17106-SPT	A	6	18	.35	.31
26 D 2855	17109-SPT	A	9	18	.45	.40
26 D 2856	17156-SPT	B	6	18	.46	.41

2-CONDUCTOR EXTENSION CORDS

(Not illus.) Quality cords designed for heavy-duty applications. Strong, highly flexible 2-wire cords feature molded vinyl plugs and plastic connectors. Type 17270C is covered with gray rubber; Type 17361S with black rubber. Both types are U.L. Listed. Shpg. wt., 1 lb.

Stock No.	Mfr's Type	Ft.	Gauge	EACH
26 D 1931	17270C	20	SV 18	1.39
26 D 1932	17361S	10	SJ 16	1.07

3-CONDUCTOR CORDS

Types 17236, 17238 and 17237 are for small tools, business machines, instruments. Others for sanders, grinders, saws, polishers requiring grounding. *Gauge. Black except, †gray. Letters in Type No. indicate type of cordage. U.L. Listed. Av. shpg. wt., ½ lb.

Stock No.	Mfr's Type	Fig.	Ft	*	EACH 1-9	EACH 10-Up
26 D 2872	17236-SV	C	6	18	.76	.69
26 D 2873	17238-SV	C	8	18	.88	.79
26 D 2874	†17237-SVT	C	6	18	.69	.61
26 D 1930	17408-SJ	D	8	18	.94	.84
26 D 2875	†17407-SJT	D	8	18	.86	.77
26 D 2876	17409-SJO	D	8	18	.86	.77
26 D 2877	17419-SJ	D	9	16	1.25	1.12

3-CONDUCTOR POWER CORDS

For electrical equipment having a built-in receptacle with blades and grounding pin. Can also be used as extension cord with devices requiring ground. Rubber cover, vinyl connectors. U.L. Listed. 2½ lbs.

26 D 2895	17460	E	10	18	1.30	1.16
26 D 2896	17461	E	10	16	1.49	1.33

F TYPE 17258 3-CONDUCTOR PROJECTOR AND BUSINESS MACHINE POWER CORD

For Revere and Eastman Kodak projectors and Friden, Victor, Hewlett-Packard business machines. Fits Switchcraft AC3 and AC3G connectors. 8-ft. length. Gray. Gauge, 18SVT. Vinyl. U.L. Listed. 1 lb.

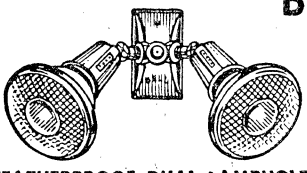
26 D 2897. 1-9, Ea...1.06 10-Up, Ea....94

G HEAVY-DUTY EXTENSION CORDS

Have molded 3-prong plug at one end and molded 3-prong receptacle at other end. 3-cond. Yellow vinyl. U.L. Listed. *Gauge.

Stock No.	Mfr's Type	Ft.	*	Lbs.	EACH 1-9	EACH 10-Up
26 D 2181	17491	25	18	2	2.32	2.07
26 D 2182 X	17492	50	18	3½	4.26	3.80
26 D 2183 X	17493	100	18	7	7.76	6.94
26 D 2184	17494	25	16	2½	2.72	2.43
26 D 2185 X	17495	50	16	4½	5.36	4.79
26 D 2186 X	17497	100	16	9	9.60	8.58
26 D 2187	17694	25	14	5½	5.70	5.07
26 D 2188 X	17695	50	14	10	10.02	8.95
26 D 2189 X	17697	100	14	19½	18.32	16.37

Bell Outdoor Lighting Equipment



WEATHERPROOF DUAL LAMPHOLDER

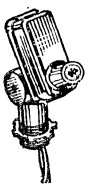
372-L, Type PAR. Gray die-cast assembly has ½" threaded mounting arms which swivel 180°. Removable porcelain sockets have rubber gaskets. 330-C. Gray holder alone. 372. Gray rectangular cover has ½" threaded outlets with gasket, mounting screws and closeup plug. Less lamps. U.L. Listed. Av. wt., 1½ lbs.

26 D 2531. 372-L. Assembly.....3.04
26 D 2532. 373-L. Above, for 3 lamps.4.16
26 D 2533. 371-L. Above, for 1 lamp..1.76
26 D 2541. 372. Cover.....96
26 D 2583. 373. Above, for 3 lamps..1.04
26 D 2586. 371. Above, for 1 lamp.....72
26 D 2592. 330-C. Holder.....1.44

PAR LAMPHOLDER

336. Provides light for homes, gardens, pools and apartments. Has mounting spike and leveling base plate. With 6' 2-wire cord and plug. Lamp not included. Size, 4x4x6". For 120 VAC. Shpg. wt., 1½ lbs.

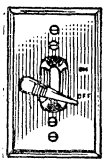
26 D 2606.....1.76



NITE SWITCH

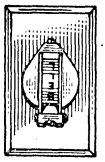
1121. For automatic dusk to dawn lighting control. Switch is mounted on adjustable swivel with ½" threaded mounting arm. Has two mounting locknuts. Chrome plated for extra long life. Load capacity, 600 watts. Size, 1¾6x3x2". Wt., 8 oz.

26 D 2621.....9.20



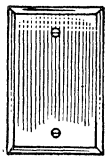
A

216



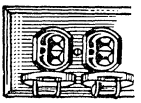
B

224-V



C

240-AL



D

245

A FLUSH-MOUNT SWITCH

216. Weatherproof, single pole lever type switch has .040" thick brass plate with die-cast lever. With gasket and mounting screws. 5A, 250 V; 10A, 125 V. 2¾x4½".

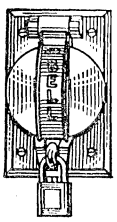
26 D 2594. Shpg. wt., 7 oz.....1.46
26 D 2595. 218. Above, 3-way switch.1.82

B PLATE WITH SNAP-COVER

224-V. Durable .040" thick brass plate with phosphor bronze spring-loaded, die-cast snap-cover. With brass rivets, gasket and mounting screws. Aluminum enamel finish. 2¾x4½" U.L. Listed, 6 oz.

26 D 2598.....1.20

POWER OUTLET COVER



360. For heavy-duty outdoor use in trailer courts, farm yards, shipping docks, etc. Provides safe, weatherproof protection for all types of 20, 30 and 50-amp power outlets or switches. Die-cast aluminum-alloy cover and plate are finished in baked aluminum enamel. Complete with "pushout" type gasket and four mounting screws for weathertight seal. Size, 2¾x4½". U.L. Listed. Shpg. wt., 7 oz.

26 D 2622.....2.64

C BLANK PLATE

240-AL. Weatherproof, rustproof blank plate is made of .040" thick aluminum. For vertical flush mounting. Aluminum enamel finish. With mounting screws and neoprene compression gasket. Size, 2¾x4½". 3 oz.

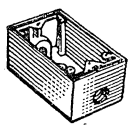
26 D 2599.....40

D DUPLEX SNAP-COVER PLATE

245. Plate has spring loaded, die-cast snap-cover. For horizontal mounting of switches, receptacles, etc. .040" thick brass plate. Enamel finish. With gasket and mounting screws. 2¾x4½". ½ lb.

26 D 2604.....1.52

WEATHERPROOF LUG OUTLET BOXES



Type 250-L

250-L. ½" outlets; 1 at each end and on back. 251-L. ½" outlets; 2 at one end, 1 at other end and 1 on back. 252-L. ¾" outlets same as 250-L. Gray. Mounting lugs. 2¾x4½x2". U.L. Listed. CSA approved.

26 D 2625. 250-L. Wt., 10 oz.....1.32
26 D 2627. 251-L. Wt., 10 oz.....1.64
26 D 2630. 252-L. Wt., 10 oz.....1.48

ASSORTED HEAVY-DUTY ELECTRICAL TAPES

ELECTRICAL TAPE

Standard-width plastic and friction tape in dispenser. Makes tight, insulated wrappings. *Cold weather tape. Av. shpg. wt., 7 oz.

DUTCH PLASTIC TAPE

26 D 3614. A-7. ¾"x44'. 1-11.....Each .86
12-Up.....Each .71

26 D 3623. 130. ½"x108'. 1-11...Each 1.56
12-Up.....Each 1.27

26 D 3671. 167*. ¾"x60'. 1-11...Each 1.33
12-Up.....Each 1.10

DUTCH FRICTION TAPE (LESS DISPENSER)

26 D 2486. No. 4. ¾"x30'. 1-11....Each .29
12-Up.....Each .27

26 D 3612. No. 8. ¾"x60'. 1-11....Each .58
12-Up.....Each .50

26 D 3620. D48200. ⅜"x60'. 1-11...Each .27
12-Up.....Each .25

TYPES 33 AND 88

- For Maximum Strength with Minimum Bulk
- Corrosion Resistant
- High Comformability At Low Temperatures

Scotch tapes provide great strength with minimum bulk. They are especially resistant to chemicals, abrasion and weather. Type 88 has high low-temperature conformability which makes cold weather splicing particularly easy. Type 88 also recommended where excessive abrasion is encountered.

TYPE 33. Rated 10,000 V; .007". 6 oz.

26 D 3699. ¾"x44'. 1-9.....Each .94
10-Up.....Each .78

26 D 2512. ¾"x66'. 1-9.....Each 1.39
10-Up.....Each 1.15

TYPE 88. All-weather. 8.5-mil. Wt., 6 oz.

26 D 3700. ¾"x66'. 1-9.....Each 1.69
10-Up.....Each 1.40

SCOTCH ELECTRICAL TAPE

Type 35. For color coding wire bundles. In red or yellow—specify. .007" thick. ¾" x 66'. Wt., 6 oz.

26 D 2636 C. 1-9.....Each 1.40
10-Up.....Each 1.16

Type 27. Thermosetting type. .007" thick. ½" x 66'. Wt., 5 oz.

26 D 2637. 1-9.....Each 1.88
10-Up.....Each 1.58

Type 23. For high frequency electronic circuits. .030" thick. ¾" x 30'. Shpg. wt., 8 oz.

26 D 2638. 1-9.....Each 1.36
10-Up.....Each 1.14

Type 49. Moisture resistant. .005" thick. 2" x 20'. Wt., 4 oz.

26 D 2639. 1-9.....Each 2.19
10-Up.....Each 1.84

G-C CHEMICALS FOR BENCH, SHOP AND HOME USE

CONTACT CLEANER

8682-16. Non-flammable general solvent is ideal for cleaning relay contacts, electronic circuits and other types of equipment. Does not contain carbon-tetra chloride. Leaves no damaging residual, oily deposits. 16 oz. aerosol can. Shpg. wt., 1½ lbs.

26 D 2640.....3.49

PRINT-KOTE SOLDERING FLUX

12-2. Non-corrosive liquid flux ideal for easier soldering and repairing of printed circuits. Used by leading electronics manufacturers. With brush applicator on cap. 2 oz. bottle.

26 D 2641. Wt., 3 oz.....60

CHLORO-KLEEN SOLVENT

213-4. Safe; does not contain carbon-tetrachloride. With Chlorothene®. Quickly cleans grease, oil, dirt and wax from electronic components. Non-toxic and odor-free. 4 oz. bottle.

26 D 2645. Wt., 5 oz.....65

PLIOBOND CEMENT

43-2. Tough, fast-drying general-purpose household cement bonds almost anything with great strength. Handy brush applicator attached to cap. 2 oz. bottle.

26 D 2647. Wt., 3 oz.....60

TAPE HEAD CLEANER

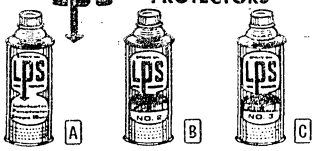
53-2. Removes damaging oxides and dirt accumulation from recording and playback heads. Safe and fast drying. Maintains hi-fi response. Applicator on cap. 2 oz. bottle.

26 D 2659.....1.03

Order from Your Nearest Allied Facility for Fastest Service

Chemicals and Servicing Aids

LPS SPRAY-ON METAL PROTECTORS



LPS organic liquid compound forms a film that displaces moisture, protects metals from rust and corrosion. Safe for delicate mechanism, at temperatures from —100 to 600°F. Can be sprayed, dipped, brushed or swabbed. Penetrates hard-to-reach places.

[A] LPS REGULAR NO. 1. Forms fine .0001" non-greasy, non-stick transparent film. 16-oz. spray can.
26 D 1873. Wt., 1½ lbs.....1.68

[B] LPS NO. 2. For heavy-duty rust protection. Forms .0002" transparent, oily film. 16-oz. spray can.
26 D 1874. Wt., 1½ lbs.....2.20

[C] LPS NO. 3. For toughest rust and corrosion protection problems. Forms .0004" transparent, waxy film. 16-oz. can.
26 D 1875. Wt., 1½ lbs.....2.20

RAPID ELECTROPLATING KITS

Complete Kit for Quick and Easy Plating

- Choice of Six Electroplating Compounds—Nickel, Cadmium, Copper, Brass, Silver or 24K Gold
- Powered by 1½-Volt Batteries

For easy electroplating of small metal objects. Each kit includes: 1-oz. metal cleaner; 1-oz. metal polish plating compound; ⅝" brush; wires and clips; polishing stick. Order batteries, below—uses two No. 6—1½-volt. Shpg. wt., 1 lb.

Stock No.	Type	Compound	EACH
26 D 1076	200	Nickel	2.49
26 D 1077	202	Cadmium	2.49
26 D 1079	204	Copper	2.49
26 D 1080	205	Brass	2.49
26 D 1088	206	Silver	3.19
26 D 1089	207	24K Gold	5.29

18 D 5641. Batteries. Wt., 2 lbs....Each .99

SPRAYON LAYOUT AIDS, CLEANER, LUBRICANT

OPTICAL LAYOUT PUNCH AND SPRAY

SKIDMORE OPTICAL CENTER PUNCH. Makes it easy to punch layout points within .002". Includes 4-lb. locating bushing, precise crosshair eyepiece.
26 D 1879. Wt., 12 oz.....19.95

BLUE LAYOUT FLUID. Sprays smooth, dark, non-glare coat. 12-oz. can.
26 D 1881. Wt., 1 lb.....2.35

SPRAY LUBRICANT AND CLEANER

TEFLON DRY LUBRICANT. Spray lubricant forms tenacious film with low friction coefficient. Ideal for high temperature applications. 12-oz. can
26 D 1883. Wt., 1 lb.....2.69

FREON T.M.C. CLEANER. Ideal for removing rosin flux. High cleaning level, continuous recovery. Extension tube for pinpoint application. 16-oz. can.
26 D 1885. Wt., 1½ lbs...3.59

CLEANERS, LUBRICANTS AND SERVICING AIDS

G-C COLOR TV TUBE CLEANER

8890. Stops dirt and dust build-up—keeps picture tubes sparkling clear. Acts as anti-static agent—prevents electrostatic dust accumulation. 8-oz. spray can.
26 D 1120. Wt., 10 oz.....99

"NO-NOISE" CONTACT RESTORER

Cleans, lubricates and protects volume controls, relays, contacts. Prevents gumming. Stops record changer binding. Won't change capacities or harm precious metals. Non-flammable. 6-oz. spray can.
26 D 3651. Wt., 10 oz.....2.25

"NO-NOISE" TUNER TONIC

Cleans and lubricates TV tuner controls, contacts and switches. Eliminates noise caused by dirty components. Contains 6 fluid ounces. Shpg. wt., 14 oz.
26 D 2397.....2.20

ELECTRICAL CONTACT CLEANER

EC-44. Conditions, lubricates and cleans electrical contacts, relays, etc. Supplied in 6-oz. sprayer; 5" plastic pushbutton assembly. Shpg. wt., 10 oz.
26 D 2552.....3.42

CHEMTRONICS "KLEER" INSULATING SPRAY

890. Protective acrylic spray for insulating, waterproofing and coating. Supplied in 16-oz. spray can. Shpg. wt., 1½ lbs.
26 D 3708.....1.39

G-C "SPRA-KLEEN" CLEANER

Eliminates noise due to dust, dirt and corrosion on contacts, switches. No harsh solvents; won't harm plastic. 6-oz. can. Wt., 10 oz.
26 D 1075.....97

G-C DE-OX-ID CONTACT CLEANER. Stops noise in controls, switches. 2-oz. bottle. (Not illus.)
26 D 1091 Wt., 6 oz.....94

G-C "FREEZE-MIST" COOLER

8668. Pinpoint bad capacitors and transistors, oxidized joints, by cooling components. Leaves no residue. With pin-point spray extension. 6-oz. can.
26 D 3134. Wt., 10 oz.....1.26

G-C "INSUL-VOLT" SPRAY

For protection against high voltage leaks, arcing and corona shorts. Meets MIL-V-1137A, types M and N. Max. oper. temp., 275° F. 15 kV/mil dielectric strength. 6-oz. can.
26 D 2505. Wt., 10 oz.....1.99

G-C HOUSEHOLD AND MODEL CEMENT

Ideal for wood, paper, plastics, ceramics and metals. Fast-drying, waterproof. For small general repairs. Brush, in cap, applies glue faster and easier. 2-oz. bottle.
26 D 2511. Wt., 3 oz.....59

G-C BENCH FIRE EXTINGUISHER

Fights small fires by denying them their oxygen supply. Works on all types of fires, including electrical, oil and grease fires. Can be used safely by anyone. 16-oz. spray can.
26 D 2525. Wt., 1½ lbs.....1.57

G-C FUNGUS VARNISH

Prevents moisture absorption and fungus growth on all types of radio, electronic and communications equipment. Will not damage metals or change capacities. 2-oz. bottle.
26 D 2530. Wt., 3 oz.....79

G-C "RELAY KLEEN" CLEANER

8682. For cleaning relays, contacts. Leaves no residue. Excellent solvent for electrical and mechanical items, Non-flammable. Pin-point extension. 6-oz. can.
26 D 3131. Wt., 10 oz.....1.89

QUIETROLE CONTACT SPRAY

Eliminates dirt, dust and corrosion from switches and controls without need for removal from chassis. Saves valuable time. Non-flammable. In 6-oz. spray can
26 D 1719. Wt., 10 oz.....2.73

QUIETROLE CONTACT CLEANER FLUID. Like cleaner above, but in 2-oz. bottle with dropper.
26 D 1090. Wt., 4 oz.....1.69

INSL-X TOOL DIP

Red liquid-plastic hardens into insulating coating when applied to handles of pliers, etc. Dries in 24 hours. 32-oz. can. 2¼ lbs.
26 D 1754. 1-23.....Each 3.40
24-Up.....Each 3.06

G-C "JIFF" CONTACT CLEANER

8670. Cleans, lubricates contacts, controls, switches. Contains silicone. No harsh solvents. Non-flammable. 6-oz. spray can.
26 D 3133. Wt., 10 oz.....1.79

G-C TRANSISTOR Z5 COMPOUND

8101. Silicone compound for better heat transfer away from transistors and diodes. Apply when mounting or re-mounting semiconductors for heat-sink-type action. 1-oz. injector. Shpg. wt., 2 oz.
26 D 1074.....2.06

G-C "ZERO MIST" COOLER

8667. Cools components instantly, helping to pinpoint bad capacitors, transistors, oxidized connections. Spray extension. In 16-oz. spray can. Shpg. wt., 1¼ lbs.
26 D 1099.....2.39

CHEMTRONICS "FROST-AID"

Enables the serviceman to track down intermittents by cooling components. The fast way to find oxidized joints and bad components. 8-oz. spray can. Wt., 12 oz.
26 D 2554.....1.69

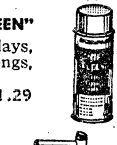
G-C "DRI-SPRAY" SPRAYER

8678. Cleans, lubricates and displaces moisture—prevents corrosion. Fungus and chemical resistant. Perfect for contacts, switches, etc. Drives moisture out, keeps it out. 6-oz. spray can.
26 D 3132. Wt., 10 oz.....1.79

CHEMTRONICS "CONTACT-KLEEN"

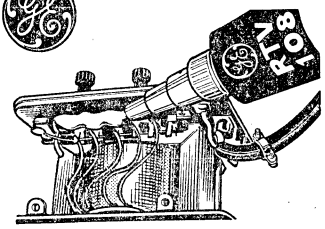
Cleans contacts, controls, relays, thermostats, switches, prongs, etc. Handy 8-oz. spray can.
26 D 2290. Wt., 12 oz.....1.29

JET-PAK SPRAYON OUTFIT

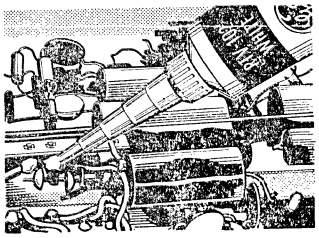


Sprays any liquid—no cords, no hoses. Powerful gas cartridge acts as power unit. Works at the touch of a button. Sprays up to 32 oz. of paints, etc. Includes head assembly, 4-oz. glass jar, 15-oz. power unit.
26 D 1638. Shpg. wt., 1½ lbs.....1.98
26 D 1640. 15-Oz. Refill. 1 lb.....1.20
26 D 1642. Extra 4-Oz. Jar. 5 oz.....13

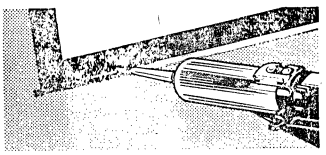
Silicones and Epoxy Compounds



RTV-108. Translucent For See-Through Uses



RTV-102, White for Affixing Name Plates



RTV-103, Black For Rubber Repairs

G.E. SILICONES AND COMPOUNDS

SILICONE RUBBER SEALANTS

Ready-to-use silicone rubber adhesive/sealants for industrial applications. In squeeze tubes, they are easily applied and air cure to form a durable, flexible silicone rubber. Needs no catalyst. Applied at room temperature, adheres without priming. For use as insulation, bonding silicone rubber parts to metal surfaces, encapsulating. Withstand —75° F to +300° F. Never harden, crack or dry out. Resist moisture, weathering and aging. Contain no solvent and cure with minimum of shrinkage. Excellent electrical properties.

RTV-102. Excellent for shock mounting. White in color.
RTV-103. For rubber repair, other uses. Black in color.
RTV-106. For long term use at temperatures up to 600° F. Red.
RTV-108. Where "see-through" is required. Translucent.
RTV-112. For brushing or spraying on production line. White.

PHYSICAL PROPERTIES OF PRESSED SHEETS CURED 1 WEEK AT 77°F: Hardness, Shore A: 30. Tensile Strength: 350 psi. Tear Resistance: 45 lb/in.

ELECTRICAL PROPERTIES OF PRESSED SHEETS CURED 10 DAYS AT 77°F: Dielectric strength, vpm: 550 for .058" thickness. Volume Resistivity, ohm-cm: $3x10^{15}$.

Type RTV-	3-Oz. Tube Stock No.	EACH 1-5	6-47	48-Up	12-Oz. Tube Stock No.	EACH 1	2-11	12-47	48-Up
102	60 D 7227	1.75	1.50	1.27	60 D 7228	5.55	5.40	5.10	4.90
103	60 D 7229	1.75	1.50	1.27	60 D 7230	5.55	5.40	5.10	4.90
108	60 D 8594	1.75	1.50	1.27	60 D 8595	5.55	5.40	5.10	4.90
106	60 D 8916	2.20	1.90	1.60	60 D 8918	7.10	6.90	6.55	6.21
112	60 D 7235	2.20	1.90	1.60	60 D 7236	7.10	6.90	6.55	6.21

RTV CARTRIDGE PACK

Speeds up production-line sealing. Type RTV 102 white silicone rubber, excellent for shock-mounting. Type 108 translucent silicone rubber, for use where "see-through" is required. Need no catalyst. Apply at room temp. Use with any standard caulking gun, or automatic dispenser.

Stock No.	RTV Type	Oz. per Unit	Color	EACH 1-5	6-11	12-Up
60 D 6396	102	12	White	3.49	3.09	2.69
60 D 6397	108	12	Trans.	3.49	3.09	2.69

RTV-615 POTTING COMPOUND

(Not illus.) Clear silicone, low-viscosity liquid that cures at room temperature, after addition of curing agent, to form a rubber-like, tough, transparent solid. Offers improved physical properties—can be cured within 15-30 minutes at 150° C. Cures in absence of air. Withstands temperatures within the range of —65° C to +200° C. High dielectric strength. Consists of compound and curing agent. 1-lb. can. Wt., 1 lb.
60 D 7243. 1-11.....Each 9.50
12-Up.....Each 8.00

RTV-616 POTTING COMPOUND

(Not illus.) Black silicone, low-viscosity liquid cures within 15-30 minutes at room temperature, without air, with the addition of a curing agent. Forms a tough, transparent solid. Withstands temperatures between —65° C to +200° C. High dielectric strength. Consists of compound and curing agent. One-pound can. Wt., 1 lb.
60 D 7244. 1-11.....Each 8.30 12-Up.....Each 7.00

RTV-9950 CATALYST (fast cure)

Paste-consistency catalyst for RTV encapsulants above. Light tan. 1½ lbs.
60 D 7445. 1-11...Ea. 8.20 12-Up.Ea. 7.50

RTV-9930 CATALYST (standard cure)

Blue paste-consistency catalyst for RTV encapsulants. Cures in 5 to 12 hours. 1¼ lbs.
60 D 7446. 1-11...Ea. 8.20 12-Up.Ea. 7.50

RTV-9910 CATALYST (heat cure)

Light yellow. Paste-consistency catalyst for curing RTV encapsulants at room temperature or with added heat. Wt., 1½ lbs.
60 D 7447. 1-11...Ea. 8.20 12-Up.Ea. 7.50

RTV-910 DILUENT

For wipe-on treatment of rubber molds.
60 D 7245. 1-lb. Package.....Each 6.00

Type G-640 HEAT SINK COMPOUND

Greaselike silicone material heavily filled with heat-conductive metal oxides. Combination of base and fillers produces a material with higher thermal conductivity than previously available silicon heat sink compounds. Applies to base or mountng studs of components. Properties of the compound are such that it will not dry out, harden or melt under virtually any atmospheric condition. Withstands long term exposure to temperatures up to 200° C. Compound maintains a positive heat seal that improves heat transfer from the device to heat sink or chassis. Actually increases life expectancy and overall efficiency of circuit component. Evaporation, 1% after period of 24 hours at temperature of 200° C. Sold in 4-oz. container. Shpg. wt., 4 oz.
60 D 7238. 1-11..Ea. 2.95 12-Up.Ea. 2.50

TYPE RTV-11 ENCAPSULANT

White, low viscosity silicone rubber base with excellent deep section curing characteristics. Wt., 1 lb.
60 D 7233. 1-11..Ea. 7.60 12-Up.Ea. 6.38

TYPE RTV 41 ENCAPSULANT

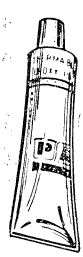
A white, medium viscosity silicone rubber base that cures readily in deep sections to high durometer, high strength rubber. 16 oz.
60 D 7234. 1-11..Ea. 6.10 12-Up.Ea. 5.10

TYPE RTV-60 ENCAPSULANT

Red, medium viscosity silicone rubber base that cures readily in deep sections to a high durometer, high strength rubber. Has excellent high temperature resistance being usable for short periods to 600°F. 16 oz.
60 D 7237. 1-11..Ea. 6.10 12-Up.Ea. 5.10

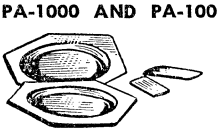
PLASTIC ASSOCIATES READY-TO-USE EPOXY CEMENTS

PA-1101 THERMA-BLEND EPOXY PASTE



Factory mixed and ready-to-use epoxy cement in paste form. Works on practically any material. Needs no mixing—only catalyst necessary is 400° F heat from an ordinary heat lamp, oven, or open flame. Curing time is 6-minutes at 400° F; at 360° F, curing time increases to 40-minutes. Forms a perfect and permanent bond. Maintains great sheer strength, even at high temperature extremes. Meets specification MIL-A-8623. In a convenient 1½-oz. squeeze tube.
60 D 7680. 1-24.....Each 2.00
25-49...Each 1.70 50-99.....Each 1.60
100-up.....Each 1.50

PA-1000 AND PA-1001 ROOM-TEMPERATURE AIR-CURE EPOXY KITS



Pre-measured, two-component mixer-package for preparing a small quantity of air-curing, short pot-life epoxy cement without waste or mess. Catalyst and resin are sealed in a polyethylene container. One component is in a central dish, the other in a ring around the dish. Stirring stick is used to push down the center of the container. The outer ring collapses, causing its contents to mix with those of the central dish. Adheres to practically any material. Cures from —50°F to +250°F. Each pkg. of PA-1000 has 10-1/10-oz. individual units. PA-1001 10-1/5-oz. units.

Stock No.	Mfr's Type	No. of Units	Oz. per Unit	EACH 1-24 Pkgs.	25-49 Pkgs.	50-99 Pkgs.
60 D 7690	PA-1000	10	1/10	2.50	2.13	2.00
60 D 7691	PA-1001	10	1/5	4.00	3.40	3.20

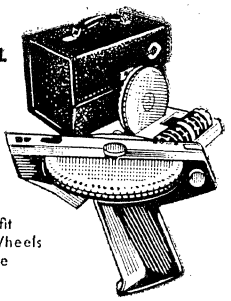
Depend on Allied for complete Stocks, OEM Prices, Prompt Shipment

Tapewriters, Slide Rules, Templates

DYMO TOOL 'N' TAPE LABEL EMBOSSING KITS

Easy to use—dial the letter, number, or symbol you want and squeeze handle. Embosses raised white letters on self-sticking plastic tape. Squeeze trigger to cut off.

PROFESSIONAL ½"/⅜" TAPE LABEL KIT



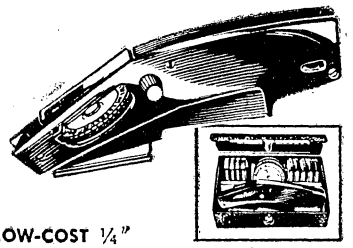
- Best Dymo Outfit
- 3 Embossing Wheels
- 10 Rolls of Tape

M-30 LABELMAKER KIT. Deluxe embossing kit features dual tape track for quick change of tape width—½" or ⅜". Versatile "Universal" embossing wheel makes both upper and lower case letters, plus regular and subscript numbers. Features automatic "Executive" letter spacing for a uniform typeset look. 72 characters. Letters up to .350".

Precision embossed standard, giant-size and vertical letters. Simple operation: dial the character you want, squeeze handle, squeeze trigger to cut off tape. Pull off backing and label is ready to apply. Ideal kit for chemical, warning, directional, instructional labeling. Kit includes the M-30 Tapewriter, 10 magazines of tape in assorted colors (5 rolls ½", 5 rolls ⅜"), giant, universal, and vertical wheels, carrying case.

26 D 1940. Shpg. wt., 2 lbs.....89.95

26 D 1941. Model M-30 Labelmaker Alone. Shpg. wt., 1½ lbs.....69.95



LOW-COST ¼" AND ⅜" KIT

- Choice of ¼" or ⅜" Labels
- 3 Interchangeable Wheels

M-10 LABELMAKER KIT. Save from separate prices. Embosses ¼" or ⅜" tape. See-thru dial. Wide/regular letter spacing. Chromed die-cast zinc body. 9" long. Three character wheels: Basic (5/32" characters). A-Z, 0-9, $ ¢ % & . ' - /. Vertical (5/32") prints perpendicular to width of tape, 44 characters similar to above. Giant (3/16") A-Z, 0-9, ./. Ten 12-foot rolls assorted solid-color tape (6—⅜"; 4—¼"). Handy carrying case.

26 D 1355. Shpg. wt., 2 lbs.....19.95

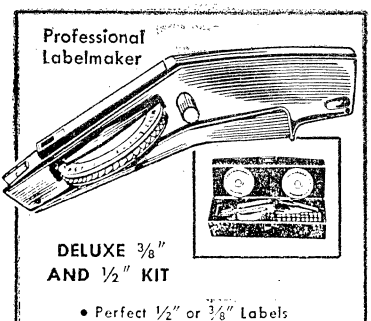
26 D 1353. M-10 Labelmaker Alone. Basic and giant wheels. 12' tape. 13 oz.....14.95

M-6 ECONOMY LABELMAKER KIT

Low-cost tapewriter for ½" and ⅜" tape. Similar to M-10, but with plastic body. Includes: M-6 Tapewriter, three ⅜" tapes, two ¼" tapes. Large and small wheels with double spacing, carrying case.

26 D 3183. Wt., 2 lbs.....9.88

26 D 3184. M-6 Labelmaker Alone. Shpg. wt., 10 oz.....6.88



DELUXE ⅜" AND ½" KIT

- Perfect ½" or ⅜" Labels
- Snap-in Embossing Wheels
- Variable Letter Spacing

M-20 LABELMAKER KIT. Deluxe embossing tool features dual tape track for quick change of tape width—½" or ⅜". Simple letter spacing knob varies spacing from regular to wide, for greater readability. "Snap-in" embossing wheels can be changed in seconds with no removable parts.

Embosses standard, giant-size and vertical letters. Just dial the character and squeeze handle, squeeze trigger to cut off tape. Pull off backing and label is ready to apply. Chrome finish body with plastic embossing wheels. Kit includes M-20 Tapewriter, 5 rolls of ½" vinyl tape in assorted colors, 5 rolls of ⅜" tape, standard and giant letter wheel, vertical wheel, carrying case.

26 D 3185. Wt., 1 lb.....34.95

26 D 3186. M-20 Labelmaker Alone. Shpg. wt., 8 oz.....24.95

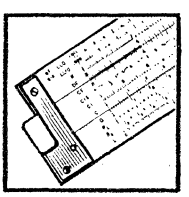
TAPE FOR DYMO LABELMAKERS—SAVE WHEN YOU BUY 3 OR MORE ROLLS

Has pressure sensitive adhesive back. Vinyl tape sticks to most clean, smooth surfaces. "Clear" tape picks up the background to which it is applied. Striped tapes have gold-color outer edges. Colors (but not sizes) may be assorted for "3-roll" savings. 2 oz.

Stock No.	Label Size	Use With Labelmaker	Feet/ Roll	Type	Colors—Be Sure to Specify Choice	EACH ROLL 1-2	EACH ROLL 3-Up
26 D 2473 C	¼"	M-6, M-10	12	Solid	Clear, Red, Orange, Blue, Grn., Yel., Brn., Blk., Gray, Gld., Walnut.	.89	.75
26 D 1884 C	⅜"	M-6, M-10, M-20, 1200	12	Solid	Red, Orange, Blue, Green, Yellow, Brown, Black, Gold, Walnut.	.99	.89
26 D 2017 C	⅜"	M-6, M-10, M-20, 1200	10	Striped	Red, Blue, Green, Brown, Black.	1.35	1.19
26 D 1903 C	½"	M-20, 1200	12	Solid	Clear, Red, Orange, Blue, Green, Black, Walnut, Yellow, Gray.	1.49	1.25
26 D 2009 C	½"	M-20, 1200	12	Striped	Red, Blue, Green, Brown, Black (Gold Edges).	1.79	1.59
26 D 3950 C	⅜"	M-30	16	Solid	Red, Blue, Black, Green	1.35	1.19
26 D 3971 C	½"	M-30	16	Solid	Red, Blue, Black, Green	1.75	1.66

POST SLIDE RULES AND ELECTRONICS TEMPLATES

PRECISION CRAFTED SLIDE RULES



1444K POCKET SIZE 5" RULE. For simple multiplication and division. Easy sliding, non-warping under all weather conditions. With instructions, carrying case.

26 D 1644. Wt., 6 oz.....5.95

1445 STUDENT 8" RULE. Fine hair line in movable cursor for accurate reading to final scale, nearest marker. For multiplication and division. Complete with instructions and punched vinyl case.

26 D 1651. Wt., 6 oz.....2.45

1447 FULL SIZE 10" RULE. For rapid, accurate answers to simple mathematical problems. Front side has A, B, C1, C, D and K scales; reverse side has S, L, and T scales. With instructions, case.

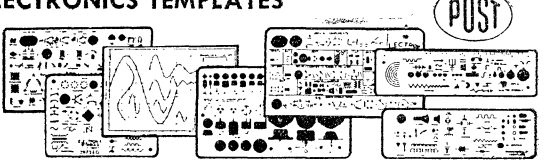
26 D 1655. Shpg. wt., 7 oz.....3.95

1450F TECHNICIAN'S RULE. For those who require an advanced trig type rule, yet do not need a log log rule. Excellent for series of related computations; permits accurate determination of squares, square roots. Reverse side has L, A, TT, Sec T ST, Cos S, C, D and D1 scales. Complete with case and instructions.

26 D 1665. Shpg. wt., 1 lb. 8 oz.....14.95

1460M VERSALOG 23 SCALE LOG LOG RULE. For engineers, mathematicians, and anyone using advanced math. Log log scales cover range from 1.001 to 22.000; reciprocal log log scales cover from 0.00005 to 0.999. Reverse side scales carry LL/1, LL/2, LL/3, TT, Sec T St, Cos S, C, D. With case and 120 page instruction book.

26 D 1699. Shpg. wt., 2 lbs. 8 oz.....22.95



ELECTRONICS TEMPLATES

2972R ELECTRONIC TEMPLATE. Dual, single vacuum tube; 3 phase wiring; control circuit devices, semiconductors, switch. 5x9".

26 D 2159. Shpg. wt., 6 oz.....3.60

2972½D ELECTRONIC SYMBOLS. Commonly used control wiring, tubes and solid state wiring circuitry symbols. J.I.C. Stds. 5x7".

26 D 2171. Shpg. wt., 5 oz.....2.95

2972½R ELECTRONIC JR. Less detailed version of 2972R. 3x8¾".

26 D 2172. Shpg. wt., 4 oz.....1.69

2972D ELECTRO SYMBOLS. Tubes, circuit components. 2¾x9¾".

26 D 2178. Shpg. wt., 1 oz.....1.75

2974R SINE WAVE CURVES AND VARIABLE WAVE FORM. 6 regular sine curves with printed amplitude-time grid; filtered, nonfiltered DC curves; uniform carrier, modulated carrier wave forms. 8¼x5½".

26 D 2179. Shpg. wt., 5 oz.....2.65

2973D TRANSISTOR OUTLINE. For 18-pin mount, 6 stud mount, 2 flange mount and 1 press fit transistor. 9½x5½".

26 D 2195. Shpg. wt., 5 oz.....2.95

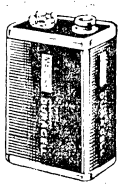
2973R LECTRON Dual, single vacuum tubes, components; control circuit devices, plugs, jacks. Variety of symbols. 9¾x5½". Wt., 6 oz.

26 D 2196.....4.45

Duracell Mercury Batteries

For use in test equipment, walkie-talkies, portable radios, TVs and tape recorders, electrical toys, and various other applications. Assure peak performance.

"T" suffix indicates ½" tab on negative terminal
"T2" suffix indicates tabs on both ends. *Indicate capacity in milliampere hours. †With snap terminals


TR146X

TR133

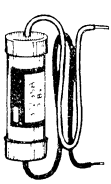
ZM 9B

RM42

RM640

RM625

TR 177


302358

303314

Stock No.	Mallory Type	Price	Volts	Cap'y mAH*	Use	Dia. x Ht., or HWD	Replaces Eveready	Replaces Burgess
18 D 5921	RM1	Pkg. of 2 for 1.24	1.4	1000	Electronic	5/8x2 1/32"	E1	HG1
18 D 5922	RM1R	Pkg. of 2 for 1.38	1.35	1000	Electronic	5/8x2 1/32"	E1N	HG1R
18 D 5923	RM1RT2	Pkg. of 2 for 1.58	1.35	1000	Electronic	5/8x2 1/32"	.....	.....
18 D 5924	RM3R	Pkg. of 2 for 2.16	1.35	2200	Electronic	1x2 1/32"	E3	HG3
18 D 5925	RM4R	Pkg. of 2 for 2.94	1.35	3400	Electronic	1 1/5x2 1/32"	E4	HG4R
18 D 5926	RM4RT	Pkg. of 2 for 3.04	1.35	3400	Electronic	1 1/5x2 1/32"	.....	.....
18 D 5927	RM4Z	Pkg. of 2 for 2.00	1.4	2400	Electronic	1 1/5x1 1/2"	.....	.....
18 D 5928	RM12	Pkg. of 2 for 2.00	1.4	3600	Electronic	5/8x1 61/64"	HG12	HG12
18 D 5929	RM12R	Pkg. of 2 for 2.16	1.35	3600	Electronic	5/8x2"	E12N	HG12R
18 D 5930	RM12RT	Pkg. of 2 for 2.26	1.35	3600	Electronic	5/8x2"	.....	.....
18 D 5931	RM12RT2	Pkg. of 2 for 2.36	1.35	3600	Electronic	5/8x2"	.....	.....
18 D 5502	RM42	3.20 ea.	1.4	14000	Electronic	1 1/5x2 3/8"	E42	HG42
18 D 5687	RM42R	3.30 ea.	1.35	14000	Electronic	1 13/64x2 3/8"	E42N	HG42R
18 D 5375	RM42RT2	3.40 ea.	1.35	14000	Electronic	1 1/5x2 3/8"	.....	.....
18 D 5950	RM312	Pkg. of 2 for .48	1.4	36	Electronic	9/64x5/16"	E312	HG312
18 D 5965	RM400	Pkg. of 2 for .66	1.4	80	Electronic	29/64x9/64"	E400	HG400
18 D 5951	RM400R	Pkg. of 2 for 1.00	1.35	80	Electronic	29/64x9/64"	E400N	HG400R
18 D 5890	RM401	Pkg. of 2 for 1.12	1.4	800	Electronic	29/64x1 1/8"	E401	HG401
18 D 5967	RM401R	Pkg. of 2 for 1.26	1.35	800	Electronic	15/32x1 1/8"	E401N	HG401R
18 D 5952	RM411	Pkg. of 2 for 4.00	14.0	160	Electronic	1x1 9/32x1 27/64"	.....	.....
18 D 5953	RM412	Pkg. of 2 for 5.52	22.4	160	Electronic	1x1 9/32x1 31/32"	.....	.....
18 D 5954	RM413	Pkg. of 2 for 6.92	28.0	160	Electronic	1x1 9/32x2 1/2"	.....	.....
18 D 5955	†RM415	Pkg. of 2 for 10.20	42.0	160	Electronic	1x1 9/32x3 1/2"	.....	.....
18 D 5956	RM450R	Pkg. of 2 for 1.12	1.35	350	Electronic	29/64x9/16"	E450	HG450R
18 D 5957	RM502R	Pkg. of 2 for 2.00	1.35	2400	Electronic	1/2x1 31/32"	E502	HG502R
18 D 5958	RM520	Pkg. of 2 for .34	1.4	130	Electronic	1/2x9/32"	E520	HG520
18 D 5042	RM575	Pkg. of 2 for .48	1.4	100	Radio	29/64x1/8"	.....	HG575
18 D 5968	RM601R	Pkg. of 2 for 2.00	1.35	1800	Electronic	5/8x1 5/32"	E601R	HG601R
18 D 5969	RM625	Pkg. of 2 for .84	1.4	250	Electronic	5/8x1/4"	E625	HG625
18 D 5961	RM625R	Pkg. of 2 for 1.12	1.35	250	Electronic	5/8x1/4"	E625	HG625R
18 D 5959	RM625RT2	Pkg. of 2 for 1.32	1.35	250	Electronic	39/64x15/64"	.....	.....
18 D 5892	RM640	Pkg. of 2 for .86	1.4	500	Electronic	5/8x7/16"	E640	HG640
18 D 5971	RM640R	Pkg. of 2 for 1.12	1.35	500	Electronic	5/8x7/16"	E640N	HG640R
18 D 5960	RM640RT2	Pkg. of 2 for 1.32	1.35	500	Electronic	7/16x5/8"	.....	.....
18 D 5899	RM675	Pkg. of 6 for 1.92	1.4	160	Electronic	29/64x13/64"	E675	HG675
18 D 5893	TR113R	Pkg. of 2 for 3.60	4.05	250	Electronic	21/32x5 3/64"	E113	H113R
18 D 5895	TR114RT2	Pkg. of 2 for 4.10	5.4	250	Electronic	1 1/16x3 1/16"	.....	.....
18 D 5972	TR115	Pkg. of 2 for 4.28	7	350	Dictating	21/32x53/64"	E115	.....
18 D 5896	TR115R	Pkg. of 2 for 4.28	6.75	250	Electronic	21/32x1 9/32"	E115N	.....
18 D 5891	TR126	Pkg. of 2 for 2.96	8.4	600	Radio	3/4x2"	E126	H126
18 D 5973	TR132	Pkg. of 2 for 2.30	2.8	1000	Paging	21/32x15/16"	E132	H132
18 D 5898	TR132R	Pkg. of 2 for 2.54	2.7	1000	Electronic	21/32x15/16"	E132N	H132R
18 D 5883	TR133	Pkg. of 2 for 2.96	4.2	1000	Radio, Pag.	21/32x2"	E133	H133
18 D 5932	TR133R	Pkg. of 2 for 2.94	4.05	1000	Radio, Pag.	2x2 1/32"	E133N	H133R
18 D 5933	TR134R	Pkg. of 2 for 3.66	5.4	1000	Electronic	21/32x2 9/64"	E134N	H134R
18 D 5934	TR135R	Pkg. of 2 for 4.28	6.75	1000	Electronic	21/32x3 1/4"	E135N	H135R
18 D 5978	TR136	Pkg. of 2 for 4.54	8.4	1000	Electronic	21/32x3 29/32"	E136	.....
18 D 5935	TR136R	Pkg. of 2 for 4.94	8.1	1000	Electronic	21/32x3 29/32"	E136N	H136R
18 D 5977	TR137	Pkg. of 2 for 5.24	9.8	1000	Electronic	21/32x4 9/16"	E137	.....
18 D 5985	TR137R	Pkg. of 2 for 5.60	9.45	1000	Electronic	21/32x4 9/16"	E137R	H137R
18 D 5884	†TR146X	Pkg. of 2 for 2.64	8.4	585	Radio	1x2 1/32x1 23/32"	E146X	H146X
18 D 5877	TR146XB	Pkg. of 2 for 2.66	8.4	700	Radio	1x2 1/32x1 23/32	E146X	H146X
18 D 5986	TR152	Pkg. of 2 for 1.74	2.8	350	Electronic	15/32x1 1/8"	E152	.....
18 D 5940	TR163	Pkg. of 2 for 2.96	4.2	500	TV Tuner	21/32x15/16"	E163	H163
18 D 5885	TR164	Pkg. of 2 for 2.96	5.6	500	Radio	21/32x1 3/4"	E164	H164
18 D 5988	TR164R	Pkg. of 2 for 3.30	5.4	500	Electronic	21/32x1 3/4"	E164N	H164R
18 D 5941	TR165	Pkg. of 2 for 3.66	7.0	500	TV Tuner	21/32x2 3/16"	E165	H165
18 D 5942	TR169	Pkg. of 2 for 6.92	12.6	500	Civil Def.	21/32x3 7/8"	E169	.....
18 D 5886	TR175	Pkg. of 2 for 2.30	7.0	350	Radio	31/64x1 1/32"	.....	.....
18 D 5887	†TR177	Pkg. of 2 for 2.96	9.8	160	Radio	1/2x1 3/4"	E177	H177
18 D 5989	TR233R	Pkg. of 2 for 5.60	4.05	2200	Electronic	1 1/32x1 15/16"	E233N	.....
18 D 5360	TR234R	3.13 ea.	5.4	2200	Electronic	1 1/64x2 19/32"	E234N	.....
18 D 5943	TR235R	Pkg. of 2 for 7.56	6.75	2200	Electronic	1 1/64x3 1/4"	E235N	.....
18 D 5991	TR236R	Pkg. of 2 for 8.58	8.1	2200	Electronic	1 1/64x3 7/32"	E236N	.....
18 D 5889	†TR286	Pkg. of 2 for 2.96	8.4	750	Radio	1x1 15/16"	E286	.....
18 D 5944	†TR289	Pkg. of 2 for 5.60	12.6	750	CB Radio	1x22 5/64"	E289	.....
18 D 5881	ZM9B	Pkg. of 2 for 1.33	1.4	2400	Radio	1/2x1 31/32"	E9	HG9

MERCURY POWER-PAK BATTERIES (Av. shpg. wt., 6 oz.)

Stock No.	Mallory Type	Price	Volts	Cap'y mAH*	Use	Dia. x Ht., or HWD	Replaces Eveready	Replaces Burgess
18 D 5324	302358	4.10 ea.	10.8	250	Rad't'n eqpt.	1 1/16x2 1/4"	E302358	.....
18 D 5325	302362	5.60 ea.	16.2	250	Rad't'n eqpt.	1 1/16x3 1/4"	E302362	.....
18 D 5948	302642	5.50 ea.	7.0	2400	Fire alarm	1 1/4x2 21/32"	E302642	302642
18 D 5035	302651	4.80 ea.	1.35	14000	Electronic	1 1/4x2 3/8"	E302651	HG302651
18 D 5036	302904	7.50 ea.	5.4	3400	Meter	1 9/32x2 29/32"	E302904	HG302904
18 D 5037	302905	8.50 ea.	6.75	3400	Test eqpt.	1 9/32x3 17/32"	E302905	HG302905
18 D 5039	302908	12.50 ea.	10.8	3400	Rad't'n eqpt.	1 9/32x5 1/2"	E302908	HG302908
18 D 5049	303314	10.70 ea.	16.8	2400	Radio, Lantern	1 7/32x6 1/64"	303314	HG303314

FOR MALLORY ALKALINE RECHARGEABLE BATTERY SYSTEM, SEE PAGE 545

Allied's Constant Inventory Turnover Assures You of Fresh Batteries

Eveready Batteries

EVEREADY®

NICKEL-CADMIUM BATTERIES

High energy, compact, hermetically sealed nickel-cadmium batteries and cells for photographic, communication and instrumentation equipment. Long-lasting, economical power—may be recharged many times. Batteries respond equally well to a trickle charge or a quick charge. Unaffected by idle periods. All batteries below have pressure contacts, expect *supplied with solder tab terminals. †10 hour discharge rate (mA.). Steel cases. Operating temperature range, —40°C to +60°C. All 1¼ volts except ‡6.1; §9.7; #12.2; Application: B-450-AA; CH4—D.

BUTTON CELLS

Stock No.	Type No. New	Type No. Old	Size	Oz.	†	Replaces Burgess	EACH
18 D 5617	B20	N22	29/64x7/32"	2	2	CD1	1.16
18 D 5618	B50	N24	39/64x15/64"	2	5	CD2	.88
18 D 5628	B100T	N26T	63/64x1/4"	2	10	CDL8*	1.08
18 D 5619	B150	N28	63/64x9/32"	2	15	CD3	.97
18 D 5622	B150T	N28T	63/64x19/64"	2	15	CS3L*	1.10
18 D 5623	B225	N32	63/64x11/32"	2	22.5	CD4	1.00
18 D 5624	B225T	N32T	63/64x3/8"	2	22.5	CD4L*	1.16
18 D 5625	B450	N36	1 3/64x1 9/64"	2	45	CD5	1.51
18 D 5626	B450T	N36T	1 7/64x1 21/64"	2	45	CD5L*	1.64

CYLINDRICAL CELLS

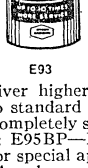
18 D 5630	CH500T	N45	9/16x29/32"	2	45	CD6L*	2.24
18 D 5636	CH500	N46	9/16x1 61/64"	2	500	CD6	1.95
18 D 5633	C900	N52	35/64x1 11/16"	3	90	CD9	3.09
18 D 5637	CH750T	N53T	7/8x1 33/64"	2	75	CD12	2.21
18 D 5634	CH4	N57	1 19/64x2 27/64"	2	400	CD10	6.30
18 D 5635	CH4T	N57T	1 19/64x29/64"	2	400	CD10L*	6.43
18 D 5162	CH1.5	N54	1 1/32x1 31/32"	2.3	150	.....	4.52

RECTANGULAR BATTERIES

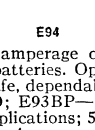
18 D 5675	#10B100	V5196	1 1/16x2 59/64"	12	15	CD27	12.90
18 D 5676	‡5B225T	N66	1 1/16x1 31/32"	12	22	CD22	7.80
18 D 5677	#10B225	V5383	1 1/16x3 19/32"	12	22	CD28	13.50
18 D 5678	§8B450T	V5407	1 51/64x2 37/64"	16	45	CD26	16.00
18 D 5679	§8B100T	V5488	1 1/16x2 21/32"	12	15	CD24	11.80
18 D 5680	#10B450T	V5511	1 51/64x3 7/64"	20	45	CD29	19.50
18 D 5681	‡5B100T	V5521	1 1/16x1 17/32"	12	15	CD21	7.50

ALKALINE ENERGIZER BATTERIES

Last Up to 10 Times Longer Than Carbon-Zinc Batteries



E93



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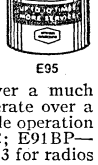


E95

Long-life alkaline energizer batteries are ideal for use where dependable high-drain, continuous service is needed. For portable television sets, flashlights, electrical toys, games, tape recorders and other electronic devices. Deliver higher amperage over a much longer period of time than do standard batteries. Operate over a wide range of temperatures. Completely safe, dependable operation in any position. Applications: E95BP—D; E93BP—C; E91BP—AA; E92—AAA; E94—½D for special applications; 523 for radios and cameras; 531 for camera. Av. shpg. wt., 4 oz.

Stock No.	Mfr's Type	Volts	Size	Replaces Mallory	Replaces Burgess	PRICE
18 D 5440	E90	1½	29/64x1 1/8"	MN9100	AL-N	Pkg. of 2/ .66
18 D 5426	E91BP	1½	1 7/32x1 31/32"	MN1500	AL-9	Pkg. of 4/1.57
18 D 5348	E92	1½	13/32x1 3/4"	MN2400	AL-7	.39 ea.
18 D 5347	E93BP	1½	63/64x1 15/16"	MN1400	AL-1	Pkg. of 2/ .99
18 D 5993	E94	1½	1 11/32x1 7/32"	.....	.....	.52 ea.
18 D 5346	E95BP	1½	1 21/64x2 13/32"	MN1300	AL-2	Pkg. of 2/1.27
18 D 5996	523	4½	.662x1.965	PX21	AL-133	1.00 ea.
18 D 5997	531	4½	.622x2.29	PX19	.....	1.00 ea.

HEARING AID AND ELECTRONIC BATTERIES

Button-type batteries for hearing aids, electronic watches and as accurate reference voltage sources. Provides higher voltage and greater milliwatt-hour* ratings. All are 1½ V; except E675(1.4V). Av. wt., 3 oz.

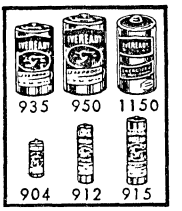
Stock No.	Mfr's Type	Ht. x Dia.	*mW Hour	PKG. OF 6
18 D 5344	S41	.455x.165"	105	1.80
18 D 5345	S76	.455x.200"	165	1.98
18 D 5427	E675	.455x.205"	180	1.92
18 D 5428	S312	.310x.140"	30	1.62
18 D 5429	S13	.310x.210"	60	1.80

EVEREADY BATTERY MANUAL

Answers completely every conceivable question concerning each Eveready battery in production. Covers all battery applications. Numerous charts, graphs and tables. Dimensions, drain data, weights. Over 500 pages. For your industrial library. 5½x 8½".

23 D 7200 E. Wt., 1½ lbs.....6.00

TOP-QUALITY FLASHLIGHT BATTERIES



Carbon-zinc batteries in standard sizes for use in almost all types of flashlights. Sealed to provide protection in handling and against corrosive leakage. Sturdy construction; long, dependable service. Type 935 (size C), for baby tubular flashlights; Types 950 and 1150 (size D), for standard flashlights; Type 915 (size AA), for standard penlights; Type 912 (size AAA), for slim penlights; Type 904, for miniature and novelty lights. All are 1½ volts. *Heavy-duty type. Av. shpg. wt. per pkg., 10 oz.

Stock No.	Mfr's Type	Size (L x Dia.)	Replaces Burgess	PRICE
18 D 5082	904	1 11/64x7/16"	N	Pkg. of 6 for .57
18 D 5080	912	1 3/4x1 3/32"	7	Pkg. of 2 for .26
18 D 5083	915BP	1 31/32x35/64"	Z	Pkg. of 2 for .27
18 D 5078	935	1 15/16x33/64"	1	Pkg. of 2 for .33
18 D 5079	950	2 3/8x1 21/64"	2	Pkg. of 4 for .65
18 D 5081	1150*	2 3/8x1 21/64"	210	Pkg. of 4 for .67

TRANSISTOR RADIO BATTERIES

- Designed to Provide Distortion Free Tone
- Meet Long-Life Power Needs of Transistor Radios

Engineered for today's modern equipment. Feature long life and steady full charge power. Batteries below fit most transistor radios, flashlights, etc. *indicates flat contacts (206 has recessed negative); †regular snap type contacts; ‡miniature snap type contacts. No. 222 is a premium long-life battery, similar to 216, but higher quality.

Stock No.	Mfr's Type	Volts	Size	Wt., Oz.	PRICE
18 D 5150	206BP*	9	2x3/4"	1.2	.63 ea.
18 D 5151	216BP‡	9	1 1/32x2 1/32x29/32"	1.3	.49 ea.
18 D 5152	222BP‡	9	1 1/32x1 1/32x29/32"	1.3	.65 ea.
18 D 5153	226BP†	9	1x1 15/16"	2.0	.69 ea.
18 D 5154	246‡	9	1 13/32x1 1/32x2 1/4"	4.5	1.36 ea.
18 D 5155	266†	9	1 1 3/16x1 1 3/16x2 7/16"	7.0	1.36 ea.
18 D 5156	276†	9	29/16x2 1/32x3 5/32"	15.0	1.57 ea.
18 D 5157	333BP*	4½	2 1/32x1 31/32"	.9	.69 ea.
18 D 5158	1015BP*	1½	9/16x1 31/32"	2.4	4/4.64
18 D 5159	1035BP*	1½	1 1/32x1 15/16"	2.8	2/3.0
18 D 5160	1050BP*	1½	1 1 1/32x2 13/32"	6.6	2/.39

LANTERN BATTERIES

509 731

For use with railroad type lanterns. Type 509 has positive coilspring contacts—a favorite of railroad men. Type 510F has Fahnstock clip terminals; type 510S has screw terminals. Type 731 has insulated screw terminals. All are 6 volts, except type 732, 12 volts.

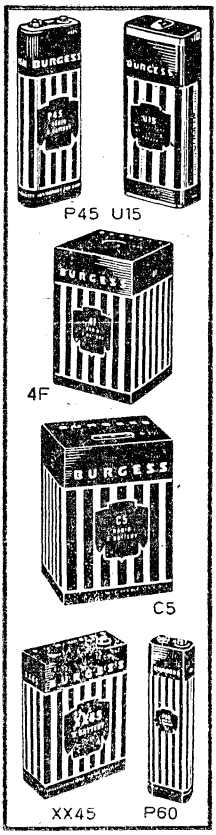
Stock No.	Mfr's Type	Size	Wt., Lbs.	Replaces Burgess	EACH
18 D 5084	509	2 5/8x2 5/8x4 3/8"	1½	F4M	.99
18 D 5085	510S	2 5/8x2 5/8x4"	1½	F4BP	.99
18 D 5086	510F	2 5/8x2 5/8x4 1/2"	1¼	F4SC	1.06
18 D 5087	731	5 3/8x2 7/8x2 15/16"	3¼	TW1	2.15
18 D 5088	732	5 3/8x2 7/8x4 15/16"	3¼	TW2	2.33

PHOTOFLASH BATTERIES

High amperage—positive flash. *Cylindrical cell. †For electronic repeating flash. #For B-C units. §For slave units.

Stock No.	Mfr's Type	Volts	Size	Wt.	PRICE
18 D 5608	#411	15	1x39/64x1 7/16"	1 oz.	1.00 ea.
18 D 5610	#413	30	1x39/64x2 17/32"	2 oz.	1.30 ea.
18 D 5604	†457	67½	2 1/16x1 5/16x2 1/4"	8 oz.	2.70 ea.
18 D 5272	460K	45	1 57/64x1 3/8x2 11/32"	6 oz.	1.97 ea.
18 D 5614	§467	67½	2 3/4x1 11/32x3 43/64"	12 oz.	2.70 ea.
18 D 5605	†482	45	3 9/16x1 3/4x5 1/2"	1 lb., 15 oz.	2.97 ea.
18 D 5613	†489	225	4 1/4x2 5/8x4 1/4"	2 lbs., 12 oz.	6.96 ea.
18 D 5607	†490	90	3 23/32x1 9/32x3 1/16"	15 oz.	3.15 ea.
18 D 5609	†491	240	2 9/16x1 5/16x4 13/32"	13 oz.	6.26 ea.
18 D 5606	†492	2¼	3 9/16x2 3/4x4 3/4"	15 oz.	8.35 ea.
18 D 5611	#493	300	2 3/4x2 9/32x3 7/8"	15 oz.	9.07 ea.
18 D 5612	†497	510	2 15/16x1 11/32x5 7/16"	1 lb., 10 oz.	11.87 ea.
18 D 5615	#504	15	19/32x19/32x1 23/64"	1 oz.	1.00 ea.
18 D 5616	#505	22½	19/32x19/32x1 31/32"	1 oz.	1.17 ea.
18 D 5602	*815BP	1½	35/64x1 31/32"	2 oz.	Pkg. of 2/.33
18 D 5601	825BP-2	1.5	27/32x7/32"	2 oz.	Pkg. of 2/.67
18 D 5600	*835BP	1½	1 15/16x1"	3 oz.	Pkg. of 2/.39
18 D 5349	*850	1½	1 11/32x2 25/64"	4 oz.	.19 ea.

Burgess "A", "B", and "C" Batteries



ZINC-CARBON "A" BATTERIES FOR ELECTRONIC USE

Stock No.	Mfr's Type	Price	Volts	Size	Wt., Lbs.	Replaces		
						Eveready	RCA	NEDA
18 D 5001	2F	1.22 ea.	1½	2 19/32x1 3/8x4 1/4"	¾	W353	VS141	11
18 D 5010	2F2H	1.92 ea.	3	2 5/8x2 5/8x4 1/16"	1½	W356	VS136	703
18 D 5002	2F4	2.87 ea.	6	4x2 13/16x5 7/16"	2½	718	.....	1
18 D 5030	2FH(2FBP)	.84 ea.	1½	2 5/8x1 11/32x4 1/8"	½	W711	VS101	700
18 D 5782	2R	.17 ea.	1½	2 25/64x1 21/64" dia.	½	1050	VS336	13
18 D 5003	4F	1.15 ea.	1½	2 5/8x2 5/8x4 3/32"	1½	742	VS004	4
18 D 5046	8R	1.85 ea.	1½	3 15/16x1 3/32" dia.	¼	960P	VS070	23
18 D 5034	422	.79 ea.	3	2 5/16x2 23/32x1 11/32"	¼	750	VS134	704
18 D 5026	432	2.90 ea.	4½	1 31/32x2 1/32x2 1/4"	¼	751	VS142	705
18 D 5091	532	1.36 ea.	4½	2 15/32x1 7/16x2 23/32"	¼	703	VS133	706
18 D 5041	B5	2.27 ea.	7½	3 29/32x7/8x2 27/32"	½	713	VS129	8
18 D 5044	C5	1.23 ea.	7½	2 7/32x1 15/16x3 1/32"	¾	717	VS065	9
18 D 5011	F2BP	1.33 ea.	3	2 21/32x1 3/8x4 1/32"	1	W352	VS100	701
18 D 5592	F3	1.65 ea.	4½	4x1 7/16x4 1/8"	1	736	VS067	3
18 D 5009	F4BP	.99 ea.	6	2 5/8x2 5/8x4"	1½	510S	VS040S	915
18 D 5007	F4PI	1.15 ea.	6	2 21/32x2 21/32x4 1/8"	1½	744	VS009	6
18 D 5593	Z4	.87 ea.	6	1 3/16x1 3/16x2 7/32"	¼	724	VS068	2

ZINC-CARBON "B" BATTERIES FOR ELECTRONIC USE

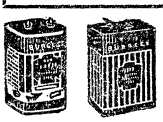
Stock No.	Mfr's Type	Price	Volts	Size	Wt., Lbs.	Replaces		
						Eveready	RCA	NEDA
18 D 5560	4156	1.61 ea.	22½	3 17/32x2 1/8x2 29/32"	1	763	VS102	710
18 D 5561	5156PI	4.16 ea.	22½	4 7/64x2 3/8x2 55/64"	1¾	768	VS031	721
18 D 5559	5308	3.05 ea.	45	4 1/16x2 9/16x5 1/8"	2½	762S	VS112	709
18 D 5570	A30	3.46 ea.	45	3 9/16x2 1/4x4 5/16"	1¾	W359	VS014	206
18 D 5571	B30	5.40 ea.	45	4 1/16x2 17/32x5 5/16"	2¼	484	VS012	207
18 D 5104	K10	1.57 ea.	15	1 1/4x7/8x1 17/32"	⅛	417	.....	224
18 D 5105	K15	1.65 ea.	22½	1 1/4x7/8x2 9/32"	⅛	420	.....	225
18 D 5061	K20	1.92 ea.	30	1 1/4x1 5/16x2 23/32"	¼	430	.....	226
18 D 5596	K45	2.97 ea.	67½	2 11/16x1 5/16x2 1/4"	½	457	VS082	203
18 D 5576	M30	2.97 ea.	45	3 9/16x1 3/4x5 1/2"	2	482	VS013	202
18 D 5669	N60X	6.50 ea.	90	1 7/8x1 11/32x7 1/8"	1	495	VS316	216
18 D 5645	P45	2.70 ea.	67½	1 29/32x1x5 9/32"	¾	477	VS218	211
18 D 5651	P60	2.97 ea.	90	1 29/32x1x7 13/32"	1	479	VS219	214
18 D 5062	U10	1.00 ea.	15	1x3 9/64x1 7/16"	1 oz.	411	VS083	208
18 D 5064	U15	1.17 ea.	22½	1x3 9/64x1 31/32"	1 oz.	412	VS084	215
18 D 5066	U20	1.30 ea.	30	1x3 9/64x2 17/32"	⅛	413	VS085	210
18 D 5649	U30	1.75 ea.	45	1 3/32x1 9/32x3 17/32"	⅛	415	VS086	213
18 D 5668	UX45	2.07 ea.	67½	1 7/32x3 1/32x3 31/32"	¼	416	VS318	217
18 D 5772	V45	2.77 ea.	67½	2 3/4x1 11/32x3 43/64"	1	468	VS125	200C
18 D 5597	V60	3.15 ea.	90	3 23/32x1 9/32x3 11/16"	1	490	VS090	204
18 D 5573	W30PI	5.06 ea.	45	2 31/32x1 7/32x3 29/32"	¾	733	.....	N30P
18 D 5054	XX15	2.10 ea.	22½	1 11/32x1 5/16x3 7/8"	¼	425P	.....	.....
18 D 5575	XX30	2.27 ea.	45	2 17/32x3 1/32x3 21/32"	½	455	VS055	201
18 D 5060	XX30PI	2.84 ea.	45	2 17/32x3 1/32x4 1/32"	½	455P	.....	.....
18 D 5574	XX45	2.70 ea.	67½	2 3/4x1 11/32x3 43/64"	¾	467	VS016	200
18 D 5586	XX50	5.50 ea.	75	1 27/32x1 5/16x6 5/16"	1	437	VS217	212
18 D 5581	XX69	4.86 ea.	103½	1 11/32x1 11/32x11 23/32"	1	W361	.....	227
18 D 5069	V10	1.00 ea.	15	1 9/32x1 9/32x1 23/64"	1 oz.	504	VS704	220
18 D 5075	V15	1.17 ea.	22½	1 9/32x1 9/32x1 31/32"	1 oz.	505	VS705	221
18 D 5068	V20	1.75 ea.	30	1 3/16x1 9/32x1 13/32"	1 oz.	506	.....	223
18 D 5077	V20S	1.30 ea.	30	1 9/32x1 9/32x2 9/16"	1 oz.	507	.....	222
18 D 5572	Z30	4.95 ea.	45	3x2 5/16x4 1/16"	1¼	738	VS015	205
18 D 5569	Z30NX	2.69 ea.	45	3 1/32x1 7/8x4 15/32"	1½	W350	VS114	711

BATTERY ENGINEERING MANUAL

Information on performance of different battery types. Hundreds of graphs and illustrations. Spec sheets for new battery design. 148 pp. 6x9½". 10 oz.

23 D 8874 Z.... 1.00

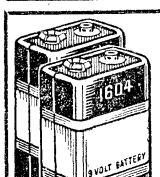
IGNITION, TELEPHONE, ALARM AND HOBBY BATTERIES



Used by police, fire departments, etc. for their dependability. 4F2H for doorbells, telephones, alarm systems and other ignition applications. 4FM is for hobby uses. Type TW2 is an outstanding lantern battery, sealed in steel for durable leakproof and weatherproof performance. Ideal for radar lights. No. 6 Ignition gives heavy-duty service in lanterns, ignitions, buzzers, bells, alarms, games and toys. Screw terminals; 4FM, 6-Ign., 6-Ind., TW2. Spring clip; 4F2H, 6-Tel. Binding Post: 4F4H, 4F5H, 4F6H.

Stock No.	Type	Price	Volts	Size	Lbs.
18 D 5015	4F2H	1.92 ea.	3	3 29/32x2 11/16x5 13/32"	2¾
18 D 5014	4F4H	3.85 ea.	6	8 5/16x2 13/16x5 13/16"	6¼
18 D 5584	4F5H	4.86 ea.	7½	7 3/16x3 31/32x5 13/16"	7½
18 D 5021	4F6H	5.53 ea.	9	8 1/2x3 31/32x5 13/16"	9
18 D 5871	4FM	.99 ea.	1½	2 5/8x2 5/8x4"	1½
18 D 5115	4FH	.99 ea.	1½	2 5/8x2 5/8x4"	1⅓

Stock No.	Type	Price	Volts	Size	Lbs.
18 D 5641	6-Ign.	.99 ea.	1½	6 5/8x2 1/2" dia.	2
18 D 5647	6-Ind.	.99 ea.	1½	6 5/8x2 1/2" dia.	2
18 D 5642	6-TEL.	.99 ea.	1½	6 5/8x2 1/2" dia.	2
18 D 5009	F4BP	.99 ea.	6	2 5/8x2 5/8x4"	1½
18 D 5853	F4M	.99 ea.	6	2 5/8x2 5/8x4 3/8"	1½
18 D 5500	TW2	2.15 ea.	12	5 3/8x2 7/8x4 15/16"	3¼



ALLIED 9-VOLT TRANSISTOR RADIO BATTERY

2 for only 59¢

- American Made
- Fit Most Radios

Made for us by a famous American manufacturer, yet sells at imported-battery prices. Replaces Burgess 2U6, RCA VS323, Eveready 216, others. 1⅞x3 9/64x1". Wt., 6 oz.

18 D 5980..... Pkg. of 2 for .59

ZINC-CARBON "C" BATTERIES FOR ELECTRONIC USE

Stock No.	Type	Price	Volts	Size	Lbs.
18 D 5583	2370	2.10 ea.	4½	3 15/16x1 3/8x2 7/8"	¾
18 D 5565	5360	1.23 ea.	4½	2 13/32x2 7/32x2 21/32"	¼
18 D 5564	5540	1.80 ea.	7½	4x7/8x2 3/4"	½
18 D 5568	W5BP	5.80 ea.	7½	2 31/32x2 3/32x1 3/4"	¼

SPECIAL-PURPOSE TAPE RECORDER BATTERIES

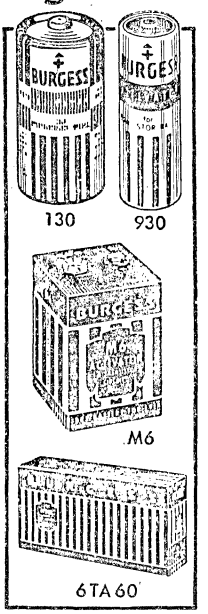
Stock No.	Type	Price	Volts	Size	Lbs.
18 D 5111	2X7	4.00 ea.	10½	2 1/2x1 25/32x2 11/32"	½
18 D 5120	2VT8	2.00 ea.	12	1 5/16x1 1/16x3 1/32"	½

Depend on Allied for Complete Stocks and Same-Day Shipment

Batteries, Battery Holders, Battery Plugs

BURGESS ZINC-CARBON BATTERIES FOR TRANSISTOR CIRCUITS, OTHER APPLICATIONS

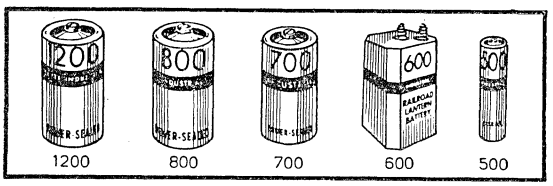
Stock No.	Mfr's Type	Price	Volts	Size	Wt., Lbs.	Replaces Eveready	Replaces RCA	Replaces NEDA
18 D 5769	2MN6	.65 ea.	9	1x$^{39}/_{64}$x1$^{7}/_{8}$" dia.	$^{1}/_{8}$	222	.....	1604D
18 D 5661	2N6	1.30 ea.	9	1$^{3}/_{8}$x1$^{3}/_{8}$x2$^{3}/_{4}$"	$^{1}/_{4}$	246	VS305	1602
18 D 5650	2U6	.48 ea.	9	1x$^{39}/_{64}$x1$^{7}/_{8}$"	$^{1}/_{4}$	216	VS323	1604
18 D 5855	7	Pkg. of 2 for .27	1$^{1}/_{2}$	1$^{3}/_{4}$x1$^{3}/_{32}$" dia.	$^{1}/_{4}$	912	VS074	24F
18 D 5861	130	Pkg. of 2 for .39	1$^{1}/_{2}$	1$^{15}/_{16}$x$^{63}/_{64}$" dia.	$^{1}/_{2}$	1035	VS335	14
18 D 5862	230	Pkg. of 2 for .39	1$^{1}/_{2}$	2$^{25}/_{64}$x1$^{21}/_{64}$" dia.	$^{1}/_{2}$	1050	VS336	13
18 D 5863	930	Pkg. of 4 for .64	1$^{1}/_{2}$	1$^{31}/_{32}$x$^{35}/_{64}$" dia.	$^{1}/_{2}$	1015	VS334	15
18 D 5779	2	Pkg. of 2 for .33	1$^{1}/_{2}$	2$^{3}/_{8}$x1$^{21}/_{64}$" dia.	$^{5}/_{8}$	950	VS036	13F
18 D 5666	A4	2.48 ea.	6	1$^{9}/_{32}$x1$^{9}/_{32}$x2$^{11}/_{32}$"	$^{1}/_{4}$	.....	.....	.....
18 D 5670	C6X	1.64 ea.	9	2$^{5}/_{16}$x1$^{1}/_{32}$x0$^{1}/_{16}$"	$^{3}/_{4}$	2356N	VS330	1612
18 D 5098	D5	2.00 ea.	7$^{1}/_{2}$	2$^{9}/_{16}$x2x2$^{23}/_{32}$"	$^{7}/_{8}$	707	VS315	26
18 D 5652	D6	1.57 ea.	9	2$^{9}/_{16}$x2x3$^{5}/_{32}$"	1	276	VS306	1603
18 D 5667	D6PI	4.20 ea.	3, 6, 9	2$^{19}/_{32}$x1$^{7}/_{16}$x7$^{27}/_{32}$"	1$^{1}/_{2}$	2506	VS301	1601
18 D 5103	D6S	4.80 ea.	9	2$^{1}/_{4}$x1$^{1}/_{4}$x7$^{29}/_{32}$"	1$^{1}/_{2}$	2671N	.....	1608
18 D 5174	L6	.62 ea.	9	1$^{31}/_{32}$x$^{47}/_{64}$" dia.	$^{1}/_{8}$	206	VS327	1611
18 D 5102	M6	1.36 ea.	9	1$^{13}/_{16}$x1$^{13}/_{16}$x2$^{7}/_{16}$"	$^{1}/_{2}$	266	VS322	1605
18 D 5864	NE	Pkg. of 6 for .48	1$^{1}/_{2}$	1$^{11}/_{64}$x$^{7}/_{16}$" dia.	$^{1}/_{8}$	904	VS073	910
18 D 5093	P6	.68 ea.	9	1$^{15}/_{16}$x1" dia.	$^{1}/_{4}$	226	VS300A	1600
18 D 5770	PM6	.80 ea.	9	1$^{15}/_{16}$x1" dia.	$^{1}/_{4}$	.....	.....	1600D
18 D 5012	PM8	1.05 ea.	12	2$^{7}/_{16}$x1" dia.	$^{1}/_{8}$	228	VS329	1810
18 D 5657	XX9	1.77 ea.	9, 13$^{1}/_{2}$	1$^{9}/_{32}$x2$^{29}/_{32}$x2$^{17}/_{32}$"	$^{1}/_{4}$	239	VS304	1900
18 D 5364	Y6	.83 ea.	9	$^{3}/_{5}$x$^{3}/_{5}$x1$^{9}/_{10}$"	$^{1}/_{8}$	.....	.....	1606



PORTABLE RADIO "AB" PACKS

Stock No.	Mfr's Type	Price	Volts	Size	Wt., Lbs.	Replaces Eveready	Replaces RCA	Replaces NEDA
18 D 5578	6TA60	11.40 ea.	1$^{1}/_{2}$, 90	9$^{31}/_{32}$x2$^{1}/_{4}$x4$^{7}/_{16}$"	4$^{1}/_{2}$	W369	.....	410
18 D 5579	G6B60	12.00 ea.	9, 90	13$^{29}/_{32}$x2$^{13}/_{16}$x4$^{21}/_{32}$"	6$^{1}/_{4}$	752	VSO47	400

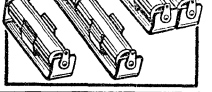
BURGESS INDUSTRIAL BATTERIES



Sets the standard of excellence for industrial batteries. Designed for industry's maximum service demands—long-life service on heavy-duty drain and long periods of consistent use. Labels clearly show "Not Designed for Retail Sales." Min. quantity 1 case.

Stock No.	Mfr's Type	Volts	Quantity	Wt., Lbs. Per Case	Per Case 1-5	Per Case 6-20
18 D 5430 X	1200	1$^{1}/_{2}$	200	42	27.00	24.00
18 D 5431 X	800	1$^{1}/_{2}$	200	41-3/10	24.00	22.00
18 D 5432 X	700	1$^{1}/_{2}$	192	21	23.04	21.12
18 D 5433 X	600	6	25	36-1/10	15.75	15.00
18 D 5434 X	500	1$^{1}/_{2}$	192	7	17.67	16.70

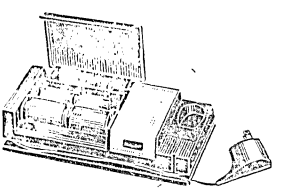
KEYSTONE BATTERY HOLDERS



Low cost, lightweight and sturdily constructed. Good electrical contact, low leakage current and snap-fit clips. 2024T3 spring temper aluminum, nickel plated brass contacts. Batteries within rules are in same size group. *Batteries go side by side. #Batteries go end to end. 2 per pkg. 3 oz.

Stock No.	Mfr's Type	Holds	Burgess	Mallory	Eveready	Per Pkg./2 1-19	Per Pkg./2 20-299
18D 5900	104	1	Hg-4R	RM4R	E4	.76	.68
18D 5901	139	1	Z, HG9,	RM12R, ZM9,	E9, E12,	.46	.42
18D 5902	140*	2	CD6, 9R,	TR133, M-15F,	E91, E133,	.76	.68
18D 5903	171*	3	HG12R, 920,	M-15R	E502, N46,	.98	.88
18D 5904	182*	4	H133 930,		515, 915,	1.28	1.14
18D 5905	189#	2	HG502R		1015, BA58	.90	.72
18D 5906	173	1	1, P6, 120,	TR233, M14R,	E93, 226,	.60	.52
18D 5907	174*	2	130, H233,	M-14F,	E233, BA42,	.76	.68
18D 5908	185#	2	302599	302599	635, 935	.90	.72
18D 5911	132	1	H163, H115R	TR132R, TR115	E132, E115	.60	.52
18D 5912	175	1	2, 2R, CD7,	RM42,	E42, N56, 95,	.60	.52
18D 5913	176*	2	210,	Mn-1300,	D99, A100, 950,	.76	.68
18D 5914	186#	2	230	M-13R,	1050, BA30	.92	.74
18D 5915	166	1	U10	RM411	411	.60	.52
18D 5916	177	1	U15	RM142R	412	.60	.52
18D 5918	183	1	U20	RM413	413	.60	.52
18D 5919	225	1	Y20	.....	504	.42	.40
18D 5271	203P	1	206	216	1604	.88	.72

MALLORY ALKALINE BATTERY CHARGER



BC-15. Charges two or four batteries of the same size, or any two pairs, simultaneously. Positive, automatic operation. Brings batteries to top charge in 24 hours. Has built-in AC line cord. For use only with Mallory Alkaline Batteries type SA-13D, SA14C and SA15AA. Not to charge other batteries. Size, 9$^{3}/_{4}$x4$^{3}/_{4}$x2$^{3}/_{4}$". For 110-130 VAC.

18 D 5239. Wt., 1 lb.....6.95

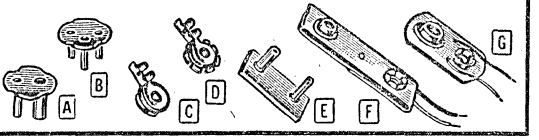
MALLORY RECHARGEABLE ALKALINE BATTERIES

SA-13D. 1.5 volt battery. 2000 milliamp-hour capacity. Size, D. 1.3x2.367". Shpg. wt., 5 oz.
18 D 5815.....1.00

SA-14C. 1.5 volt battery. 1000 milliamp-hour capacity. Size, C. 1.01x1.94". Shpg. wt., 2$^{1}/_{2}$ oz.
18 D 5816.....81

SA-15AA. 1.5 volt battery. 300 milliamp-hour capacity. Size, AA. 0.55x1.94". Shpg. wt., 1 oz.
18 D 5817.....52

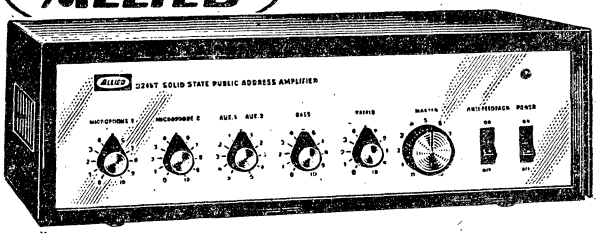
CINCH-JONES PLUGS FOR BATTERIES

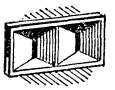


Made with nickel-plated brass tube pins mounted on high-grade bakelite. Chart below indicates the correct plug for most popular batteries. Av. shpg. wt., 2 oz. 2 per package.

Stock No.	Mfr's Type	Fig.	For Burgess Battery	For Eveready	Pkg. of 2
18 D 5178	5A1	A	2F, 4F, 6F, 8F, 2D, 8R	720, 960P	.16
18 D 5176	5B1A	B	XX15, XX22, XX30P1	425P, 433P	.16
18 D 5301	5M	C	P6, D5, P6M, M6, XX45, XX30, XX50,	226, 707, 467, 266	.11
18 D 5302	5F	D	K45, P45, P45M, P60, D6, 4D4, N60X, C6X	455, 477, 457, 437, 495	.11
18 D 5175	5A4	E	2F4, F4P1, XX15, XX22, XX30P1	....	.16
18 D 5184	5D	G	U30, 2U6, 2N6, UX45	415, 216, E146	1.39
18 D 5308	5D2	F	N60	.....	.83
18 D 5309	5MFA	F	XX45, XX30, K45	457	.83

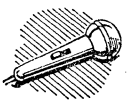
Allied® Solid-State PA Amplifiers



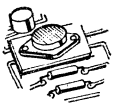


AC Convenience Outlets

Anti-Feedback Control



Mike Precedence Feature



Printed Circuit Design

ALLIED 3246T 45-WATT SILICON TRANSISTOR SOLID-STATE AMPLIFIER

- **Advanced Silicon Solid-State Circuit with Inverse Feedback for High-Quality Sound Reproduction**
- **Microphone Precedence Feature Cuts Out Program Material To Permit Paging, Announcements**

Only Allied, first in the field with the very latest PA design, offers you such tremendous value for your PA dollar. You get a new silicon solid-state 45-watt amplifier with many deluxe features for less than the cost of many tube-type amplifiers of equal power. Modern printed circuit construction permits the many benefits of transistorized circuits at no extra cost. There is plenty of power without the excessive heat usually found in tube-type amplifiers. Hum and noise are kept to a minimum and you get sound the instant you turn it on—there's no waiting for tubes to warm up.

Other features include wide-range frequency response and high-gain auxiliary inputs for phono, tuner, or tape recorder make it the perfect choice for most large-size PA systems in cafeterias, dining or dance halls, skating rinks, work areas and waiting rooms. Also provides excellent interplant paging service as well as general coverage of meetings, assemblies and outings. Microphone precedence feature cuts out program material so paging may be heard, while 40-10,000 Hz frequency response assures that every word is heard clearly. Features separate mixer controls and inputs for two high or low impedance mikes, and common mixer control for two auxiliary inputs for phono, tuner or tape recorder. Extra-large master gain control lets you vary total output without changing the input. gain controls individually. Switchable anti-feedback control attenuates the lower frequencies to allow operation at high levels.

Separate bass and treble tone controls. Instant choice of output impedance—4, 8, or 16 ohms and 70.7 volts plus 25 volt output to permit installation of a constant-voltage system without conduit wiring for speakers. AC convenience outlet on rear of chassis. Has both screw-type and quick-connect speaker connections. Pilot light, 5 3/16x15 1/4x9 1/2". Styled in gray case with brushed aluminum front. For 105-130 volt, 50-60 Hz AC.

12 D 7042 U. Shpg. wt., 10 lbs. **79.95**

Allied 3201A 4-Speed Manual Phono Top. Plays up to 12" records. Mounts with screwdriver. Cables, connector. 117 V, 60 Hz.

12 D 7983 X. Shpg. wt., 6 lbs. **24.95**

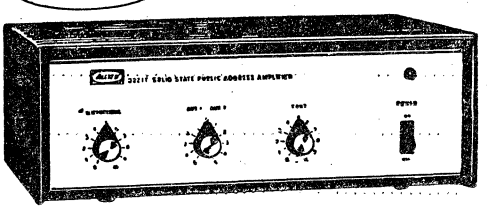
SPECIFICATIONS

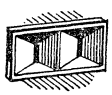
Power Output: 45 watts (90 watts peak). **Frequency Response:** 40-10,000 Hz. **Inputs:** 2 Mike; 2 Aux (crystal or ceramic phono cartridge, tuner, tape recorder). **Controls:** Mike (2) Aux; Bass; Treble; Master Gain; Anti-Feedback; on-off. **Outputs:** 4, 8, and 16 ohms, plus 25 V and 70.7 V; AC Convenience Outlet. **Solid-State Circuit:** 8 silicon transistors; 3 diodes. **Power Consumption:** 65 watts at 120 VAC. **Power Requirement:** 105-130 V, 50-60 Hz AC.

INSTALLATION NOTES

Mike Connector: Amphenol 75MC1F or Switchcraft 2501F (takes 2, 1 supplied). **Aux. Conn:** Phono plug (takes 2, 1 supplied). **Speaker Conn:** Screw terminals; spkr. jacks use Amph. 91MPM3S plugs, not supplied. **Speaker Cable:** Uses 2-cond. (not incl.). **Line Cord:** 7' 2-wire with plug. **Ventilation, Plug Space Required Behind Cabinet:** 3". **Ventilation Space Required Above Cabinet:** 5". **Power:** 105-130 V, 50-60 Hz AC; optional phono: 60 Hz.

ALLIED MODEL 3321T 20-WATT SOLID-STATE AMPLIFIER

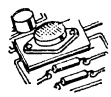




AC Convenience Outlet

Anti-Feedback Circuit

Mike Precedence Feature



Printed Circuit Design

- **Solid-State Circuit Throughout**
- **Clear Coverage in Indoor, Outdoor Medium-Size Areas**
- **"Quick-Set" Selector for Standard Impedances**
- **70.7 and 25-Volt Constant-Voltage Outputs**

Twenty watts of solid-state power—an excellent choice for use where clear, average size area coverage is required at the lowest possible cost. Latest solid-state circuit design includes six silicon transistors and two diodes for reliability and cool operation. Anti-feedback circuit gives exceptionally low hum and distortion to provide unusually clear reproduction of voice or music.

For use in lecture halls, auditoriums, churches, stores, offices, restaurants and a wide variety of other applications. Microphone precedence feature cuts out regular program material to permit paging and announcements. Mike and auxiliary controls allow controlling the volume of either input without affecting the volume of the other—especially useful for lectures where both voice and music are used to accompany a graphic display. 40-10,000 Hz frequency response of all input signals. Inputs include one high or low impedance microphone and two auxiliary for phono, tuner or tape recorder to permit use of records, FM, or long-playing tapes as background music sources. Controls include one microphone and one auxiliary fader; a master tone control and an on-off switch.

"Quick-Set" selector makes it easy to choose 4, 8, or 16 ohm impedance, or 25 volt or 70.7 volts for constant-voltage output. Can be used for multi-speaker installations where different power levels are desired at various locations. With pilot light. All input connectors are easily accessible from the back of the unit, while all controls are mounted on froht for convenience. Gray metal case, 4 1/2x13x7 5/8". For 105-130 volt 50-60 Hz. AC.

12 D 7041 U. Shpg. wt., 8 lbs. **59.95**

SPECIFICATIONS

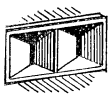
Power Output: 20 watts (40 watts peak). **Response:** 40-10,000 Hz. **Inputs:** 1 Mike, 2 Auxiliary (crystal or ceramic phono cartridge, tuner, tape recorder). **Controls:** Mike and Auxiliary Faders; Master Tone; On-Off Switch. **Gain:** Mike, 126 dB; Auxiliary, 83 dB. **Outputs:** 4, 8, 16 ohms; 25 volts or 70.7 volts; AC Convenience Outlet. **Solid-State Circuit:** 6 silicon transistors, 2 diodes. **Power Requirement:** 105-130 V, 50-60 Hz AC.

INSTALLATION NOTES

Connectors: Microphone, Amphenol 75MC1F or Switchcraft 2501F (takes 1, 1 supplied); Auxiliary pin plug (takes 2, one supplied). **Speakers:** Screw-type terminals; speaker jacks use Amphenol 91MPM35 (not included). **Ventilation Space Required Above Cabinet:** 5". **Ventilation Mike Plug Space Required Behind Panel:** 3". **Speaker Cable:** Uses 2-conductor (not included). **Line Cord:** 7' 2-conductor with plug (included).

Allied's Own Public Address Equipment Is Your Best Buy

Allied® PA Amplifiers Offer More Watts per Dollar

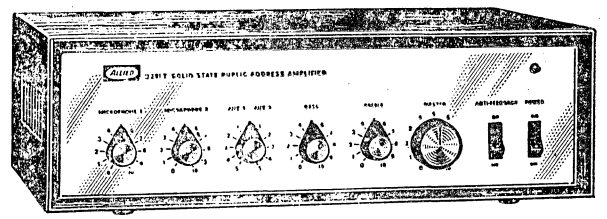


AC Convenience Outlets

Anti-Feedback Control

Mike Precedence Feature

Solid-State PC Construction



ALLIED 328IT 80-WATT SILICON TRANSISTOR SOLID-STATE AMPLIFIER

- Anti-Feedback Control Attenuates Low Frequencies to Prevent Feedback
- Mike Precedence Feature
- "Quickset" Selector for Instant Choice of Desired Impedance
- For High or Low Impedance Microphones

It takes plenty of power to handle the really big jobs. That's why the Allied 3281T all silicon transistor amplifier is designed to deliver a full 80 watts of audio output. You can rely on it for adequate coverage of extra-large auditoriums, factories, or athletic fields with power to spare. It's priced surprisingly low for a modern solid-state amplifier. Dollar-for-dollar, you just can't get more in an 80-watt public address amplifier.

Designed to maintain its wide response even at full power, it delivers better sound over wide areas. Economical to operate too. Features ample controls and inputs for almost any public address installations. Separate bass and treble controls plus a large master gain control let you vary the tone of each input individually and adjust total output volume without disturbing the balance between inputs. Separate mixer controls for and inputs for two microphones. Common mixer control for auxiliary inputs accommodates phono, tuner or recorder, lets your public address system be used with commercial FM broadcasts, pre-recorded taped programs, or records (see the special phonograph listed below). Anti-feedback circuit with front-panel control switch attenuates the lower frequencies to allow higher volume without feedback. Protects trumpets from damage.

"Quick-Set" selector for impedance—4, 8, 16 ohm and 70.7 volt outputs, plus 25-V output that permits installation of constant voltage system without conduit for speaker wires. Pilot light. Gray metal case with brushed aluminum panel. 5 5/16x15 1/4x11 1/2". For 105-130 V, 50-60 Hz AC. Shpg. wt., 27 lbs.

12 D 7040 U.....114.95

ALLIED MODEL 3201A 4-SPEED MANUAL PHONO TOP. Designed especially for use with the Model 3281T amplifier, mounts on top with just a screwdriver. Plays up 12" records, receives power from amplifier for 110-130 VAC.

12 D 7983 X. Shpg. wt., 6 lbs.....24.95

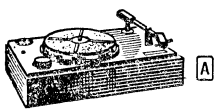
SPECIFICATIONS

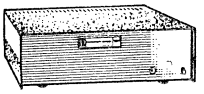
Power Output: 80 watts. **Response:** 40 to 10,000 Hz. **Inputs:** 2 Microphone, Hi or Low impedance (switch controlled); 2 Aux. (ceramic, crystal phono, tuner, tape). **Gain:** Mike, 118 dB; Aux., 89 dB. **Hum and Noise:** Mike, 43 dB below rated output; Aux., 66 dB below rated output. **Outputs:** 4, 8, 16 ohms; 25, 70.7 V. **Power Consumption:** 150 watts. **Power Requirement:** 105-130 volts, 50-60 Hz AC.

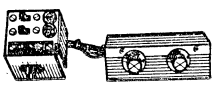
INSTALLATION NOTES

Microphone Connectors: Amphenol 75MC1F or Switchcraft 2501F (takes two, one supplied). **Aux Connectors:** Pin plug (takes two, one supplied). **Speaker Connectors:** 2 screw terminals; speaker jacks, use Amphenol 91MPM3S (not included). **Line Cord:** 7-ft., 2-wire. **Space Required Behind Cabinet:** 3". **Space Required Above Cabinet:** 5". **Speaker Cable:** 2-conductor included).

SOLID-STATE TRANSFORMERLESS AMPLIFIERS, ACCESSORIES — UNIVERSITY SOUND







"POWERLINE" ACCESSORIES

A Model PT-210 3-Speed Manual Phono. Designed to provide record source for Power-Line amplifier (right). Three-speed monophonic player mounts on top of unit with just a screwdriver. Equipped with dual stylus (stereo microgroove and 78 rpm) flip-over sapphire cartridge for playing any stereo or mono record. 4 3/4x14 3/8x8 3/4". For 117 V, 60 Hz AC. Shpg. wt., 6 lbs.

12 D 7988 X.....32.97

B Model UPB 100T Booster Amplifier. Powerful booster-amplifier delivers a full 100 watts for sound systems in schools, industrial plants, or anywhere that requires a public address system of extra-high capability. Has 5 outputs. 16-ohm impedance; 25, 70 and 115 V for industrial use. Frequency response, 50-15,000 Hz. For 110-120 VAC. 5x15 1/2x10 1/2". Shpg. wt., 18 lbs.

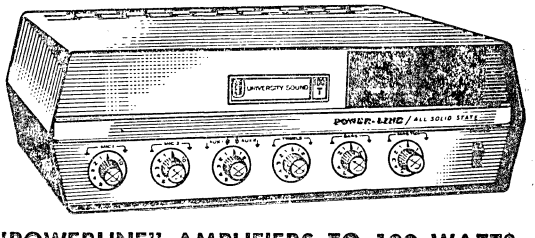
12 D 8239 U.....254.95

C Model MPA-1 Two-Channel Plug-in Mike Preamplifier. Provides two additional permanent microphone inputs with hi-lo impedance selection and front-of-panel controls. Pre-wired, installs in amp with screwdriver and penknife. 3x4x1 1/2". Shpg. wt., 1 lb.

12 D 8241 X.....41.97

D Model UMX-5 Solid-State Mixer-Preamplifier. All silicon transistor mixer-preamplifier provides for five high or low impedance inputs. Output drives any amplifier through its mike or aux input. Has 10 dBm (2.85 V) output, frequency response of 25-50,000 Hz, ±2 dB. Features 5 input level controls, master gain, on/off (with pilot) and on/off audio switch for each input. Has connectors for paralleling up to three units. Uses Amphenol-type connectors (not included). For 110-120 VAC. 2 1/2x13 1/2x4 5/8". Shpg. wt., 6 lbs.

12 D 8240 U.....112.76



"POWERLINE" AMPLIFIERS TO 100 WATTS

- No Transformer Needed with 4 to 20-ohm Loads
- Direct Coupled Circuitry Boosts Power Up To 25%
- Power Consumption Less Than 5 Watts When Idling

Meet the needs of small, medium and large complex PA installations. Solid-state circuits eliminate the need for Constant-Voltage systems in virtually all small-to-moderate size installations, but Constant-Voltage output is included for use if required. Direct-coupled circuits end insertion losses, boost available power to speakers by 20-25%. Control, mix and amplify three or more input signals, delivering their rated output power into 4 to 20-ohm loads. Factory-installed Output Autoformer converts transformerless amplifier to 25-70 V operation for large installations. All units feature Hi- or Lo input selection, switched AC outlet, and fused AC line. Power consumption less than 5 W. Deluxe UPL-100T and UPL-60T have logic circuits for overload protection, 40-20,000 Hz frequency response. Models UPL-35T and UPL-20T have response of 50-15,000 Hz, ±1 1/2 dB. All units have master gain control, bass and treble controls. For 95-130 V, 60 Hz AC. 5x15 1/2x10 1/2".

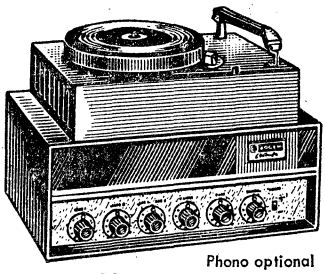
12 D 7984 U. UPL-100T 100-Watt PA Amplifier. 32 silicon transistors, 5 inputs. Shpg. wt., 22 lbs.....159.00

12 D 7985 U. UPL-60T 60-Watt PA Amplifier. 31 silicon transistors, 5 inputs. Shpg. wt., 20 lbs.....129.00

12 D 7986 U. UPL-35T 35Watt PA Amplifier. 35 silicon transistors, 5 inputs. Shpg. wt., 17 lbs.....104.97

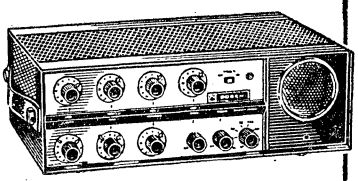
12 D 7987 U. UPL-20T 20-Watt PA Amplifier. 19 silicon transistors, 4 inputs. Shpg. wt., 17 lbs.....92.37

Bogen Public Address Amplifiers.

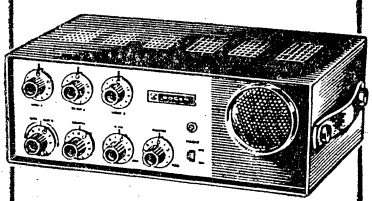


Phono optional

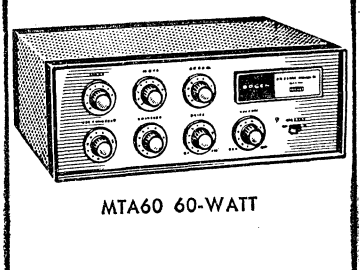
CHB-100 100-WATT PA



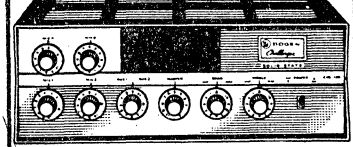
MX60A 60-WATT PA



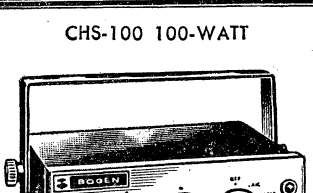
M60A 60-WATT



MTA60 60-WATT



CHS-100 100-WATT



BT35A 40-WATT

100-WATT PA AMPLIFIER MIXES TWO MIKES AND PHONO OR TUNER

Model CHB-100. Powerful public address amplifier boasts systems-tested circuitry for continuous, heavy-duty operation. Delivers a dependable 100-watt power output with a wide-range response of 20-20,000 Hz, ±2 dB. Inputs are provided for two high-impedance mikes, magnetic phono and two high-impedance auxiliary inputs; mixes two mikes and phono or tuner.

Includes separate bass and treble controls, fader, master volume control. Memory level markers aid in making accurate adjustments of controls. Output impedance, 4, 8 and 16 ohms, 25-volt line balanced, (6 ohms) 70-volt line (50 ohms). Has two plug-in speaker sockets and screw terminals. Protected against circuit damage caused by accidental shorting or disconnecting speaker lines. Hum and noise: mike, —7 dB; aux., —80 dB. Gain: mike, 125 dB aux., 100 dB; mag. phono, 115 dB. Metal cabinet, 6¾x15¾x10". 117 VAC.

12 D 7348 U. Shpg. wt., 25 lbs.... **133.5**

MODEL CHB-50. Similar to above, but with 50-watt power output.

12 D 7347 U. Shpg. wt., 22 lbs..... **103.5**

MODEL CHB-35A. Similar to CHB-100, but has 35-watt power output.

12 D 7346 U. Shpg. wt., 20 lbs..... **85.5**

LPC-4 PHONO TOP. Fits conveniently on top of the amplifiers listed above. 4-speed manual turntable with cartridge, mat, mounting brackets. 5x13x9¼". 117 VAC.

12 D 7373 X. Shpg. wt., 7 lbs..... **27.75**

DELUXE 60-WATT PA AMPLIFIER PROVIDES FIVE MICROPHONE CHANNELS

Model MX60A. Versatile amplifier provides five high-impedance mike channels, each with gain control. One channel converts for magnetic phono or tape. Also has two auxiliary inputs with fader; master gain control. Individual speech filters, calibrated low-frequency filter, power stage screen regulation. Exclusive variable level memory markers. Boost-and-cut type bass and treble controls. Identification strips for each channel. Built-in remote gain control circuit. Response: ±1½ dB, 10-38,000 Hz. Gain: mike, 125 dB; aux., 85 dB; magnetic phono, 120 dB. Hum and Noise: —70 dB. Impedance: 4, 8, 16, 83 ohms; 25-, 70-V line. Black and gray metal cabinet with leather carrying handle. 4¾x16½x12". For 117 VAC.

12 D 7379 U Shpg. wt., 35 lbs..... **229.50**

MODEL MX30A. Same as above, but 30 watts and 163 ohm output impedance instead of 83 ohms. 4¾x16½x12".

12 D 7380 U. Shpg. wt., 34 lbs.... **187.50**

POPULAR 60-WATT AMPLIFIER FILLS A WIDE VARIETY OF NEEDS

Model M60A. Widely-used 60-watt PA amplifier adapts to a multitude of applications. Accommodates virtually any audio signal source, providing a high degreee of intelligibility and control. Has three high-impedance mike channels (two convert for magnetic phono); two auxiliary inputs. All four inputs can be simultaneously mixed and faded. Bass, treble and master gain controls with memory markers for easy level adjustments. Response: ±2 dB, 20-20,000 Hz. Gain: mike, 122 dB; aux., 95 dB; mag. phono, 115 dB. Hum and Noise: (below 60 watts) mike, —65 watts; aux., —80 dB. Impedance: 4, 8 and 16 ohms; 25-V at 16 ohms, 70-V at 82 ohms. Rugged metal case, carrying strap. 5¾x14⅝x9⅞". 117 VAC.

12 D 7369 U. Shpg. wt., 29 lbs.... **165.00**

MODEL M330A. Same as above, but 30 watts and 70-V output is at 163 ohms instead of 82 ohms. Shpg. wt., 20 lbs.

12 D 7382 U..... **126.00**

ALL-SILICON SOLID-STATE 60-WATT PA AMPLIFIER

Model MTA60. Provides three low-impedance unbalanced microphone and two auxiliary inputs. If balanced mike lines are required, use T525U transformer (facing page). Equalized for magnetic cartridge and tape heads. Tape recorder and booster outputs. Chimney-type heat sinks and heat-sensing "thermo-guards" permit safe continuous operation to 158° F. RF capacitor-type filters. Output transistors are protected against open or shorted speaker lines. Memory marker controls. Response: 7-20,000 Hz, ±1 dB. Gain: mike, 125 dB; aux., 110 dB. Impedance: 2.6, 8, 16 ohms; 25-V at 10.4 ohms; 70-V at 82 ohms. 12 transistors, 7 diodes. 4½x12½x9¾". For 117 VAC.

12 D 7078 X. Shpg. wt., 23 lbs.... **178.50**

MODEL MTA30. As above, but 30 watts: 4, 8 and 16 ohms; 70-V at 163 ohms. Response: 30-20,000 Hz, ±1 dB. Operates on 117 VAC or 24-30 VDC (emergency power).

12 D 7075 X. Shpg. wt., 19 lbs.... **142.50**

POWERFUL 100-WATT ALL-SILICON SOLID-STATE PA AMPLIFIER

Model CHS-100. Advanced design solid-state PA amplifier offers a unique combination of features, dependability and value. Delivers a tremendous 200-watt peak power output. Inputs for two high- or low-impedance microphones with separate volume controls; two auxiliary inputs on fader; master volume, bass and treble controls.

All-silicon transistor circuitry assures freedom from distortion; designed for continuous operation from —20° C to +65° C. Allows simultaneous mixing of 3 input signals; provision for microphone precedence. Output protection. Memory marker controls. Response: ±2 dB, 40-20,000 Hz. Impedance; 2, 8 and 16 ohms; 25- and 70-volt lines. Optional LPC-4 phono-top, above. Metal cabinet, 5½x10½x15¼". 117 VAC.

12 D 7311 U. Shpg. wt., 23 lbs.... **157.15**

MODEL CHS-50. Same as above, but 50 watts and 4-ohm instead of 2-ohm impedance.

12 D 7312 X. Shpg. wt., 21 lbs.... **127.45**

CHS-35 MODEL. Similar to above, but 35 watts, germanium output 117 VAC/12 VDC.

12 D 7313 X. Shpg. wt., 17 lbs.... **104.95**

PMA-2 PREAMPLIFIER. Mounts in CHS-series amplifiers to provide 2 additional high or low impedance mike inputs. No transformer required for lo-Z. Knobs come through front panel of amplifier. 1⅝x3⅝x4¾".

12 D 8262 Shpg. wt., 2 lbs..... **32.95**

COMPACT SOLID-STATE 40-WATT MOBILE PA AMPLIFIER

Model BT35A. Excellent PA amplifier for police, fire, civil defense and business or industrial use in cars, trucks or boats. Delivers a continuous 40-watt output for enough sound-power to be heard over the noise of traffic or machinery. Solid-state circuit operates instantly—needs no warm-up time. Operates over a temperature range of from —20°C to +65°C. Switch selects either low-impedance mike; or auxiliary (high-level phono, tuner or tape) inputs. Separate controls for mike and auxiliary volume. Built-in RF and line filters; polarity protection. Response: ±3 dB, 150-15,000 Hz. Gain: microphone, 110 dB; auxiliary, 90 dB. Hum and Noise: (below rated output) mike, —90 dB; aux., —95 dB. Output impedance: 4, 8 and 16 ohms; output socket for accessory siren tone-fog-horn generator. Durable construction can take plenty of rugged use; splashproof gasket seals chassis in sturdy metal cabinet. Compact design allows easy installation under-dash or elsewhere. With adjustable fixed-lock bracket. 3x8x6¼". 12-15 VDC.

12 D 7393 X. Shpg. wt., 8 lbs..... **90.00**

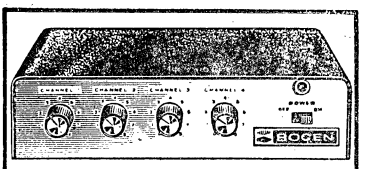
Allied has a selection of PA Equipment to fit every need

Mixers, Preamps, Transcription Players

BOGEN

LOW-COST ALL-SILICON SOLID-STATE MIXER-PREAMPLIFIER

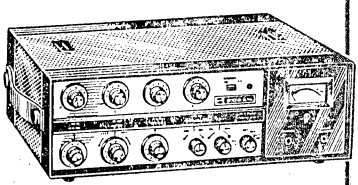
Model MX6A-T. Makes it possible to add up to four extra hi- or lo-Z mike channels to amplifiers or tape recorders. Two of the four channels can be used for high-level tuner or phono input. Provides excellent performance with electric guitars. Individual volume controls for each input for complete control in any multi-channel application. Up to three mixer-preamps may be paralleled to provide 12 inputs. Separate high and low-level outputs drive any amplifier through its mike or aux. input; also drives power amplifiers with 5-V or better sensitivity. Response: ±2 dB, 50-20,000 Hz. Inputs: four mikes (hi-Z, 150K; lo-Z, 200 ohms); two aux., 250K. Output impedance: 2000 ohms. 9¼x6x2⅝". 117 VAC.
12 D 7349 X. Shpg. wt., 6 lbs.....**48.75**



MX6A-T MIXER-PREAMPLIFIER

PROFESSIONAL MIXER-PREAMPLIFIER FOR RECORDING AND BROADCAST USE

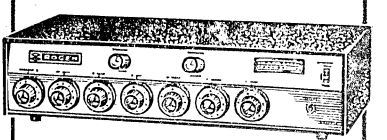
Model MXM-A. Deluxe mixer-preamp has five hi-Z mike inputs (one for magnetic phono or tape head) plus two auxiliary inputs. Accepts signal from remote preamp or O-level line. Up to three units may be paralleled for a total of 21 inputs. Built-in level meter permits calibrated monitoring of 25 and 70-volt outputs of boosters. Adjustable speech filters for each mike input; adjustable low-frequency filter screens out hum or turntable rumble. DC voltage on filaments, silicon rectifiers, high-impedance cathode follower output. Accepts plug-in low impedance TL-600 transformer to match 500/600 ohm line. Feedback-type bass and treble controls. Frequency Response: ±1 dB, 18-38,000 Hz. Output: 20 volts at 1% distortion, high impedance: 4 volts, 600 ohms. 4¾x16½x12". 117 VAC.
12 D 7310 U. Shpg. wt., 23 lbs....**187.50**



MXM-A MIXER-PREAMPLIFIER

VERSATILE ALL-SILICON SOLID-STATE MIXER-PREAMPLIFIER

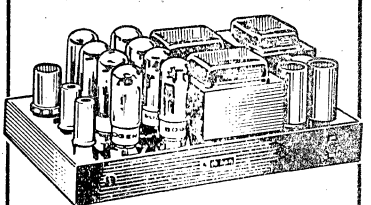
Model MTM. Mixes six input signals: four low-impedance microphones and two auxiliary with provision for magnetic phono or tape. Up to three units may be paralleled for up to 18 inputs. Output level may be monitored on built-in meter or with headset. Memory marker bass, treble and volume controls; provision for remote volume control. Sensitivity mike, .0001 volt; aux., 0.15 volt. Frequency response: 40-15,000 Hz at 1½ dB. Power output: 1.8 volts into 500 ohms at 0 dB (peak power, 7 volts). Output impedance: split 125/150-125/150; balanced, 500/600 ohms. For balanced mike line, use T525U transformer, below. Hum and noise: mike, —65 dB; aux., —70 dB. 16¼x8½x3¾". 117 VAC or 12-15 VDC.
12 D 7077 X. Shpg. wt., 13 lbs....**145.50**



MTM MIXER-PREAMPLIFIER

200-WATT BOOSTER AMPLIFIER/VARIABLE FREQUENCY GENERATOR

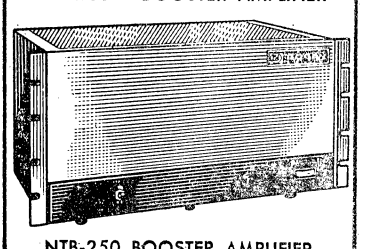
Model MO-200-A. Powerful booster amplifier delivers a full 200 watts for sound systems in schools, outdoor stadia, industrial plants or anywhere that requires a PA system of extra-high capability. Has four outputs. 8-ohm output impedance: 25, 70 and 115 V for industrial uses. Booster amplifier units may be paralleled to multiply power output. May also be used as an inexpensive variable frequency 115-volt generator for servos, motors, vibration (shake) tables, ultra-sonic equipment. Power output: 200 watts at less than 2% distortion. Response: ±1 dB, 8-50,000 Hz. Inputs: high impedance, 0.5 megohm; low impedance, 500/600 ohms (with TL600 transformer, below). Hum: (below rated output) —80 dB. Sensitivity: hi-Z, better than 2 V; lo-Z (with TL600), better than 0.5 V. 6x16x11¼".
12 D 7069 U. Shpg. wt., 65 lbs....**285.00**
MODEL MO-100-A. Similar to above, but 100 watts. Outputs: 16 ohms; 25, 70, 115 V. Response: ±1 dB, 8-50,000 Hz. 6¾x8x13".
12 D 7316 U. Shpg. wt., 33 lbs....**159.00**



MO-200-A BOOSTER AMPLIFIER

EXTRA-POWERFUL 250-WATT SOLID-STATE BOOSTER AMPLIFIER

Model NTB-250. Advanced-design all-silicon solid-state booster amplifier delivers a tremendous 700-watt peak power output with a frequency response of 20-30,000 Hz, ±1 dB. Ideal for outdoor stadia, large assembly halls, schools, factories, airports or wherever a maximum amount of undistorted power is required. Any number of these units may be paralleled to multiply power output. With a variable frequency audio generator input, this unit may be used to provide a relatively inexpensive power source (35-5000 Hz at 120 V) capable of driving servos, motors, shake tables, ultrasonic equipment. Input: high-impedance; low-impedance, 600 ohms, with TL600 transformer below. Outputs: 2.5, 5, 8, 20, 57 ohms; 25 and 70-volt balanced and unbalanced. Speech filter switch; input level control; output level meter; circuit breaker, 9¼x17⅛x11¾". 117 VAC.
12 D 7385 Z. Shpg. wt., 75 lbs....**517.50**
MODEL MT100. 100 watt booster amplifier. Silicon solid-state. 15-35,000 Hz ±1 dB. 6x8x13". 117 VAC or 12-16 VDC.
12 D 7386 Z. Shpg. wt., 31 lbs....**255.00**



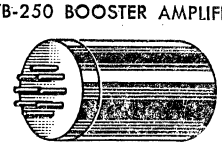
NTB-250 BOOSTER AMPLIFIER

PLUG-IN TRANSFORMERS FOR BOGEN AMPLIFIERS

- Fully enclosed in metal cover
- Keyed 9-pin miniature socket
- Easy to install in amplifiers

Highest-quality microphone and line transformers have been designed especially for plug-in use with Bogen amplifiers. Transformers are completely enclosed in durable metal covers and equipped with keyed 9-pin plugs on their bases for accurate and easy insertion into the tube socket provided on the amplifier. Transformers listed in the table below are all microphone transformers, except type *TL600 line transformer for use with MO100A, MO200A input and MXM-A output. Average wt., 2 lbs.

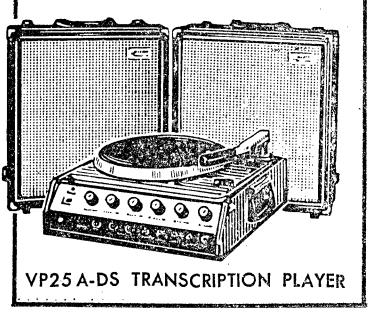
Stock No.	Mfr's Type	Ohms	EACH
12 D 7367	TL600*	500/600	13.20
12 D 7381	T200	200	12.90
12 D 7070	T500	500	13.50
12 D 7071	T50	50	12.90
12 D 7073	T525U	200	12.75



TRANSFORMER

PORTABLE 20-WATT SOLID-STATE TRANSCRIPTION PLAYER

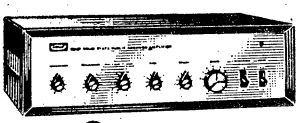
Model VP25A. An ideal monophonic system for schools, dances and background music systems. Features the Bogen B52 manual turntable with continuously variable speed from 29 to 86 rpm; click-stops at 16, 33⅓, 45 and 78 rpm. Solid-state 20-watt amplifier. 12" speaker in removable cover. Inputs: 2 microphone, radio/tape, phono (internal). Outputs: two 8 ohm. Response: ±1 dB, 45-18,000 Hz. Includes G.E. variable reluctance cartridge with dual sapphire styli, rubber turntable mat. Portable amplifier and turntable with speaker in lid of the rugged carrying case, 15¼x16½x10¾" (less handle and projections). 117 VAC.
12 D 7322 U. Shpg. wt., 40 lbs....**191.05**
MODEL VP50A-DS. Similar to above, but with 40-watt solid-state amplifier and two 12" speakers in separate break-apart case. Outputs: 4, 8 and 16 ohms; 25 and 70 volts, monitor and tape. Amplifier/turntable case, 7x15¾x16½"; speaker cases, each 16½x15¾x11½". 117 VAC.
12 D 7378 L2Z. Shpg. wt., 60 lbs...**265.55**



VP25A-DS TRANSCRIPTION PLAYER

SHIPPING NOTE: Items with suffix U, W, or Z in stock no. sent truck or express. See Ordering Information pages.

Complete PA Systems Featuring Allied® Amplifiers



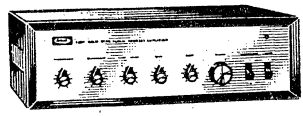
ALLIED 80-WATT DELUXE AUDITORIUM PA SYSTEM

419.95

Save $78.56

Separately, $498.51. Powerful system covers large auditoriums, lecture halls, churches, banquet rooms. System includes: Allied 3281T Solid-State Amplifier; two Electro-Voice 664 Mikes; two Atlas MS10C Mike Stands with "full grip" clutch; four Allied 3350 Sound Columns with six speakers each. Amplifier has four inputs, all-silicon transistor circuit, 80-watts power. Master gain control, separate mixer controls, anti-feedback switch. Mike precedence feature. Response, 40-10,000 Hz. Cardioid dynamic mikes have "pop-proof" wire mesh grill to filter out wind and breath blasts for close-talking without boom. Response, 50-15,000 Hz. Mike stands adjust 35-63"; have 10" gray base. Full-range sound columns have extra-wide 145° dispersion. Overall sound projection up to 250 feet (indoor). Overall column size, 41x11x6".

12 D 0038 L9U. Shpg. wt., 219 lbs. 419.95



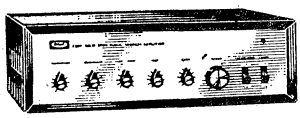
ALLIED 80-WATT INDOOR/OUTDOOR PA SYSTEM

259.95

Save $45.20

Separately, $305.15. All-weather system perfect for multipurpose PA operations from ballgames to music. System includes: Allied 3281T Solid-State Amplifier; Shure 55SW "Unidyne III" Mike; six Electro-Voice PA-30A Speakers. Amplifier has 2 mike and 2 aux. inputs. Power Output: 80 watts. Frequency response, 40-10,000 Hz. Separate bass and treble controls. Dependable solid-state circuit draws minimum current for economical operation. "Quickset" selector for instant choice of impedance. Dynamic cardioid mike has on-off switch, 50-15,000 Hz response. Impedance: 35-50 ohms, —55 dB; 150-250 ohms, —56 dB; hi-Z, —57 dB. Speakers are rectangular horns designed for paging. Fiber-polyester is virtually indestructible, absolutely waterproof. Maximum versatility and wide dispersion with good response for both voice and music.

12 D 0023 L8Z. Shpg. wt., 189 lbs. 259.95



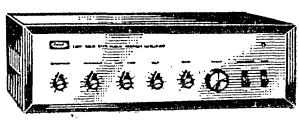
ALLIED 45-WATT FOUR-COLUMN INDOOR SYSTEM

299.95

Save $43.56

Separately, $343.51. Medium-size PA system is ideal for skating rinks, cafeterias, waiting rooms, etc. System includes: Allied 3246T Amplifier; two Electro-Voice 664 Cardioid Dynamic Mikes; two Atlas MS10C Mike Stands with "full grip" clutch; four Allied 3300 Sound Columns with four 8" speakers each. Amplifier has microphone precedence feature, switchable anti-feedback control, and AC convenience outlet. Separate mixer controls and inputs for 2 high or low-impedance mikes, and common mixer control for two aux. inputs for phono, tuner, or tape recorder. Frequency response, 40-10,000 Hz. Mike has "pop-proof" wire mesh grill. Dual impedance. On-off switch. Frequency response, 50-15,000 Hz. Stands have two-section chrome tube that adjusts from 35-63"; 10" gray base. Sound columns project sound powerfully and uniformly.

12 D 0036 L9Z. Shpg. wt., 184 lbs. 299.95



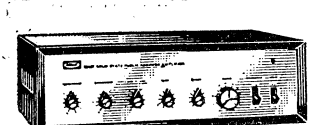
ALLIED 45-WATT SOUND COLUMN PA SYSTEM

159.95

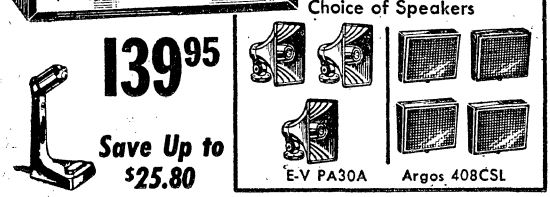
Save $18.01

Separately, $177.96. For any moderate-size indoor application. System includes: Allied 3246T Solid-State Amplifier; Allied 3311 Omni-Directional Dynamic Mike; Atlas MS10C Mike Stand with "Full Grip" Clutch; Two Allied 3300 Sound Columns with four speakers each. Amplifier has silicon solid state circuit with anti-feedback. Gain controls for 2 mike and 2 aux inputs. Extra-large master gain control. Response, 40-10,000 Hz. Mike has zinc die-cast housing, dull chrome and black finish. Response, 45-15,000 Hz. Table stand, mike holder, phone plug. Atlas stand adjusts 35-63"; 10" gray base; bakelite lining prevents jamming. Sound columns offer outstanding wide-angle dispersion and excellent sound projection up to 150 ft. (60 ft. recommended). Handsome walnut wood-grain vinyl-clad cabinet. Overall column size, 41x11x6".

12 D 0021 L5Z. Shpg. wt., 96 lbs. 159.95



ALLIED 45-WATT SOLID-STATE PAGING SYSTEM



139.95

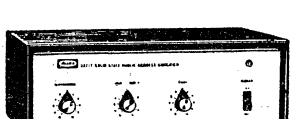
Save Up to $25.80

Separately, $165.75. **System with Horns.** For paging and background music. Includes: Allied 3246T Solid-State Amplifier. 45 watts power. E-V 719 Ceramic Mike with 16-ft. cable. 3 E-V PA30A Speakers with fiber-polyester horn. Virtually indestructible. Versatile, wide dispersion, smooth response.

12 D 0017 L5U. Shpg. wt., 25 lbs. 139.95

Separately, $145.67. **System with Baffles** As above but with 4 Argos 408 CSL Speaker/Baffles. 8" speaker with 4.08 oz. magnet. 10 watts.

12 D 0016 L6U. Shpg. wt., 35 lbs. 139.95



ALLIED 20-WATT PORTABLE PA SYSTEM

99.95

Save $12.84

Separately, $112.79. Excellent for medium-size area coverage, both voice and music. System packs into one carrying case. Includes: Allied 3221T Amplifier; Allied 4525S Microphone; Two 12" Speakers; Portable Carrying Case. Solid-state 20-watt amplifier has anti-feedback for low hum and distortion. Mike and aux. faders, handy AC convenience outlet on back of chassis. Master tone control. On-off switch. 3 inputs. Frequency response, 40-10,000 Hz. Mike has on-off switch, desk stand, cable. 105-130 V, 50-60 Hz AC.

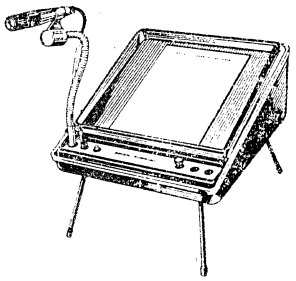
12 D 0019 L4U. Shpg. wt., 37 lbs. 99.95

Make Allied Your Headquarters for Everything in PA Equipment

Lecterns, Paging Amplifier, Portable PA Systems

AMPLI-VOX

SOLID-STATE PA EQUIPMENT



ROVING ROSTRUM

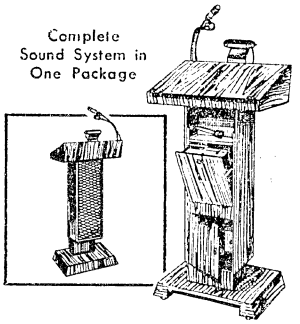
MODEL S-122. Battery-operated. Power enough for audiences up to 1000 people, indoors or outdoors. With professional dynamic cardioid mike with 10-ft. cable, gooseneck stand, lavalier cord. 50-15,000 Hz. Two 6x9" speakers with 10-oz. ceramic magnets, one in rostrum, other in cover with 40-ft. cable. 25 watts music power, 40 peak.

Radio/ceramic phono, mike inputs. Speaker, recorder outputs. Adjustable legs. Combines into luggage style case, 8⅞x16¾x17¼". Uses 10 "D" batteries, below. 24 lbs.

12 D 7535 U. 198.95

12 D 7534 U. S-112. Above, but omnidirectional mike. Shpg. wt., 24 lbs. 169.95

18 D 5779. Batteries. 4 oz. ....2/33¢



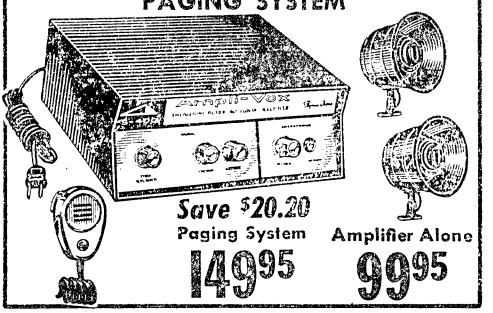
CORDLESS LECTERN

MODEL S-500. For audiences up to 3000. Reading table and complete sound system in one package. The integrated sound column housing six 5" speakers provides superb coverage in medium-size halls or auditoriums. Battery-operated, use indoors and out. 25 watts music power, 40 peak. 50-15,000 Hz.

Includes professional dynamic cardioid mike that mounts on lavalier or gooseneck stand for positioning wherever you want it. Mike and auxiliary inputs. Lectern 15" deep, 21" wide at base. Table, 13x20" Dx W. Wood with walnut Formica furniture finish. Hidden wheels. Adjustable 36-46". Order 10 batteries at left. Shpg. wt., 66 lbs.

12 D 7512 Z. 389.50

BATTERY/AC AMPLIFIER PAGING SYSTEM



Save $20.20

Paging System **149.95** Amplifier Alone **99.95**

ALL-PURPOSE SOLID-STATE PA AMPLIFIER

MODEL S-402. Small attractive amplifier can be used anywhere. Perfect for marine, park, classroom, truck, lodge, store, or beach applications. Paging override allows you to page without interfering with background music. Separate controls let you adjust background music volume and paging volume levels. Has tone control and three-position input selector switch. Built-in battery charger for connecting rechargeable batteries. All-transistor circuit. Inputs: mike; aux. for magnetic or ceramic phono, tuner, tape recorder. Power output: 35 watts music power (50 watts peak). Outputs: 4, 8, 16 ohms; 25, 70.7 V; 600-ohm line. 3¼x8⅜x8¾". For 110 VAC and 12 VDC. U.L. Listed.

12 D 7533 U. Shpg. wt., 8 lbs. 99.95

COMPLETE AC/MOBILE/MARINE PAGING SYSTEM

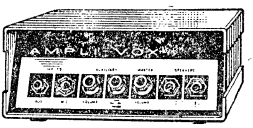
Separately, $170.15. For nearly any stationary or mobile PA requirement. Great for schools, restaurants, offices, automobiles, or boats. System includes: Ampli-Vox S-402 Solid-State Battery/AC 35-Watt Amplifier; Electro-Voice 600E Low-Impedance Dynamic Microphone; two Electro-Voice PA-30A Weatherproof Speakers. Sound quality of amplifier meets high professional standards. Microphone has push-to-talk button. Response, 100-7000 Hz. Output, —55 dB. With coiled cord that extends to 6 ft. and bracket. Speakers are rectangular horns designed for paging. Fiber-polyester construction is virtually indestructible, absolutely waterproof. Ultra-smooth response for both voice and music. Wide 120° dispersion. Less speaker cable. 110 VAC and 12 VDC.

12 D 0037 L4 X. Shpg. wt., 18 lbs. 149.95

CORDLESS 25-WATT PORTABLE PA AMPLIFIER

MODEL S-702. Flashlight-battery powered lightweight PA amplifier can be used anywhere—poolside, beach, campus, boat, patio. Power, 25 watts (40 watts peak). Inputs for mike and phono, radio, or tape recorder. Two aux. outputs. Has on-off switch, master control for mike and aux. inputs. Impedance, 8 ohms. 3¼x3⅜x8¾". Less batteries.

12 D 7532 U. Shpg. wt., 8 lbs. 79.95



Flashlight battery operation for any outdoor PA use

Argos PRODUCTS COMPANY

SOLID-STATE PORTABLE PA SYSTEMS

BATTERY-POWERED SOUND COLUMN PA SYSTEM

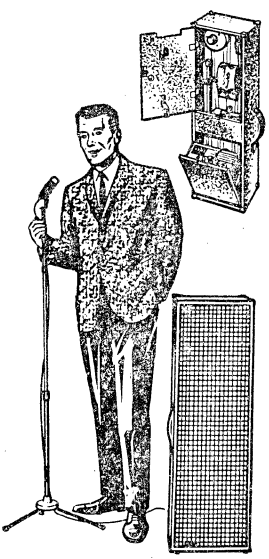
195.00

- Provides Full 25-Watt Power
- Delivers Clear, Natural Sound

MODEL PSD-5060. Completely portable PA system for classrooms, outdoor and social events, bazaars, lectures, rallies, club meetings, travelling presentations, and carnivals. Amplifier; sound column; and microphone with 18-ft. cable, stand, and lavalier all in one easy-to-carry case. Amplifier has 25 watts power capacity (40 watts peak). Features push-pull, all-transistor design. Has microphone and auxiliary inputs.

Output for sound column. Operates on 10 flashlight batteries or long-life alkaline batteries for up to 400 hours of use. Low-impedance dynamic mike. Stand adjusts from 26-64". Sound column contains six specially-designed speakers. Response, 200-10,000 Hz. Impedance, 16 ohms. Scuff-resistant blue-grey vinyl case with handle. 29¾x9¾x6⅞". Less batteries.

12 D 7191 U. Shpg. wt., 31 lbs. 195.00



BATTERY/AC LECTERN PUBLIC ADDRESS SYSTEM

249.95

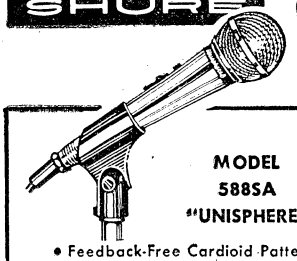
- Sets up in Less Than 30 Seconds
- Handy AC Convenience Outlet for Phono

MODEL LSD-6040. Converts from batteries to AC with just the flip of a switch. Amplifier boasts all-silicon transistor design. 15 watts power (20 watts peak). Inputs: 2 mike, aux. AC convenience outlet. Aux. output for additional speaker. Volume control. Unidirectional dynamic cardioid mike has built-in volume control. 150 ohms. With 18-ft. shielded cable, plug, lavalier adapter. Stand has flexible chrome-plated 9" gooseneck with quick-attach mike bracket. Four speakers in vertical column have 200-10,000 Hz response. 8-16 ohms. Gray vinyl case. 21x16x7⅝". Less batteries. For 117 VAC/24 VDC.

12 D 7192 U. Shpg. wt., 25 lbs. 249.95

SHURE Quality Public Address Microphones

UNISPHERE AND UNIDYNE MICROPHONES



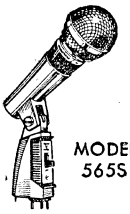
MODEL 588SA "UNISPHERE"

- Feedback-Free Cardioid Pattern
- Wind, Pop and Blast Filters

Unidirectional dynamic microphone features ball-type styling and feedback-free cardioid pickup pattern. Also features shock-mounted cartridge; wind, pop, and blast filters, lockable on-off switch. 80-13,000 Hz frequency response. High impedance. Output: −58 dB. Satin-chrome housing. With broadcast-type connector, 15-ft. one-conductor detachable cable, and swivel stand adapter. Size: 6½" long, 2" diameter.
12 D 7152. Wt., 1½ lbs.....**36.00**

Model 588SB. As Model 588SA, but low-Z, −59 dB output. 2-cond. cable.
12 D 7174. Wt., 1½ lbs.....**36.00**

Model 588SAC. As Model 588 SA, but with pre-wired plug end assembly for use as MC1F, MC1M, or phone plug.
12 D 7277. Wt., 1½ lbs.....**37.20**



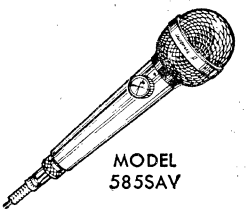
MODEL 565S

565S "UNISPHERE I" DYNAMIC

Rugged, feedback-free dynamic cardioid mike. "Pop-proof" wire mesh screen for protection against wind blasts and pops. Frequency response is 50-15,000 Hz. Dual impedance, 50-250 ohms and hi impedance. Outputs: low-Z, −57 dB; hi-Z, −55 dB. Chrome, black housing. Complete with on-off switch, swivel mount, 15' detachable connecting cable. Diameter, 2"; length, 6¼". Shpg. wt., 2½ lbs.
12 D 7211.....**63.00**

12 D 7303. Model 565. Above, less on-off switch, swivel mount. With swivel adapter. Shpg. wt., 2½ lbs.....**60.00**

12 D 7216. Model 566. Deluxe version of 565S. Shock mount, 40-15,000 Hz. Shpg. wt., 2¾ lbs.....**88.20**



MODEL 585SAV

585SAV "UNISPHERE A" DYNAMIC

Dynamic cardioid ball-type microphone designed for general purpose recording and PA use. Has spherical "pop-proof" wire mesh grille to eliminate blasts and pops; special volume control on mike to control loudness of sound system. Frequency response: 50-13,000 Hz. High impedance. Output level: −56.5 dB. Complete with 15-ft. detachable cable. Size, 2⅛" diameter, 6¾" length. Shpg. wt., 2¼ lbs.
12 D 7232.....**45.60**

12 D 7274. Model 585SBV. Same as 585-SAV, but has low impedance.....**45.60**

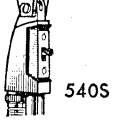
12 D 7304. Model 585SA. As 585SAV, but no volume control. With On-off switch.**40.80**

12 D 7305. Model 585SB. Same as 585SA, but has low impedance.....**40.80**

OMNIDIRECTIONAL PUBLIC ADDRESS MICROPHONES

533AV 579SB

51S



540S

430

575S

MODEL 533SA DYNAMIC

High-impedance dynamic microphone with hand-to-stand feature. Wind, breath, and pop filters. On-off switch. Frequency response: 40-11,000 Hz. High-impedance output: −54.5 dB. Single-conductor shielded 15-ft. cable. Swivel adapter. Satin chrome finish. 6⅝x2 1/16" dia.
12 D 7309. Shpg. wt., 1¾ lbs.....**31.80**

Model 533SB. Same as above, but low-impedance. Output: −55.5 dB. 1¾ lbs.
12 D 7338.....**31.80**

Model 533SAC. Same as Model 533SA above, but with pre-wired plug end for MC1F, MC1M, or phone plug.
12 D 7318. Shpg. wt., 1¾ lbs.....**33.00**

Model 533SAV. Same as Model 533SA, but with volume control. High-Z.
12 D 7180. 2 lbs.....**36.00**

Model 533SAVC. Above, with plug-end.
12 D 7183. 2 lbs.....**37.20**

MODEL 579SB "VOCAL SPHERE"

This omnidirectional model provides natural and intelligible voice reproduction which makes it ideal for public address, entertaining, recording, and other field and studio applications. Pickup pattern provides sound pickup evenly from all directions for use where feedback or audience noise doesn't present a problem. Extremely rugged design for longer life. Built-in wind and breath noise filters make unit ideal for close-up applications.

Lockable on-off switch. Frequency response: 50-15,000 Hz. Low impedance. Output: −59 dB. Satin-chrome and gray housing measures 6⅜" in length, 1 9/16" in diameter. Complete with broadcast-type Cannon connector with 20-ft. two-conductor detachable cable, swivel stand adapter. Shpg. wt., 2 lbs.
12 D 7185.....**45.00**

51S "SONODYNE I" DYNAMIC

Excellent general-purpose mike, ideal for a broad variety of PA and sound system uses. Dynamic element has frequency response of 60-10,000 Hz. Three impedances permit use under practically all conditions. 30-50 ohms low-Z, −52 dB output; 150-250 ohms medium-Z, −52.5 dB output; hi-Z, −49.5 dB output. Handsomely styled chrome finish. Swivel mount permits tilting head. Convenient on-off switch. With 15-ft. two-conductor cable. 4½x3⅛x3⅞".
12 D 7136. Shpg. wt., 3½ lbs.....**32.40**

12 D 7228. Model 51. Same features as Model 51S above, but does not have on-off switch. Shpg. wt., 3½ lbs.....**31.20**

MODEL 540S "SONODYNE II"

Omnidirectional has high-output dynamic element, 50-13,000 Hz for music, 400-6000 Hz for speech. On-off switch. 50-250 ohms and hi-Z. Outputs: hi-Z. −55 dB; low-Z, −57 dB. Chrome, black finish. Swivel mount. 15' 2-cond. cable. 3⅝x1¾".
12 D 7132. Wt., 3⅛ lbs.....**31.20**
12 D 7395. Model 540. Same as Model 540S, but no on-off switch. 3 lbs.....**30.00**

MODEL 430 CONTROLLED MAGNETIC

Omnidirectional, dual-impedance, controlled magnetic microphone. Excellent for PA paging; can be used both indoors and outdoors. Frequency response: 60-10,000 Hz. Impedances: 150 to 250 ohms and high impedance. Output: −52 dB. Black and satin chrome finish. On-off switch and swivel adapter. 15-ft. 3-conductor cable. Less base (see stands below). 6¾x1¾" dia. 2¼ lbs.
12 D 7213.....**24.00**

LOW-PRICED MODEL 575S

Omnidirectional high-impedance dynamic, 40-15,000 Hz. Built-in filters reduce voice "pop". Output: −56 dB. Black satin. Slide to talk locking on-off switch, stand adapter, lavalier assembly. 7' shielded cable. Less S-38B base (see below). Size: 4¾x1⅛". Shpg. wt., 1 lb.
12 D 7462.....**15.00**
12 D 7471. Model 575SB. Low Z.....**13.20**

Model 275S. Ceramic version of above. 40-12,000 Hz response. Impedance: 1-5 meg. Output: −59.5 dB. Switch, stand adapter, lavalier assembly. Shpg. wt., 1 lb.
12 D 7284.....**9.60**

ACCESSORIES FOR SHURE MICROPHONES

S-38B

A-2WS

A-25B

S-38B BASE. For use with microphones having stand adapter. Shpg. wt., 1½ lbs.
12 D 7445.....**3.00**

A-2WS WINDSCREEN. Fits "Unidyne III" Model microphones—545S, 545, 545L, 546; "Omni-dyne" Models 578 and 578S. Protects from wind blasts. 4x2¼".
12 D 7308. Shpg. wt., 5 oz.....**4.20**

A95A

A95P

A-25B 90° SWIVEL ADAPTER. Tilts to 90°.
12 D 7446. Shpg. wt., ½ lb.....**3.60**

A95A TRANSFORMER. 35-50, 150-250 ohms. MC1F output, XL-3-11 input. 2½x¾".
12 D 7466. Shpg. wt., 9 oz.....**11.40**

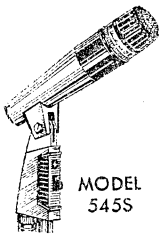
A95P TRANSFORMER. Above, with phone plug output.
12 D 7282. Shpg. wt., 10 oz.....**12.60**

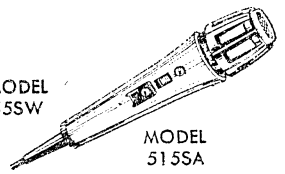
Make Allied Your Headquarters for Everything in Sound Equipment

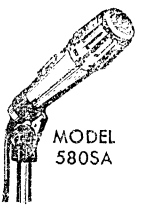
General-Purpose Microphones

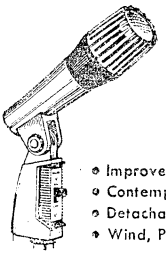
SHURE

CARDIOID DIRECTIONAL MIKES









- Improved Shock Mounting
- Contemporary Styling
- Detachable 15-ft. Cable
- Wind, Pop, Blast Filters

545S "UNIDYNE III" DYNAMIC

Features cardioid pickup pattern; dynamic element with 50-15,000 Hz frequency response. Impedance: 50-250 ohms or Hi-Z. Output levels: low-Z, −57 dB; hi-Z, −55 dB. Satin-chrome and black finish. Swivel-mount permits tilting the head a full 180°. On-off switch. With 15-ft. detachable cable. 1¼" diameter x 5¾" long.

12 D 7133. Shpg. wt., 3 lbs. **56.40**

12 D 7161. Model 545. Above, without on-off switch. Swivel adapter. **53.40**

55SW "UNIDYNE II" DYNAMIC

Cardioid dynamic mike has response of 50-15,000 Hz. Impedance: 35-50 ohms, 150-250 ohms, hi-Z. Output: 35-50 ohms, −55 dB; 150-250 ohms, −56 dB; hi-Z, −55 dB. Chrome finish. Swivel mount with on-off switch. 15-ft. 2-cond. cable. 4½x2¼x3¼".

12 D 7135. Shpg. wt., 3⅛ lbs. **53.40**

12 D 7234. Model 55S. Same as above, but without on-off switch. **52.20**

12 D 7235. Model 556S. Deluxe version of Model 55SW. Shock mount. 40-15,000 Hz. Shpg. wt., 3½ lbs. **85.20**

515SA "UNIDYNE B" DYNAMIC

Low-priced dynamic mike with highly effective cardioid pickup pattern. Has on-off switch; swivel adapter. Response: 80-13,000 Hz. Hi-Z output: −58 dB. Chrome and black housing, 1½x6⅞". With 15-ft one-conductor non-detachable cord.

12 D 7217. Shpg. wt., 1½ lbs. **25.20**

12 D 7227. Model 515SB. Same as 515SA, but low impedance. −59.5 dB. **25.20**

12 D 7188. Model 515SAC. As 515SA, but pre-wired plug end assembly. **26.40**

580SA "UNIDYNE A" DYNAMIC

Top-quality dynamic mike. Cardioid pickup pattern with high noise rejection from back and sides of microphone make it ideal for recording use; also reduces feedback problems. Frequency response: 50-13,000 Hz. High impedance. Output Level; −58 dB. Modern styling with attractive chrome finish. On-off switch. Swivel adapter. With 15-ft. two-conductor cable. Size, 1¾" diameter, 6⅝" long. Shpg. wt., 3 lbs.

12 D 7050. ..... **37.20**

12 D 7427. Model 580SB. Same as above, but low impedance. Wt., 3 lbs. **37.20**

548S "UNIDYNE IV" DYNAMIC

One of the latest additions to the famous "Unidyne" family of feedback-free dynamic mikes. Ideal for use in entertainment, public address, and recording applications. Offers advanced features for greatly increased ruggedness and performance.

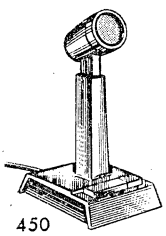
Units feature improved shock mounting for ultra-reliable use. Wind, pop and blast filters eliminate annoying noises. Unidirectional pickup pattern picks up sound mainly from the front, while suppressing noise coming from the back, to further aid noise suppression. Dual impedance. Response: 40-15,000 Hz. Output levels; High impedance, −55.0 dB; low, 150 ohms, −55.5 dB.

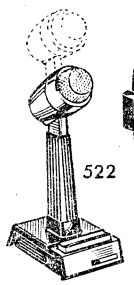
Complete with broadcast-type Cannon connector; 15-ft. two-conductor high flexibility detachable cable. Handsome contemporary styling. Convenient swivel mount also contains on-off switch. Size: 1⅝" in diameter, 5¹³⁄₁₆" in length. In chrome and black housing. Shpg. wt., 2¼ lbs.

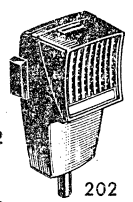
12 D 7200. ..... **66.00**

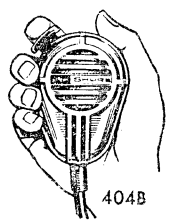
12 D 7203. Model 548. Same as above, less on-off switch and swivel mount. With swivel adapter. Wt., 2 lbs. **63.00**

OMNIDIRECTIONAL COMMUNICATIONS, PAGING AND LAVALIER MIKES









MODEL 520SL

Rugged, top-performing controlled-magnetic mike, designed for efficient voice communications. Has grip-to-talk locking switch. Frequency response: 100-9000 Hz. Output level: −52.5 dB. Attractively styled, chrome and green finish. With 7-ft. two-conductor cable. Size, 9⅜x5x7". Wt., 5 lbs.

12 D 7233. ..... **28.20**

MODEL 450

Deluxe controlled-magnetic mike features adjustable stand height; lockable push-to-talk mike relay switch. Response: 100-10,000 Hz. High or low impedance. Output Levels: hi-Z, −54 dB; low-Z, −55 dB. Two-tone gray finish. 7-ft. four-conductor cable. "Armo-Dur" case. 10½x5¾x4".

12 D 7444. Shpg. wt., 2¼ lbs. **31.20**

MODEL 522 "UNI-COM"

New unidirectional dynamic base station microphone features press-to-talk bar and adjustable height for maximum ease of use. Designed especially to suppress unwanted background noise and feedback. Frequency response: 60-11,000 Hz. Has both high and low impedance. Output: High impedance, −56.5 dB; low impedance, −57 dB. Gray "Armo-Dur" case. Overall size: 12¼ (adjustable)x4x5¼". With 7-ft. four-conductor cable. Shpg. wt., 2¼ lbs.

12 D 7134. ..... **39.60**

MODEL 202

Ceramic, noise-canceling microphone, ideal for wide applications in CB, Radio and Amateur communications. For use where high noise levels may cause problems in clear voice transmission. Response: 200-4000 Hz. High impedance. Output: −50 dB. Press to talk. Bracket. 5-ft. coiled cable. 4x2¼x1⅝".

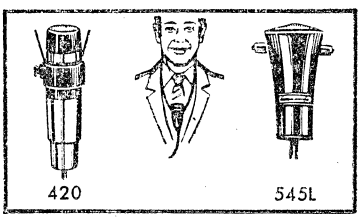
12 D 7465. Shpg. wt., 1 lb. **12.60**

MODEL 404B

Controlled-magnetic press-to-talk mike. Response: 200-8000 Hz. 150-250 ohms. Output: −52 dB. Hand-held. High-impact gray case. With bracket, 5½-ft. coiled cord.

12 D 7140. Shpg. wt., 1 lb. **21.00**

12 D 7141. Model 404C. Same as Model 404B above, but for high impedance. Output level, −54 dB. Shpg. wt., 1 lb. **21.00**



MODEL 420

Dual impedance-controlled magnetic mike features omnidirectional pickup pattern and frequency response of 60-10,000 Hz. 150-250 ohms and hi-Z. Output: −52 dB. With 20-ft. two-conductor cable, lavalier neck cord assembly. 1¾" diameter, 3¾" long. Shpg. wt., ¾ lbs.

12 D 7212. ..... **19.20**

MODEL 545L

"Unidyne III" lavalier type mike features dynamic cardioid pickup pattern for effective rejection of unwanted noise from rear and sides of mike. Can be used as lavalier, hand-to-stand, or gooseneck mounting. Full-range frequency response of 50-15,000 Hz. Low-impedance, 150 ohms. Output Level: −57.5 dB. With 20-ft. two-conductor cable. 1¼" diameter. 5⅛" long. Lavalier cord, clip assembly.

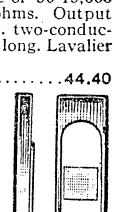
12 D 7339. Shpg. wt., 2 lbs. **44.40**

CA5AJ ULTRAMINIATURE CERAMIC MICROPHONE

- Only 1/10-Inch Thick
- 50-4500 Hz Response
- Weighs Just ¾ Gram
- For TV, Theater Work

Remarkably small mike can be hidden easily for TV and theater use. Ideal for closeup interviews, recordings, and many other uses. Originally designed to be used with miniature experimental equipment. Has a broad operating temperature range of −20° to −200° F. Frequency response of 50-4500 Hz equals mikes of much larger size and cost. High impedance. Output level: −70 dB. Only 1/10th of an inch thick, weighs just ¾ gram. Has 1" leads attached. Overall size: 1x¼x 1/10" Shpg. wt., 6 oz.

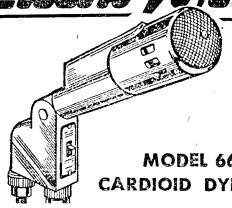
12 D 7470. ..... **12.60**



Electro-Voice®

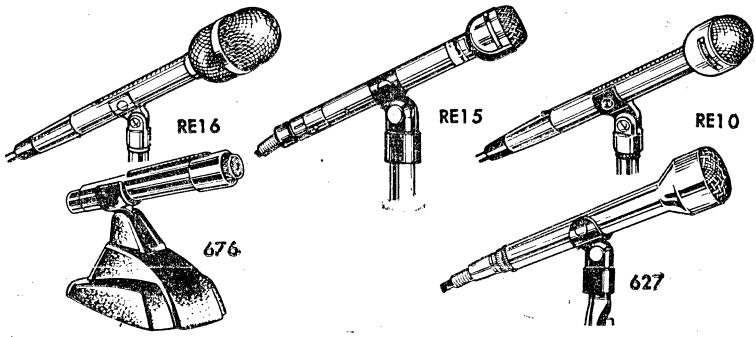
Broadcast Quality Microphones

PROFESSIONAL CARDIOID DYNAMIC MICROPHONES



MODEL 664 CARDIOID DYNAMIC

Extra-rugged dynamic mike for general-purpose PA and recording use. High-quality, natural-sounding reproduction of voice and music. Super cardioid pickup pattern and variable "D" construction for uniform response at all frequencies. "Pop-proof" wire-mesh grille minimizes wind and breath blasts to allow close talking without boominess. Shielded Acoustalloy® diaphragm. Response: 60-15,000 Hz. Output: —58 dB. Impedance: 150 ohms or hi-Z. (Wired for hi-Z, changeable to 150 ohms.) On-off switch, detachable 15-ft. 2-cond. cord, QC4M connector. Chromed. ⅝"-27 thread. 7 3/16x1 7/8" dia.
12 D 7241. Shpg. wt., 2 lbs.... **53.40**



MODEL RE16 CARDIOID DYNAMIC PROFESSIONAL MICROPHONE

Highest quality super-cardioid microphone, designed for the most exacting applications. Features continuously variable D response, that eliminates bass boost when used close up. Has integral blast and pop filter around head; virtually eliminates pickup of breath noises when used in close-up vocal applications. Strong metal screen prevents damage. For stand or hand-held use. Bass compensation switch provides controlled low-frequency attenuation to overcome feedback and rumble, restoring spectrum balance for longer reach in recording use.

Super-cardioid pickup pattern assures uniform response at all frequency levels, and with sound sources at any position around the microphone. Response: 80-15,000 Hz. Output: —56 dB. Impedance: 150 ohms. Non-reflecting matte satin-nickel finish. With 18-ft. 2-conductor shielded broadcast cable, Switchcraft A3F connector. 7¼" long, ¾" dia. barrel, 1¾" dia. head. Designed for maximum hand-held comfort. With metal case, No. 310A clamp.
12 D 7630. Shpg. wt., 4 lbs..... **159.00**

MODEL RE15 CARDIOID DYNAMIC

For exacting, professional applications in recording voice or music. Super-cardioid directional pattern with continuously variable D construction eliminates musical coloration for off-axis instruments. Maintains essentially uniform cardioid pattern for virtually identical response at any position. Maximum noise rejection is at 150° off axis. Bass-tilt switch restores spectrum balance for longer reach.

Rugged housing and inner construction, handsome non-reflecting matte satin-nickel finish. Response: 80-15,000 Hz. Output: —56 dB. Impedance: 150 ohms. With 18-ft. 2-conductor shielded broadcast cable, Switchcraft A3F connector. 6½" long, ¾" dia. barrel, 1⅜" dia. head. With metal storage case and No. 310A clamp.
12 D 7252. Shpg. wt., 4 lbs..... **153.00**

MODEL 674 CARDIOID DYNAMIC

For PA, recording or communications applications. Continuously variable D construction and cardioid pickup pattern for uniform response at all frequency levels. Three-position bass-tilt switch provides controlled low-frequency attenuation to overcome feedback and rumble. QC-4M connector for fast impedance changes, 150 ohms or hi-Z. Response: 60-15,000 Hz. Output: —57 dB. On-off switch. 15-ft. 2-conductor cable. 7⅞x 1¼" dia. Chromed. ⅝"-27 stud mount.
12 D 7098. Shpg. wt., 2 lbs..... **53.40**

MODEL 676 CARDIOID DYNAMIC. Similar to above, but without on-off switch and stud mount. With model 300 stand adapter.
12 D 7432. Shpg. wt., 2 lbs..... **53.40**

MODEL RE10 CARDIOID DYNAMIC

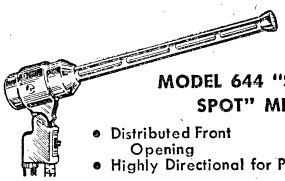
High quality super-cardioid mike with continuously variable D. Similar in design to RE15, but for less exacting applications. Provides uniform response at all frequencies. Maximum off-axis rejection at 150° from front. Integral bass compensation switch provides controlled low-frequency attenuation to eliminate feedback and rumble. Response: 80-13,000 Hz. Output: —55 dB. Impedance: Low-Z. Rugged housing with matte satin-nickel finish, black grille and "backbone." 18-ft. 2-conductor cable. Size, 6⅝x¾".
12 D 7396. Shpg. wt., 4 lbs..... **90.00**

MODEL RE11 CARDIOID DYNAMIC MIKE. Similar to above, but with integral blast and pop filter around head. Virtually eliminates breath noises for close-up vocal use. Specifications same as RE10.
12 D 7625. Shpg. wt., 1 lb..... **96.00**

MODEL 627 CARDIOID DYNAMIC

"Single-D" construction. Cardioid pattern rejects sounds from sides and rear, reduces feedback. Low frequency response varies with working distance. Designed to enhance "robust" sound when used close to lips. Reduced response to sounds more than two feet away, for greater feedback control. Breath and pop filter. Weighs just 8 oz. (less cable). Response: 80-11,000 Hz. Output: —58 dB. Impedance: Hi-Z. Acoustifoam surrounding protects element. 15-ft. cable. Die-cast housing with bright chromed finish. On-off switch. 6x¾" dia. barrel, 1½" diameter head. ⅝"-27 thread.
12 D 7099. Shpg. wt., 1½ lbs..... **37.80**

UNIDIRECTIONAL DYNAMIC MIKES

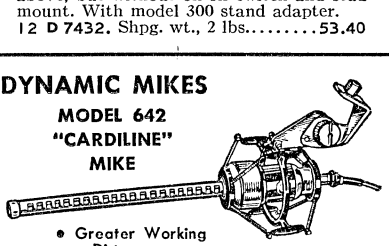


MODEL 644 "SOUND SPOT" MIKE

- Distributed Front Opening
- Highly Directional for PA Use

Deluxe directional dynamic mike features a combination of cardioid and distributed front opening design for high directivity of pickup pattern. Allows working distances of up to 2½ times that of conventional mikes. Ideally suited for press conferences, meetings, any activity for which maximum directivity is essential. Provides more than 20 dB sound cancellation above 700 Hz from rear and sides of mike for high noise rejection, low reverb and feedback.

Response: 40-12,000 Hz. Output: —53 dB. Dual impedance: 150 ohms or hi-Z. Effective front acceptance angle is 45° each side of center. Has convenient on-off switch in base. Deluxe satin chromed finish. 16x2 5/16" diameter, ¾" diameter tube. Standard ⅝"-27 thread. With 15-ft. 2-conductor shielded broadcast cable. Shpg. wt., 4 lbs.
12 D 7121..... **69.30**



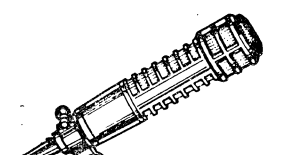
MODEL 642 "CARDILINE" MIKE

- Greater Working Distance
- Designed for TV Use

Outstanding professional-quality dynamic mike designed especially for television applications. Highly directional 80° pickup pattern allows mike to be aimed for maximum directivity. Combines the best characteristics of cardioid and distributed front opening design. Essentially cardioid unidirectional pick pattern to 500 Hz; highly directional over balance of range. Boasts a working distance of over 2 to 3 times that of conventional mikes.

Dual frequency response: flat from 40-10,000 Hz; choice of 5 or 100 dB low-frequency reduction steps by screwdriver adjustment. Output: —48 dB. Impedance: 50, 150 or 250 ohms, externally adjustable. Non-reflecting gray finish, cast aluminum housing. 17⅞x3 3/16" dia. With 20-ft. three-conductor cable. Less mount. Wt., 9 lbs.
12 D 7448 X..... **234.00**

RE20 WIDE-RANGE SUPER CARDIOID



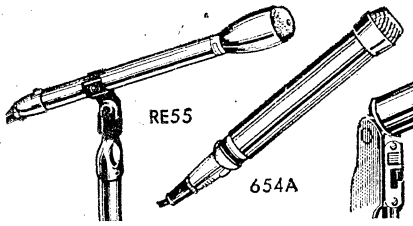
- For Recording and Broadcast
- Response of 40-20,000 Hz

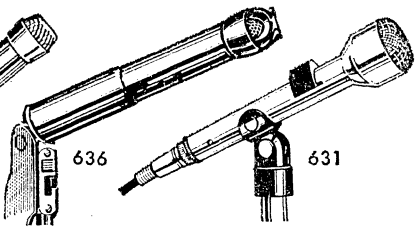
Extremely wide range, high quality microphone for exacting studio recording as well as broadcast use. Widest, most uniform response curve of any dynamic microphone, comparable to high quality condensers. Uniform cardioid polar pattern; off-axis response same as on-axis. Excellent transient response. Handles high sound input.

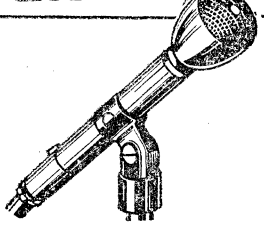
Pop filter. Bass tilt-down switch. Strong and positive mounting clamp. Impedance: 50, 100, 150 ohms. Output: —57 dB. Switchcraft A3M connector. 18' two-conductor shielded broadcast cable with A3F connector at mike end. Clamp fits ⅝"-27 threaded pipe. Non-reflecting fawn beige matte. Length, 8½"; max. dia., 2⅛".
12 D 7626. Wt., 6 lbs..... **249.90**

and General-Purpose Microphones

Electro-Voice







RE55 DYNAMIC MIKE

Versatile, top-quality dynamic mike can be used on a stand or hand-held. Omnidirectional pickup pattern is especially suited to full-range music recording or other exacting professional applications. Has "pop-proof" wire mesh grille, built-in blast filter. Response is extremely stable over entire range, mike can even be calibrated for secondary use as lab standard. Frequency response, 40-20,000 Hz. Output, —55 dB. Impedance, 150 ohms. Professional-looking satin-nickel finish. 10½x1 7/32" diameter. ¾" shank. With 18-ft. three-conductor cable. Shpg. wt., 4 lbs.

12 D 7250.....126.00

MODEL 654A ALL-PURPOSE MIKE

"Slim-Trim" design broadcast-quality dynamic mike may be used with a stand, hand-held or as a lavalier. Omnidirectional pickup pattern. Excellent microphone for just about any application in radio or television broadcasting. Ideal for announcers, interviewers, commentators, etc. Wide frequency response of 50-15,000 Hz. Excellent voice reproduction. Output: —57 dB. Impedance: matches all low-impedance inputs. Built-in Switchcraft A3M connector. 18-ft. 3-conductor cable. Non-reflecting gray finish. 6 13/16x1⅛" diameter. With standard ⅝"-27 stand clamp, lavalier neck cord. 3 lbs.

12 D 7117.....63.00

MODEL 636 "SLIMAIRE" DYNAMIC

Slim-design dynamic mike excellent for use in public address systems and serious recording applications. Has wide, omnidirectional pickup pattern. "Pop-Proof" wire-mesh filter eliminates wind and breath blasts for excellent voice reproduction. Response: 60-13,000 Hz. Output: —58 dB. Impedance: 150 ohms or hi-Z. (Shipped wired for hi-Z, may be changed easily.) Has on-off slide switch in base; 90° vertical swivel base with standard ⅝"-27 thread. 10¼x1⅛" diameter. Has handsome satin-chromed steel finish. Detachable 15-ft. cord, 2-conductor cable. Shpg. wt., 2 lbs.

12 D 7244.....45.60

MODEL 631 VOICE MIKE

Hand-held microphone ideal for use in PA systems or home recording applications. Has exclusive E-V magnetic on-off switch with special actuator that can be easily removed to leave the mike in "on" position at all times. Frequency response: 80-13,000 Hz. Output level: —55 dB. Omnidirectional pickup pattern. Available in choice of high or low impedance. Special four-stage blast filter eliminates the need for external pop filters. 6 1/32x1 25/64" diameter head. ¾" dia. barrel. Chromed. Shockproof construction. With 16-ft. 2-conductor cable. 3 lbs.

12 D 7251. Low Impedance.....37.80
12 D 7247. High Impedance.....37.80

MODEL 635A DYNAMIC OMNIDIRECTIONAL MIKE

Omnidirectional pickup pattern. Ideal for use by entertainers and vocalists. Can be handheld, used on stand, or as lavalier. Four-stage blast filter is virtually unaffected by breath or wind. Response, 80-13,000 Hz. Minimum pickup of low-frequency reverberations, room "rumble" and prop noise.

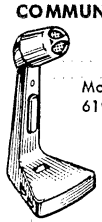
Output: —55 dB. Low impedance. Special Acoustalloy® diaphragm provides excellent vocal reproduction. Magnetically shielded housing, non-reflective matte nickel finish. With Switchcraft A3M connector, 2-cond. 18-ft. cable. Model 310A clamp, lavalier neck cord assembly. 6x1⅜" diameter. Wt., 1 lb.

12 D 7481.....49.20

MODEL RE50. Similar to above, for low instrumental broadcast and recording. Low susceptability to mechanical shock, handling and cord noise or breath pops due to unique double case design, separated by rubber isolation mounting. Non-reflecting fawn beige finish. 7¾x 1 15/16" max. dia., 1" shank. With #300 clamp. Shpg. wt., 12 oz.

12 D 7182.....66.00

COMMUNICATIONS MICROPHONES



MODEL 619TR TRANSISTORIZED MIKE. Base-station dynamic mike with built-in transistor amplifier and speech compressor. Separate controls for level and degree of compression. Grip-to-talk switch, compression meter. Provision for relay operation. Response: 150-10,000 Hz. Output: Hi-Z, —42 dB; 3000 ohms, —44 dB; 150 ohms, —58 dB. Die-cast gray stand, chrome plated head. 5-ft. coiled cable. 4½x4¾x9¾".

12 D 7627. Shpg. wt., 3 lbs.....50.00

MODEL 607 NOISE-CANCELING DYNAMIC. Close talking base mike for high ambient noise. Rejects sound more than ¼" away. 300-3800 Hz. —54 dB. High impedance. 15' cable. Stud mt. fits ⅝" —27 thd. Cycolac. 4⅛x1¾x3¼".

12 D 7678. Shpg. wt., 1 lb.....33.00

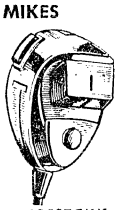
MODEL 620 NOISE-CANCELING DYNAMIC. As above, but on gray metal stand. Push- or grip-to-talk switch. Relay wiring. High impedance. 15' cable. 9¾x4½x4¾".

12 D 7629. Shpg. wt., 3 lbs.....39.90

COMMUNICATIONS MIKES

602F

WITH NOISE-CANCELING FEATURE



205STCKK

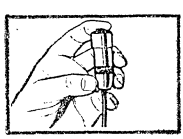
MODEL 602F NOISE-CANCELING MICROPHONE. Differential close-talking mike features high rejection of background noise; two balanced rear port openings phase-out sounds more than ¼" away. Press-to-talk switch shorts mike in "off" position; closes relay in "on" position. Response: 200-5000 Hz. Output: —55 dB. Rugged blue-gray Cycolac® housing. Size, 2½x4x1¾". With 5-ft. coiled cord, mounting bracket. Shpg. wt., 1 lb.

12 D 7484. Low Impedance.....36.30
12 D 7482. High Impedance.....36.30

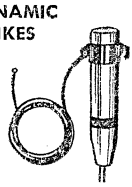
MODEL 205STCKK NOISE-CANCELING MICROPHONE. Single-button carbon microphone for aircraft and emergency communications use. Provides outstanding rejection of background noise. FAA approved. Blast-proof, waterproof and shock-resistant. Output: —50 dB at ¼" away. Low impedance. Black phenolic case, press-to-talk switch. Coiled cord.

12 D 7035. Shpg. wt., 2 lbs.....31.50

MINIATURE DYNAMIC LAVALIER MIKES



Model 649B



Model 647A

MODEL 649B. Miniature, omnidirectional lavalier mike is a real favorite in the TV industry. Weighs only 31 grams (less cable). Ideal for "walk-about" applications or programming requiring unobtrusive mike placement. Response: 70-10,000 Hz. Output: —61 dB. Matches all low-Z inputs. "Pop-proof" wire mesh grille. Non-reflecting gray aluminum finish. Neck cord, belt, clamp, 30' shielded cable, stand clamp. 2¼x¾" dia.

12 D 7118. Shpg. wt., 1 lb.....66.00

MODEL 647A. May be hung around neck, clipped to jacket, or hand-held. Extremely lightweight, just 2 oz. (less cable). Withstands humidity, temperature extremes, shock. "Pop-proof" wire mesh grille. Response: 70-10,000 Hz. Output: —60 dB. Non-reflecting gray finish. 3 5/16x¾" dia. 18' cable, lavalier, belt clip, stand mount.

12 D 7264. High Impedance.....51.90
12 D 7125. Low Impedance. 1 lb.....51.90

MICROPHONE STANDS AND MATCHING TRANSFORMER

MICROPHONE LINE TRANSFORMER

MODEL 502B. (Not illus.) Line transformer matches low-impedance microphone to high-impedance input of amplifiers, recorders, etc. Frequency response flat from 30-20,000 Hz. Supplied with 2-foot cable for high-impedance side.

12 D 7340. Shpg. wt., 1 lb.....9.90

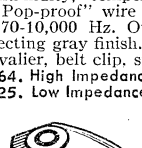
MICROPHONE DESK STANDS

MODEL 422. Has interchangeable rubber shock mounts for ¾" or 1" stand clamps.

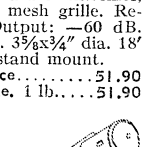
12 D 7397. Shpg. wt., 2 lbs.....10.50

MODEL 418. For use with mikes having small-type stud—Models 611, 623, 630, 636, 641, 644, 664 and 674. Die-cast.

12 D 7146. Shpg. wt., 3 lbs.....8.10

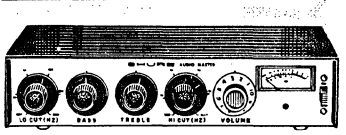


Model 422



Model 418

SHURE Professional Microphone Mixers

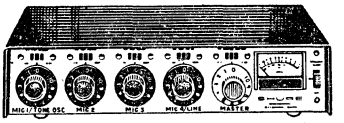


MODEL M63 AUDIO MASTER

Designed to provide maximum flexibility in the control of volume, bass and treble response, plus high and low-frequency rolloff to any high level input source. Ideally suited for applications as a final audio controller when used in conjunction with the M68 Series Mixers at right.

Shapes frequency response to equalize sound systems for correction of room acoustics. Also can be used to reduce feedback, provide special sound effects, reduce stand and stage noise during recording. Has VU meter to monitor audio level; bass and treble controls; continuously variable high and low pass 6 dB per octave filters.

Five outputs: 600 ohms balanced line; high impedance high level; high impedance mike level; low impedance mike level; headphone jack. Response: 20-20,000 Hz. 2½x11⅜x 5¾". Two 30 VDC jacks and AC receptacle. For 105-130 V, 50-60 Hz AC, 30 VDC.
12 D 7593. Shpg. wt., 5½ bs.....90.00

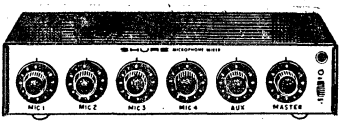


MODEL M67 MIKE MIXER

Professional microphone mixer/remote amplifier specifically designed for studio and remote broadcasting, recording and sound reinforcement. Compact and lightweight, ideal for studio, remote or original installation uses—or as add-on mixer for providing additional microphone inputs.

Has four balanced low-impedance mike inputs; one line input. Line and mike level outputs; two-level headphone monitor jack. Illuminated VU meter is calibrated for 4 and 10 dBm output. Built-in tone oscillator. Individual input gain controls; master control for overall output. Line input switchable for 600 ohms or bridging.

Low-frequency roll-off switch on each channel; direct mix bus permits stacking units for additional input capacity. Response, ±2 dB, 20-20,000 Hz. Hum and Noise: —125 dBv max. equivalent input hum and noise. 11⅜x7½x2½". 115 VAC.
12 D 7594 Shpg. wt., 5½ lbs.....154.20



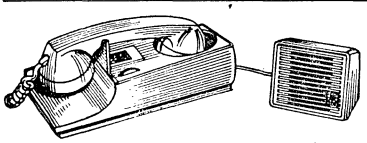
MODEL M68 MIKE MIXER

Solid-state monophonic mixer has four mike inputs plus one highlevel auxiliary input for tuner, tape and accessories. Individual volume controls for each input, Master control for overall input. Switch selected low or high impedance for mike inputs. Low or high impedance mike level output and high impedance auxiliary output. Frequency response, 30-20,000 Hz. 28 VDC jack. 2½x 11⅜x5¼". With male Cannon-type input receptacles. 105-130 V, 50-60 Hz AC.
12 D 7142. Shpg. wt., 4 lbs.....78.60

12 D 7595. Model M68FC. As above, with female Cannon-type input receptacles 85.20

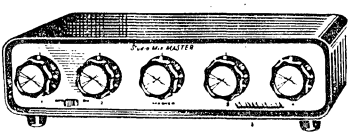
12 D 7596. Model M68P. As above, but high-impedance input only. Low and high-impedance output. Phone plugs.....63.00

12 D 7597. Model M68RM. Similar to M68-FC, but has built-in adjustable intensity reverb for special effects. Jack for use with remote reverb. 40-20,000 Hz.....108.00



FANON FTA-4 SOLID-STATE TELEPHONE AMPLIFIER

Convenient solid-state telephone amplifier provides added versatility and flexibility for your phone. Great for offices, around the house, in industrial areas where high noise levels may be present. Permits "hands free" conversations, boosts volume level of telephone to aid the hard-of-hearing, permits "conference" calls where more than one person can listen at the same time. Solid-state circuit amplifies the sound to room level. Can be used with any phone, no installation is necessary. Pickup has suction cup mount for instant connection and disconnection on any telephone. Built-in speaker and volume control. 10x3x3". With 9-volt battery. Japan.
24 D 9231. Shpg. wt., 4 lbs.....14.95

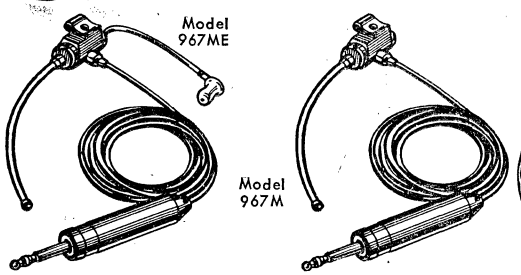


SWITCHCRAFT 307TR 4-CHANNEL STEREO MIXER AMPLIFIER

Accepts from one to four monophonic input signals or up to two stereo signals from any combination of program sources—mikes, recorders, phono pickups, etc. Has individual gain control for each channel, plus Master control for overall input level. Solid-state circuit. Provides minimum of 2 volts output into high impedance load. Frequency response, 20-20,000 Hz; S/N ratio, 60 dB min., referred to 1 mV input. Gain: mike inputs, 60 dB; phono inputs, 40 dB; aux. inputs (tuner, preamp, etc.), 20 dB. 3½x12x7¼". Standard ¼" phone jacks. Requires 2 "D" batteries. Shpg. wt., 4½ lbs.
12 D 7437.....87.00
12 D 7438. Model 308TR. Above, for 117 VAC. 5 lbs.....96.00

Electro-Voice Professional Microphones

DELUXE AIRCRAFT HEADSETS



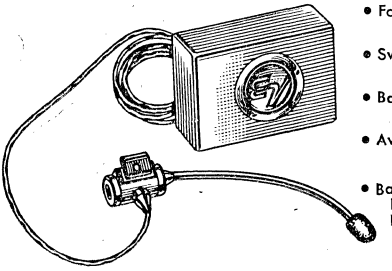
MODEL 967ME DYNAMIC HEADSET

Dynamic headset for efficient, hands-free aircraft communications. Meets requirements of FAA TSO C-57 and C-58, Category B. Audio quality is far superior to magnetic transducers. Background noise reduction is equivalent to true noise-cancelling microphones. Designed for connection to carbon input circuits with 12 to 24 VDC supplies. Output is 40 dB, referred to 1 volt/dyne/cm maximum, 250 ohm load. Small size and weight (24 grams) permit unobtrusive mounting on glasses or headband. Mike and earphone cables are of different lengths for maximum flexibility. Earphone amplifier is built-into handle of plug. Push-to-talk switch is designed for convenient mounting on plane's steering control. With headband, cable clip, convenient carrying case. Shpg. wt., 2 lbs.
12 D 7582.....96.00

MODEL 967M MICROPHONE

Has same fine features as above, but microphone only. Talk-back is provided by cabin speaker. Transducer weight, 16 grams. 2 lbs.
12 D 7583.....85.50

BROADCAST QUALITY DYNAMIC MIKES



- For Lecturing, Sportscasting, Other Entertainment Uses
- Switch-Selected 50 or 150 Ohms Output
- Battery-Operated Preamp Attaches to User's Belt
- Avoids Clothing and Handling Noises of Lavalier Mikes
- Background Noise Rejection Is Equivalent to True Noise-Canceling Mikes

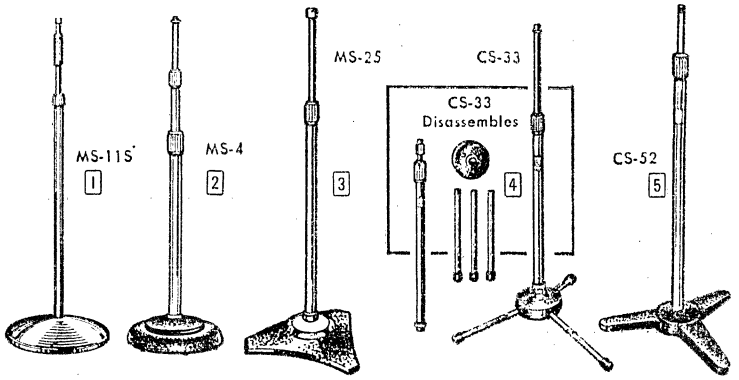
MODEL RE-51 HANDS-FREE DYNAMIC MIKE

Broadcast-quality dynamic mike for hands-free sports announcing, lecture work, other uses. Avoids troublesome clothing and handling noises of standard lavalier mikes, provides background noise reduction equivalent to true noise-cancelling mikes. Features essentially flat response from 80-8000 Hz. Small size and weight of transducers (16 grams) permits unobtrusive mounting on glasses or headband. Battery-operated preamp attaches to user's belt. Two-position switch adjusts output for 150-ohms or 50-ohms (with 10 dB attenuation) input equipment. Supplied with microphone tubes of two lengths for maximum flexibility. 18' two-conductor shielded broadcast cable with Switchcraft A3F connector. With cable clip, convenient carrying case. Shpg. wt., 2 lbs.
12 D 7584.....75.00

MODEL 651 GENERAL-PURPOSE DYNAMIC MIKE

Same as above, but for less exacting uses. Preamp switch adjusts output for low-Z (150 ohms) or hi-Z input equipment. 2 lbs.
12 D 7585.....60.00

Microphone Stands and Accessories



1 **MS-11S AUTOMATIC FLOOR STAND.** Self-locking with automatic clutch for easy and instantaneous changes in height. Removing hand automatically locks the position. Adjusts 39-62". All chromed. 10" base. ⅝"-27 thread. Shpg. wt., 13 lbs.
12 D 7271 L2X 18.66

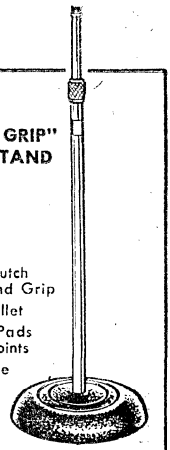
2 **MS-4 TELESCOPING FLOOR STAND.** 25-65". 3 chromed sections, 2 clutches. 10" gray base. ⅝"-27 thread.
12 D 7270 L2X. Wt., 12 lbs... ..... 12.33

3 **MS-25 PROFESSIONAL FLOOR STAND.** "Air Lock Cushion" controls drop of chromed tube. 38-67". 17" chromed and gray base. ⅝"-27 thread. Wt., 22 lbs.
12 D 7330 L2U 21.66

4 **CS-33 COLLAPSIBLE FLOOR STAND.** Fully demountable floor stand with full grip "Velvet Action." Can be collapsed to a total length of only 22½", making it ideal for fixed as well as portable applications. Base legs remove and are self-leveling. No tools or screw fastenings are required to hold the base assembly together. Fully adjustable from 26 to 64". Chromed. 20" base diameter. ⅝"-27 thread. Wt., 4 lbs.
12 D 7327 X..... 11.52

5 **CS-52 PORTABLE FLOOR STAND.** Adjusts 34 to 62". Chromed tube. 2 sections. Chromed self-leveling legs. 15" dia. base. ⅝"-27 thread. Wt., 9 lbs.
12 D 7450 X..... 9.33

LOW-COST "FULL GRIP" MS-10C FLOOR STAND

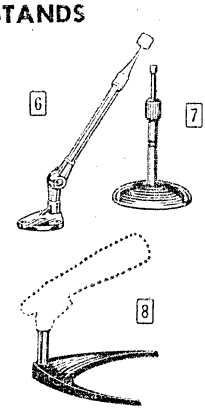


- Extended-Length Clutch Body for Full-Hand Grip
- Bakelite Locking Collet
- Self-Leveling Base Pads and "Anti-Tip" Points
- Stable 10"-Dia. Base

Excellent low-cost stand, innerlined with bakelite to prevent jamming or slipping. 2-section, chrome-plated tube adjusts from 35" to 63". Shrivel-gray base, 10" in diameter. Self-leveling, shock-absorbing base pads. Standard ⅝"-27 thread. Shpg. wt., 10 lbs.
12 D 7325 L2X..... 8.16

MS-11C. Similar to MS-10C above, but has all chromed finish. 34-62". Shpg. wt., 13 lbs.
12 D 7326 L2X..... 10.68

MICROPHONE DESK STANDS

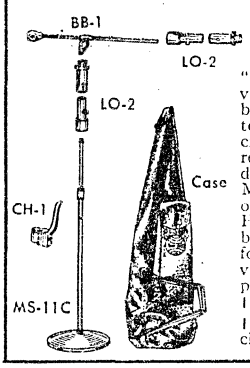


6 **US-2 MULTIPURPOSE MICROPHONE SUPPORT.** Ideal for language labs, switchboards, pulpits. Spring-loaded omni-swivel assembly "floats" in any position. Vertical: 180°. Horizontal: 360°. Chromed. 12¾" arm. 2⅝" base. ⅝"-27 thread. 2 lbs.
12 D 7273. ..... 7.02

7 **DS-7.** General-purpose desk stand with adjustable "Velvet Clutch." Base is of cast iron with gun metal shrivel finish; has pads to prevent damage to desks or table tops. Adjusts from 8 to 13". Base diameter 6", tube height 4". Chrome finished. ⅝"-27 thread. Shpg. wt., 3 lbs.
12 D 7186..... 4.35

8 **DS-14 CONTEMPORARY DESK STAND** Modern stand with 3" chromed tube. Has gray-shrivel base. Standard ⅝"-27 thread. Shpg. wt., 2 lbs.
12 D 7109..... 3.33

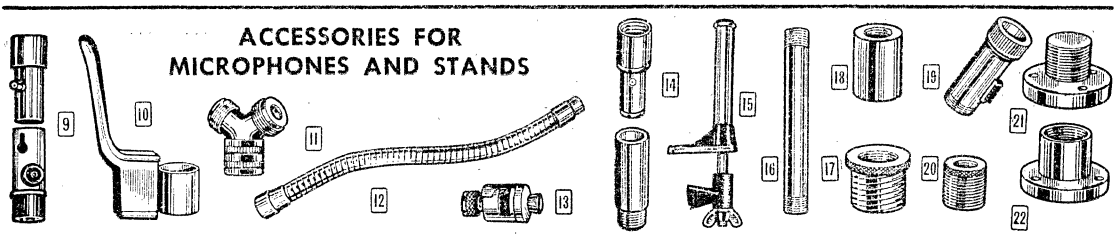
COMBINATION STAND, BOOM, HANGER



- With Two Lock-On Attachments
- Case with Fitted Compartments
- Mike, Boom Disconnect Easily

"PORTO-STAND" PS12C. Unique device incorporates mike stand, baby boom and cable hanger in one easy-to-assemble unit. Ideal for musicians, band members—anyone who requires fast and easy setup and disassembly of mike equipment. Mike and boom disconnect in seconds and fold away into case. Height: 34 to 62", 10" diameter black wrinkle base. Cable hanger for tubes ⅞ to 1¼" diameter. Black vinyl carrying case with fitted compartments. Shpg. wt., 19 lbs.
12 D 7336 X..... 27.93
12 D 7345 X. PS11C. Above, with chrome base. Wt., 20 lbs..... 29.91

ACCESSORIES FOR MICROPHONES AND STANDS



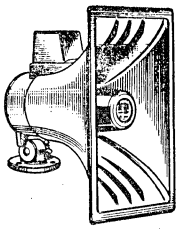
ADAPTERS AND FITTINGS. Thread sizes shown as ⅛" pipe are International Pipe Standard. ⅝" dia., 27 threads-per-inch is standard—fits all stands on this page. Shpg. wt., 6 oz., except *1¼ lbs.

Stock No.	Type	Fig.	Description	EACH
12 D 7110	LO2	9	Lock-on mike attachment	2.85
12 D 7207	CH1	10	Cable hanger; fits all stems ⅞" to 1¼" in diameter	2.10
47 D 1996	. . .	11	"Y" Mike Connector	1 38
12 D 7189	GN13	12	Flexible 13" gooseneck	2.10
12 D 7206 X	GN19	12	Flexible 19" gooseneck*	3.00
47 D 1946	. . . .	13	Mike volume control; hi-imp.	4.08
12 D 7187	SO1	14	Snap-on mike attachment*	2.34
12 D 7190	BC1	15	Bracket clamp; 6" stem*	3.00

Stock No.	Type	Fig.	Description	EACH
12 D 7106	AD7	16	3" extension rod; ⅝"-27 ends	.74
12 D 7105	AD8	16	6" extension rod; ⅝"-27 ends	.74
12 D 7199	AD3	17	⅛" pipe female to ⅝"-27 female	.59
12 D 7201	AD4	. .	¾" long; ⅜"-27 male coupling	.44
12 D 7202	AD5	17	⅝"-27 to ⅝"-27 female coupling	.59
12 D 7108	AD1	18	For adapting RCA mikes, ½" male to ⅝"-27 female	.75
47 D 1950	. . . .	19	Push-to-talk switch with lock	2.32
12 D 7198	AD2	20	⅛" pipe female to ⅝"-27 male	.54
12 D 7103	AD12	21	Mike base flange. Male. ⅝"-27	.80
12 D 7104	AD11	22	Mike base flange. Female. ⅝"-27	.80
12 D 7204	SW-1	. .	Gyromatic mike lock swivel*	4.02

All Stands on this Page Fit Microphones with Standard ⅝" -27 Thread

Electro-Voice PA Horns, Drivers, Speaker Systems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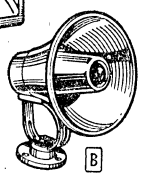
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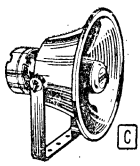
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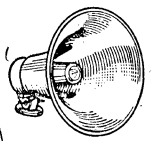
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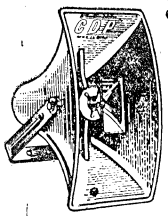
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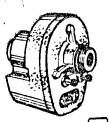
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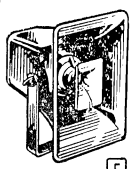
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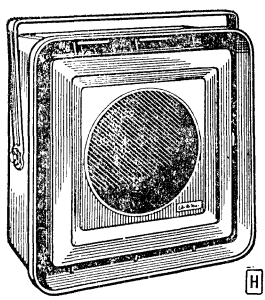
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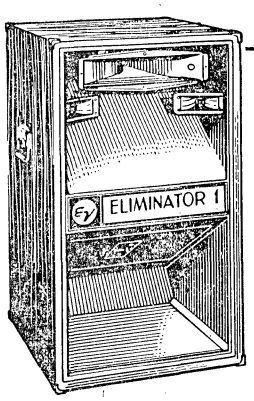


HIGH-EFFICIENCY HORN PROJECTOR PA PAGING SPEAKERS

A **PA30AT-7.** Rugged 30-watt paging projector speaker with integral 70.7-volt line transformer. Easily selected line power taps at 30, 15, 8, 4 and 2 watts. Virtually indestructible Implex rectangular horn for maximum durability, versatility, and sound dispersion. Driver, conservatively rated at 30 watts, provides smooth response for both voice and music. Universal swivel bracket mounts speaker in any position and allows rotation without dismounting. Response: 250-14,000 Hz. Power handling capacity: 30 watts. Dispersion: 120° by 90°. Sensitivity (EIA): 59 dB. Sound-pressure level: 125 dB. 11x6½x8½". Shpg. wt., 7½ lbs.
12 D 7486 X.....30.00

PA30A. Same quality and specifications as above, but no transformer. Shpg. wt., 4½ lbs.
12 D 7616 X.....22.80

B **PA12.** Round paging horn for use where durability is a prime factor. Special diaphragm eliminates loading for clean response. Tough fiber-polyester construction. Frequency response: 325-14,000 Hz. Power capacity: 12 watts. Dispersion: 105°. Impedance: 8 ohms. Size, 7½x6⅜" diameter. Shpg. wt., 5 lbs.
12 D 7476 X.....16.20

C **844A.** Durable, compact 30-watt general purpose paging projector speaker. Smooth natural voice reproduction; provides highly intelligible paging without feedback. Frequency response: 250-13,000 Hz. Power handling capacity: 30 watts. Nominal impedance: 8 ohms. Nominal dispersion: 90°. Sensitivity (EIA): 54 dB. Sound-pressure level: 123 dB. Size, 7½x 9⅞" diameter. Shpg. wt., 13 lbs.
12 D 7475 X.....24.00

D **PA30R.** Re-entrant projector speaker has round spun-aluminum bell for uniform 105° dispersion. Conservatively rated 30-watt driver delivers smooth response for both voice and music. Universal swivel bracket mounts speaker in any position and allows rotation without dismounting. Response: 250-14,000 Hz. Power capacity: 30 watts. Sensitivity (EIA): 60 dB. Sound-pressure level: 127 dB. Impedance: 8 ohms. 9¾x10" dia. Shpg. wt., 6¾ lbs.
12 D 7487 X.....24.00

PA30RT-7. Same specifications and quality as above, but with 70.7-volt transformer. Switchable power taps at 30, 15, 8, 4 and 2 watts. Size, 12⅛x10¼" dia. Shpg. wt., 7½ lbs.
12 D 7499 X.....30.60

COMPOUND DIFFRACTION PROJECTOR SPEAKERS

E **848ACDP.** Compound diffraction wide-angle projector with FC100 Horn and 1828C Driver. Low-distortion speech and music reproduction. 150-10,000 Hz. 30 watts. Dispersion: 90° by 120°. 8 ohms. 10½x20½x20".
12 D 7540 U. Shpg. wt., 16¾ lbs.....54.60

F **847ACDP.** Wide-angle projector provides high articulation over uniform 90° by 120° area. Uses two diffraction horns. Response: 250-10,000 Hz. Capacity: 25 watts. Impedance: 8 ohms. 11¾x7¾x10¼".
12 D 7617 X. Shpg. wt., 10 lbs.....37.20

LINE TRANSFORMERS

TR7-2. 7½ watts; 25-volt. Primary impedance taps: 83, 156, 312, 624, 1248 ohms. Secondary: 8 ohms. Taps: 7½, 4, 2, 1, ½ watt. 1½ lbs.
12 D 7489.....6.60

TR30-2. 30 watts; 25-volt. Power taps: 30, 15, 8, 4, 2 watts. Secondary: 8 ohms. 1½ lbs.
12 D 7456.....9.00

TR7-7. As TR7-2, except 70.7-volt; primary impedance taps: 660, 1250, 2500, 5000, 10,000 ohms. Weatherproof. Wt., 1½ lbs.
12 D 7468.....6.60

TR30-7. 30 watts; 70.7-volt. Power taps: 30, 15, 8, 4, 2 watts. Secondary: 8 ohms. 1½ lbs.
12 D 7457.....9.00

VERSATILE CONVERTIBLE DRIVERS

High-efficiency, peak-free-response PA drivers. Use directly with any Electro-Voice compound diffraction projector horn; easily converted for use with any re-entrant-type horn. All have 1⅜"-18 thread for attaching horn. Type 1829T for constant voltage systems.

Stock No.	Mfr's Type	Fig.	Response (Hz)	Watts (Prog.)	Ohms	Dia. x Depth	Wt., Lbs.	EACH
12 D 7492 X	1828C	G	150-10,000	30	8	4x3¼"	6	21.00
12 D 7496 X	1829	G	140-11,000	60	16	5 5/16x4 1/16"	8	36.00
12 D 7497 X	1829T	G	140-11,000	60	16	5 15/16x6⅜"	11	43.80

COMPACT WIDE-RANGE ALL-WEATHER 12" SPEAKER SYSTEM

H **Musicaster IA.** Integrated loudspeaker system particularly suited to voice and music reproduction. May be used indoors or out, in home, office, or industrial applications. Performs reliably at rallies, picnics and other outdoor events. Has 12" wide-range driver for good bass response; Radax, dual-cone driver assembly for crisp highs.

Completely weatherproofed and fungus proofed compression molded housing assures reliable operation under all weather conditions. Housing designed to stand stably on any flat surface. Universal "U" bracket for easy mounting. Bracket easily converts to carrying handle for portability. Frequency response: 80-10,000 Hz. Mechanical crossover at 4000 Hz. Dispersion: 120°. Power handling capacity: 30 watts (60 watts peak). Impedance: 8 ohms. Size, 21½x 21½x8½". Shpg. wt., 36 lbs.
12 D 7044 U.....69.90

Musicaster IIA. As above, but wider range 80-16,000 Hz response. Mechanical crossover at 4000 Hz. Electrical crossover at 5000 Hz.
12 D 7479 X. Shpg. wt., 37 lbs.....88.50

THREE-WAY LOUDSPEAKER SYSTEM HANDLES 100 WATTS FOR HIGH LEVEL SOUND REINFORCEMENT AND PLAYBACK

Eliminator I. Deluxe three-way speaker system designed for high level, wide-range sound reinforcement and recorded music reproduction. Ideal for the stringent performance requirements of "Acid Rock" groups and other equally demanding applications. Suitable for either permanent or temporary installation.

Features efficient low-frequency transducer coupled to 55 Hz folded exponential horn to handle 100 watts power over a wide frequency range. Two very-high-frequency compression drivers and horns offer smooth, extended response past 15,000 Hz. Equalization controls are provided to cope with various acoustic conditions and to assure flexibility for listener preference. Has two-position mid-range control; continuously-variable level control for high-frequency drivers. Ruggedly built black vinyl enclosure complete with metal corners and carrying handles.

Frequency response: 55-15,000 Hz. Electrical crossovers at 800 and 3000 Hz. Power handling capacity: 100 watts. Nominal impedance: 8-16 ohms. Nominal dispersion: 100° or better past 15,000 Hz. Sensitivity (EIA): 57 dB. Sound-pressure level: 122 dB. Size, 37½x22½x23⅛". Shpg. wt., 140 lbs.
12 D 8254 X.....399.50

PA Speakers, Trumpets, Drivers and Baffles

WEATHERPROOF PAGING/TALK-BACK SPEAKERS

May be used as sensitive mikes for talk-back use. Type UH Series has 360° adjustable hood. IB-A8, IB-T for medium-level sound systems. CIB-A8 for wide coverage in low-noise areas. Compact DLC-8 for low-level use. MIL-T, MIL-A8 for low-power systems. CMIL-A8, CMIL-T for wide-coverage with low power. IBR-A8 for wide coverage with minimum of speakers. MLC (not talk-back) for low-level systems requiring wide response. All 8 ohms except UH-45, 45 ohms. *Swivel mtg. bracket; fits ½" pipe without extra fixture. †70.7 V. transformer. ‡25/70.7 V. transformer.

Stock No.	Mfr's Type	Fig.	Frequency Range, Hz	Watts	Dispersion	Dia.	Length Inch	Wt., Lbs.	EACH
12 D 7940 X	UH-8	A	220-16,000	32	120°	10½"	*10⅞	5	26.97
12 D 7938 X	UH-45	A	220-16,000	32	120°	10½"	*10⅞	5	28.17
12 D 7939 X	UH-T†	A	220-16,000	32	120°	10½"	*10⅞	5	35.37
12 D 7504 X	IB-A8	D	250-13,000	30	90°	10¼"	*9	4¼	23.97
12 D 7166	IB-T‡	D	250-13,000	30	105°	10¼"	*11 1/16"	5¼	30.60
12 D 7515 X	CIB-A8	E	250-13,000	30	120x60°	.....	*7⅜x14x12	6	28.17
12 D 7572	CMIL-A8	E	350-13,000	10	120x60°	.....	*6 7/32x9½x8 7/16	4	22.77
12 D 7167	CMIL-T‡	E	350-13,000	10	120x60°	.....	*6¼x9½x10 7/16	4¾	30.90
12 D 7398	DLC-8	F	400-10,000	7.5	120°	5⅞"	4	1½	11.97
12 D 7569	MIL-A8	D	350-13,000	10	120°	7 13/16"	*6⅞	3¼	19.77
12 D 7058 X	MIL-T‡	D	350-13,000	10	120°	7 13/16"	9 13/16	4	28.77
12 D 7516 X	IBR-A8	C	300-10,000	30	360°	13"	10¼	5¼	32.10
20 D 8416 X	MLC	B	150-15,000	15	120°	.....	12¾x9⅛x10⅝	11	40.95

DIRECTIONAL REFLEX TRUMPETS

Large horn diameters for deep sound-penetration with narrow angle where "long throw" is necessary, or ambient noise level is high. Provides more sound intensity along speaker axis. (Model SMH, for voice reproduction only.) With mtg. brackets. Order drivers below.

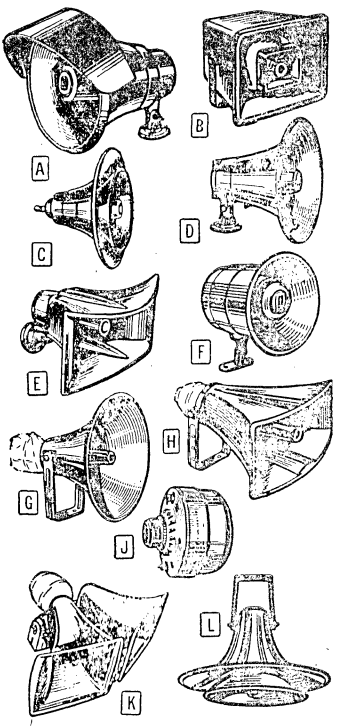
Stock No.	Mfr's Type	Fig.	Low Cutoff	Dispersion	Length	Dia.	Wt., Lbs.	EACH
12 D 7563 U	PH	G	150 Hz	85°	15¾"	20⅜"	11¾	27.57
12 D 7564 U	SMH	G	200 Hz	95°	12"	16¼"	8¼	23.37
12 D 7559 U	CLH	H	120 Hz	120x60°	20"	21½x11½"	13¼	34.50
12 D 7566 X	Cobreflex 2	K	200 Hz	120x60°	10¼"	18½x9¼"	10¼	29.39
12 D 7168	RSH	L	180 Hz	360°	11"	19"	13	37.50

HEAVY-DUTY DRIVERS FOR TRUMPETS ABOVE

All 16 ohms except ID-40T, which has multi-impedance transformer (45/122/250/500/1000/2000 ohms) with taps for 70.7-V. *Used as siren. 190-3600 Hz. All weatherproof.

Stock No.	Mfr's Type	Fig.	Frequency Range, Hz	Wattage of Taps	Max. Watts	Wt., Lbs.	EACH
12 D 7573	ID-20	J	120-6500	.....	20	2½	16.50
12 D 7574	ID-30	J	85-7500	.....	30	3	21.00
12 D 7575	ID-40	J	80-12,000	.....	40	4¼	25.50
12 D 7576	ID-40T	J	80-12,000	40, 20, 10, 5, 2.5	40	5¼	34.50
12 D 7943	ID-75*	J	150-7000	.....	75	5	36.50

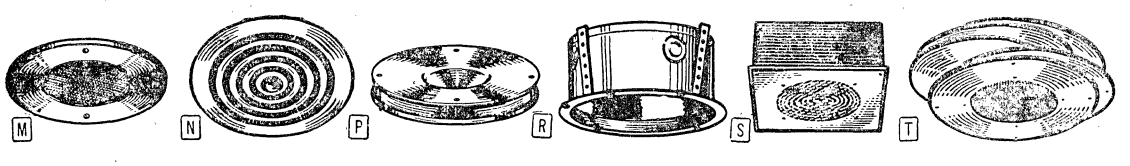
UNIVERSITY SOUND



BAFFLES AND ENCLOSURES FOR 8" SPEAKERS

soundolier

Also Available With Matching 8" Speakers Installed



M TRIM RING BAFFLES

MODEL 61-8. Sturdy, highly polished 20-gauge steel. Has flush mounting that will not "give" or buckle when installed. Requires 8½" ceiling hole. Accepts 8" speaker. Use with 95-8 Protective Enclosure (right). Outer dia., 12¾". Less speaker. Wt., 2 lbs.
12 D 7548 X. 1-4. Ea. 2.95 5-Up. Ea. 2.59

MODEL B61-8. As above but with 8" speaker mounted. With transformer. 4 lbs.
12 D 7500 X. 1-4. Ea. 9.94 5-Up. Ea. 8.56

N LOUVERED BAFFLES

MODEL 67-8. Similar to air diffusers in appearance. Allows free passage of air for maximum sound dispersion. Sturdy flushed mounting, recessed louvers. Attractive aluminum finish. Welded construction eliminates vibration. Requires 10¼" hole. Accepts any 8" speaker. Dia., 12". Use 95-8 enclosure (right). Less speaker. Wt., 2 lbs.
12 D 7546 X. 1-4. Ea. 4.53 5-Up. Ea. 3.98

MODEL B67-8. As above but with 8" speaker mounted. With transformer. 4 lbs.
12 D 7501 X. 1-4. Ea. 11.49 5-Up. Ea. 10.89

P BAFFLES FOR LOW CEILINGS

MODEL 68-8. Attractive-satin-brushed aluminum finish. For maximum sound dispersion. Special diffractor avoids "beaming" of sound in low-ceiling applications. Requires 8½" hole. Takes 8" speaker. Overall dia., 12¾". Use with 95-8 Protective Enclosure (right). Less speaker. Wt., 1¼ lbs.
12 D 7547 X. 1-4. Ea. 6.93 5-Up. Ea. 6.07

MODEL B68-8. As above but with 8" speaker mounted. With transformer. 4 lbs.
12 D 7503 X. 1-4. Ea. 12.89 5-Up. Ea. 11.59

S TRIM SQUARE BAFFLES

MODEL 169-8. (Illustrated with 193-8 enclosure.) This heavy-duty low-cost baffle is designed for convenience. Sturdy 24-gauge steel, attractive white finish. Requires 8½" round or 9⅝" square hole with enclosure. Can be used with any 8" speaker. 10½x10½". Less speaker. Shpg. wt., 1 lb.
12 D 7554 X. 1-4. Ea. 2.37 5-Up. Ea. 2.08

MODEL B169-8. As above but with 8" speaker mounted. With transformer. 4 lbs.
12 D 7514 X. 1-4. Ea. 9.21 5-Up. Ea. 8.43

S MODEL 193-8 SQUARE ENCLOSURE

(Illustrated with Model 169-8 baffle.) Fits 169-8, left. Designed for use with any 8" speaker. Welded 20-gauge steel. Undercoated. 3¾x9⅝" square. Wt., 1¾ lbs.
12 D 7555. 1-4. Ea. 3.96 5-Up. Ea. 3.47

T TRIM RING BAFFLES

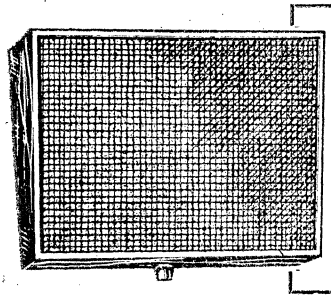
MODEL 51-8. White finish. Made of rugged 24-gauge steel. May be painted. Flush mounting. Requires 8½" hole. For any 8" speaker. Use with 95-8 Enclosure (below). 12¾" dia. Less speaker. Shpg. wt., 6¼ lbs.
12 D 7502 X.....Package of 5 for 7.95

MODEL B51-8. As above but with 8" speaker mounted. With transformer. 3½ lbs.
12 D 7522 X. 1-4. Ea. 9.18 5-Up. Ea. 8.05

R ROUND ENCLOSURES

MODEL 95-8. Constructed of durable 20-gauge steel. Use with Trim Ring Baffle and speaker. Undercoated; jute patch lining reduces resonance. Measures 4¼x9⅞" diameter. Shpg. wt., 3 lbs.
12 D 7550 X. 1-4. Ea. 4.86 5-Up. Ea. 4.26

Baffles and Speaker-Baffles

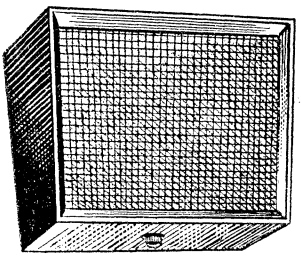


EXTRA-THIN BAFFLE WITH 8″ SPEAKER

Only 4″ deep, yet provides all the response and volume you need for background music or paging systems, plus expert styling and clean appearance that blends well with most decors.

Smart, modern styling in a sloping baffle that's only 4″ deep. Features 8″ dia. shallow speaker with internal dust shield, bonded magnet structures and barium ferrite magnet for more sound per watt. Ideal for use in classrooms, offices, reception rooms, and many other background music and paging system applications. Impedance, 8 ohms. Size, 9x12x4″. Available as baffle-speaker unit alone, or with tapped transformer and/or L-pad volume control for adjustments right at the speaker. Screw terminals for fast installation. Supplied with all hardware for easy mounting. "T" suffix in Mfr's Type indicates baffle-speaker with transformer, tapped at 5, 2.5, 1.25, 0.62 and 0.31 watts. Transformerless types, 15 watts peak. "V" suffix, with volume control.

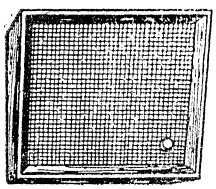
Stock No.	Mfr's Type	Enclosure Finish	Wt., Lbs.	EACH
12 D 7869 X	TP8A-VT	Walnut-Finished Wood	4	15.95
12 D 7842 X	TP8B-V	Walnut-Finished Wood	3½	12.95
12 D 7870 X	TP8C	Walnut-Finished Wood	3½	10.95
12 D 7871 X	TP8D-T	Walnut-Finished Wood	4	14.10
12 D 7581 X	TS8A-VT	Walnut-Textured Vinyl	3½	13.95
12 D 7012 X	TS8B-V	Walnut-Textured Vinyl	3	10.95
12 D 7562 X	TS8C	Walnut-Textured Vinyl	3	9.95
12 D 7013 X	TS8D-T	Walnut-Textured Vinyl	3½	11.95



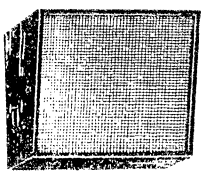
TAPERED 8″ SPEAKER-BAFFLE

Ruggedly constructed and tastefully styled baffle, completely wired with 8-inch speaker. Installs easily, looks smart. Has highly efficient barium-ferrite magnet with 10-watt power handling capacity. Convenient L-pad volume control allows level to be adjusted at speaker as well as at amplifier. Impedance, 8 ohms. Size, 9½x12x6″. Wood baffle available in walnut finish.
12 D 7552 X. Wt., 5½ lbs.....13.95

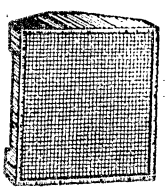
70.7-VOLT SPEAKER-BAFFLE. As above, with 70.7-V constant-voltage transformer installed. Tapped at 10, 5, 2.5, 1.25 and .62 watts. Available in walnut finish—ideal for contemporary installations.
12 D 7553 X. Wt., 6¼ lbs.....15.95



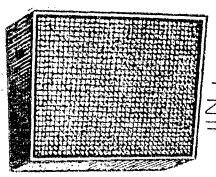
With Baffle, 8″ Speaker



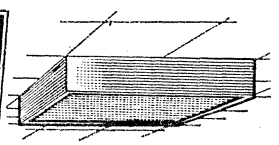
High Density Front Panel



Designed for Best Dispersion Angle



Reinforced Blocks for Lasting Strength



Installs on Ceiling Surface

PREWIRED SPEAKER-BAFFLE WITH TRANSFORMER

Model UL8A-W. Complete, prewired assembly is ready to hang on wall. Includes baffle with full-range 8-inch, 5-watt speaker. Has 1.47-ounce Alnico V magnet for good solid sound. Includes 70.7 volt constant voltage transformer, and L-Pad type volume control for convenient, easy adjustments. Transformer taps for 5, 2.5, 1.25, 0.62, and .31 watts. Screw terminals for speedy connection to speaker lines. Authentic, walnut grain is permanently molded into the high impact styrene body for enduring beauty. Ideal for contemporary installations. Impedance, 8 ohms. Size, 9½x12x6″. Shpg. wt., 3¾ lbs.
12 D 7530 X.....10.95

COMPLETE PREWIRED SPEAKER-BAFFLE

Model UL8B-W. Prewired speaker assembly includes same fine features as Model UL8A-W above, except without transformer. Has 8-inch speaker with 7-watt power capacity (15 watts peak). Complete with baffle, L-Pad type volume control, and screw terminals for fast installation. 8 ohms. 9½x12x6″. Shpg. wt., 3 lbs.
12 D 7531 X.....8.95

STRAIGHT CORNER BAFFLE FOR 12″ SPEAKER

Model CS12-W. Modern styled straight corner baffle is designed to accommodate 12″ speakers with up to 10-ounce magnets. Frame and ¾″ front panel are high density, particle board chosen for acoustically correct density. Recessed front for neater, trimmer appearance. Beautiful wood grain cover fabric in attractive walnut finish. Locked corners provide maximum strength—years and years of service. Mounting hardware is enclosed in coin envelope, fastened inside each baffle. Size, 13½x13½x8¾″. Wt., 2½ lbs.
12 D 7536 X. 1-5.....Each 7.95 6-Up.....Each 7.55

STRAIGHT CORNER BAFFLE FOR 8″ SPEAKER

Model CS8-W. Has all of the fine features as that of the Model CS12-W above, except it is designed to accommodate 8″ speakers. Wood-grain cover fabric, walnut finish. Mounting hardware included. Size, 13½x13½x8¾″. Shpg. wt., 1¼ lbs.
12 D 7537 X. 1-5.....Each 5.95 6-Up.....Each 5.65

SLOPING 9-WATT 8″ SPEAKER-BAFFLE

Sloping baffle has thin modern look for contemporary architecture. With 8-inch speaker, designed for best dispersion angle. Nine-watt, 8-ohm speaker has 1.45-oz. Alnico V magnet. Screw terminals for easy installation with no soldering. Bonded corners for maximum strength and years of service. Recessed front for a neater, trimmer appearance. For use in average offices, classrooms, reception rooms, hospital rooms. All hardware is included in a coin envelope, for fast, easy mounting. Size, 9x11x6″. Covered with durable wood-grained fabric. Attractive walnut finish enclosure matches most interiors. Shpg. wt., 4 lbs.
12 D 7091 X.....7.50

STANDARD BAFFLE FOR 8″ SPEAKER

Low-cost baffle accommodates all 8″ speakers with magnets up to 6.8-ounce (Alnico) or 10-ounce (Ceramic) magnets. Perfect fixture for economical public address systems and music installations in stores, homes, and offices. Recessed front for neater, trimmer appearance. Frames and front panels are of particle boards chosen for acoustically correct density. Thin, modern styled design. Sturdily constructed of birch veneer fabric, walnut finish. Reinforced with husky glue blocks for lasting strength. Hardware enclosed for fast, easy mounting. Size, 9x11x5⅝″. Shpg. wt., 3 lbs.
12 D 7092 X.....5.50

SURFACE MOUNTING CEILING SPEAKER

Model MC-8. Modern styled surface mounted ceiling speaker is thinner than most lighting fixtures, and is ideal for office or home use. Powerful, highly efficient barium ferrite magnet handles 5 watts of power. Neutral beige finish may be repainted any color to match the surrounding decor. Trim, inconspicuous lines. Puts out clear, distinct sound to provide effortless voice and music, even over long corridor reaches. No cut-outs needed. Installs on ceiling surface for maximum sound dispersion. Size, 11x11x2¾″. Impedance, 8 ohms. Mounting hardware enclosed in coin envelope for quick easy mounting. Shpg. wt., 4¼ lbs.
12 D 7538 X.....9.95

PA Speakers and Transformers

utah

SUPER-THIN PA SPEAKERS

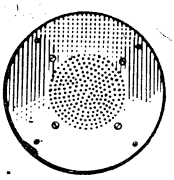
- Have Internal Dust Shield
- Include Handy Screw Terminals

Public address speakers with internal dust shields. Number in Mfr's type indicates speaker diameter. Type PA8J speaker has Alnico V magnet, others have ceramic magnet for extra efficiency. 8 ohms. Screw terminals. Suffix "W" indicates dual cones. All are 8", except *12".

Stock No.	Mfr's Type	Watts	Mag. Oz.	Depth In.	Wt., Lbs.	EACH 1-2	3-5	6-Up
12 D 7907	PA8ECS	8	3.0	1⅞	1½	5.37	5.10	4.63
12 D 7908	PA8FC	10	5.5	2¾	1¾	4.98	4.73	4.48
12 D 7909	PA8FC-W	10	5.5	2¾	1¾	5.28	5.02	4.75
12 D 7872	PA8HC	12	6.0	2⅞	2½	6.30	5.99	5.67
12 D 7873	PA8HC-W	12	6.0	2⅞	2½	6.75	6.41	6.08
12 D 7874	PA8JC	15	10.0	3	2¾	6.90	6.56	6.21
12 D 7913	PA8JC-W	15	10.0	3	2¾	7.35	6.98	6.61
12 D 7914 X	PA12JC*	18	10.0	4 7/16	4½	8.97	8.52	8.07
12 D 7916	PA8J	15	6.8	4 1/16	3	6.90	6.56	6.21
12 D 7915 X	PA12JC-WCR*	18	10.0	4 7/16	4	10.95	10.40	9.88
12 D 7918	PA8JC-WCR	15	10.0	3	3	7.95	7.55	7.17

PREWIRED CEILING ASSEMBLIES

- Flush Mounting in Ceilings
- Constant Voltage Transformers
- Available with Whizzer Cone

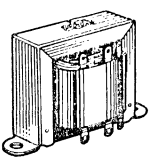


Assemblies for easy ceiling installation. Include round, flush mount baffle, constant-voltage transformer, and 8" speaker with barium ferrite magnet. In Mfr's Type no., suffix "A" indicates aluminum finish. "W" white. *Whizzer cone.

Stock No.	Mfr's Type	Line Volts	Mag. Oz.	Wt., Lbs.	EACH 1-5	6-11	12-Up
12 D 7505	70-8EC-A	70	3.0	3¼	9.50	9.03	8.58
12 D 7506	70-8EC-W	70	3.0	3¼	9.50	9.03	8.58
12 D 7507	25-8EC-A	25	3.0	3¼	9.50	9.03	8.58
12 D 7508	25-8EC-W	25	3.0	3¼	9.50	9.03	8.58
12 D 7509	70-8HCW-A*	70	6.0	4	10.75	10.21	9.68
12 D 7513	70-8HCW-W*	70	6.0	4	10.75	10.21	9.68
12 D 7517	25-8HCW-A*	25	6.0	4	10.75	10.21	9.68
12 D 7518	25-8HCW-W*	25	6.0	4	10.75	10.21	9.68
12 D 7519	M8RA	Alum. Baffle		¾	2.95	2.80	2.66
12 D 7520	M8RW	White Baffle		¾	2.95	2.80	2.66

LOW-PRICED LINE-TO-VOICE-COIL TRANSFORMERS

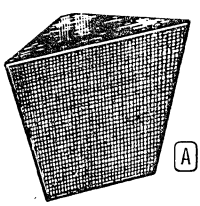
These transformers permit driving speakers at various power levels from same 70.7 or 25-volt line. Just select desired power tap on transformer, there is no affect on other speakers in the same system. All are equipped with solder terminals. Impedance and wattage figures are clearly printed directly on coil. Use with 4, 8, or 16 ohm speakers as indicated. All have 1¾" mounting centers except *2" centers. Shpg. wt., 1 lb.



Stock No.	Watt Taps	Line Volts	Imp. Ohms	EACH 1-11	12-Up
12 D 7088	5, 2.5, 1.25, .62, .31	70.7	8, 4	1.69	1.57
12 D 7821	10, 5, 2.5, 1.25, .62	70.7	16, 8, 4	1.99	1.87
12 D 7820	2, 1, .5	70.7	8, 4	1.59	1.51
12 D 7824	18, 9, 4.5, 2.25, 1.12	70.7	16, 8, 4	2.89	2.73
12 D 7822	5, 2.5, 1.25, .62, .31	25	8, 4	1.79	1.67
12 D 7823	10, 5, 2.5, 1.25, .62*	25	16, 8, 4	2.49	2.27
12 D 7825	2, 1, .5	25	8, 4	1.69	1.61

Speaker-Baffle Combinations

Argos



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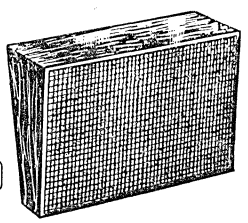

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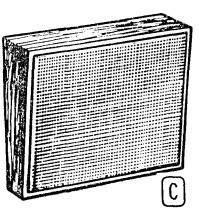

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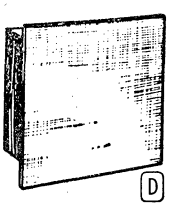

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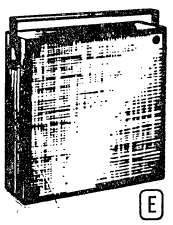


E

A SLANTING-FRONT CORNER BAFFLES

Model ACB. "Clip-In" front goes on or off in seconds without front screws—entire cabinet mounts easily on wall with "Speedy Mounting" clips. Bass reflex type for wide-range response. Screw terminals; acoustic padding. Wood-grained vinyl covered. Walnut finish.

Stock No.	Model	Size	For	Wt., Lbs.	EACH 1-5	6-Up
12 D 7510 X	SCB-8D	15x17¾x9"	8"	6	9.36	8.89
12 D 7511 X	SCB-12D	20x20¾x10½"	12"	8	12.82	12.18

B "THINLINE" SPEAKER-BAFFLE COMBINATIONS

Have 8" or 12" speakers with wide-range response, clear tone for paging and background music systems. All baffles are expertly styled—thin and wide—with clean, sculptured appearance.

Series 108 has 8" speaker with 1-oz. magnet and 6-watt capacity. Series 408 has 8" speaker with 4.8-oz. magnet and 10-watt capacity. Series 508 has 8" speaker with 6-oz. magnet and 15-watt capacity. Series 212 has 12" speaker, 10-oz. magnet, 20-watt capacity.

Screw terminals for fast hookup. Wood-grained vinyl-covered baffles, except Series 508—wood-veneer walnut finish.

In table below "L" indicates L-pad volume control; "V" indicates standard volume control; "T," 70.7-volt transformer.

Stock No.	Model	Baffle Size	Wt., Lbs.	EACH 1-5	6-Up
12 D 7883 X	WB-108CS	9½x12x4¼"	4	7.87	7.48
12 D 7343 X	WB-108CSVT	9½x12x4¼"	6	12.23	11.62
12 D 7344 X	WB-408CS	9½x12x4¼"	5	9.85	9.36
12 D 7350 X	WB-408CSL	9½x12x4¼"	6	12.08	11.48
12 D 7426 X	WB-408CST	9½x12x4¼"	7	12.82	12.18
12 D 7352 X	PB-508CS	9¾x11x5⅜"	6	11.83	11.24
12 D 7429 X	PB-508CST	9¾x11x5⅜"	7	14.80	14.06
12 D 7887 X	WB-212CS	13¾x16x6¼"	7	15.59	14.81
12 D 7888 X	WB-212CSL	13¾x16x6¼"	9	17.77	16.88

C ALL-WEATHER SPEAKER-BAFFLE COMBINATION

Model WWB-600S. Ideal for PA use or as background music in areas subjected to heavy moisture conditions or actual precipitation in entrance areas such as shipping and receiving and loading docks, etc. May be immersed in water without damage. Heavy-duty 5½" speaker has 5.3-oz. magnet with 12-watt power capacity. 8 ohms. 9½x12x4¼". Walnut woodgrain. Shpg. wt., 4½ lbs.

12 D 7891 X. 1-5.....Each 12.82 6-Up.....Each 12.18

D ECONO/LINE TWO-WAY SPEAKER-BAFFLE

Model EB-8S. Versatile speaker-baffle combination may be hung on wall like regular baffle or may be mounted flush with only contemporary grille showing. Has 8" diameter shallow speaker. Ideal for low level paging or background music. For use in classrooms, reception areas, stores, homes or office, and many other background music and paging system applications. Power, 6 watts. Impedance, 8 ohms. Size, 11⅝x11⅝x4¼". Speedy mounting clip for fast, easy installation. Shpg. wt., 3¾ lbs.

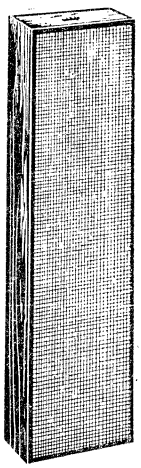
12 D 7892 X. 1-5.....Each 6.75 6-Up.....Each 6.54

E "HALLMARK" TWO-FACED SPEAKER SYSTEM

Model TC8BS. Smartly designed 2-faced corridor speaker system solves your bi-directional sound problems. Delivers the same corridor paging coverage as you would normally expect from two ordinary "single-faced" speakers. 8" dual-cone speaker puts out plenty of good, clear sound to provide voice and music coverage even over extended hallways or factory areas. 4.8 oz. magnet handles 10 watts of power. Effortless installation . . . merely attach to wall or ceiling without removing mounting bracket. May be used in a variety of public address or background applications in schools, offices, warehouses, or wherever there is a long corridor stretch. Impedance, 8 ohms. Size, 10¾x10¾x3½". Finished in handsome Dusk Walnut. Shpg. wt., 6 lbs.

12 D 7521 X. 1-5.....Each 14.80 6-Up.....Each 14.06

Sound Column Speakers for Better PA Coverage



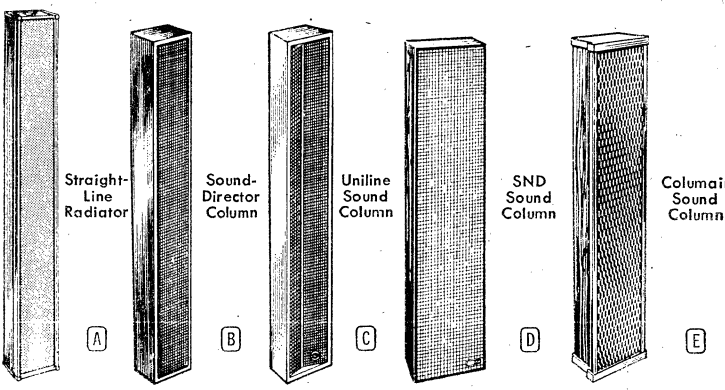
DELUXE ALLIED® SOUND COLUMN SPEAKER

- 41" High with Six 6" PA Speakers
- 145° Horizontal, 30° Vertical Dispersion
- 60-Watt Capacity, 50-15,000 Hz
- Wood-Grain Vinyl Cabinet

MODEL 3350. Deluxe sound column utilizes six powerful 6-inch speakers for outstanding wide-angle dispersion and excellent sound projection in any PA use. Provides wide-range response of 50-15,000 Hz. Delivers uniform sound over a wide 145° horizontal, 30° vertical pattern for better coverage throughout entire room with lower reverberation and feedback. Overall sound projection up to 250 feet (indoor).

Heavy-duty speaker; voice coil of each speaker has aluminum nomax bobbin to handle high power at wide response without distortion. Power capacity, 60 watts. Impedance, 16 ohms. Includes mounting hardware. Walnut wood-grain vinyl cabinet. 41x11x6".
12 D 8002 U. Shpg. wt., 44 lbs. . **64.95**

ALLIED 3300. Four 8" speakers. Dispersion: 140° horiz., 45° vert. 60-11,000 Hz. 25-watt capacity. 8 ohms. With mounting hardware. Walnut wood-grain vinyl cabinet. 41x11x6".
12 D 8001 U. Shpg. wt., 37 lbs. . . **34.95**



A ELECTRO-VOICE RADIATOR

MODEL LR4SA. Wide-range straight-line radiator offers uniform loudness over an extended horizontal pattern. Provides reduced feedback and reverberation effects. Contains 12 speakers in weatherproofed aluminum fan enclosure. Frequency response, 200-10,000 Hz. Capacity, 40 watts. Impedance, 8 ohms. Dispersion; 160° horizontal, 30° vertical. 48⅜x6⅝6x4¹1⁄32".
12 D 7033 U. Shpg. wt., 27 lbs. **99.90**

B ARGOS SOUND-DIRECTOR COLUMN

MODEL SD-1064. Provides good uniform sound distribution for rooms up to 200-ft. long. "Focusing" adjustment adapts to room length. Contains six wide-range 5" speakers. Covered in walnut-grain vinyl; plastic cane grille cloth. Frequency response, 200-10,000 Hz. Capacity, 30 watts. Impedance, 16 ohms. Dispersion: 120° horizontal, 30° vertical, 30¼x7x3⅛". With mounting clips.
12 D 7880 X. Shpg. wt., 10 lbs. **43.05**

MODEL MSD-1060. Deluxe version of SD-1060, above. Features six full-range 8" speakers for voice or music even under poor acoustical conditions. 70-15,000 Hz. 60 watts. 16 ohms. Dispersion: 120° horiz., 30° vert. 50½x10¾x8¼".
12 D 7093 U. Shpg. wt., 40 lbs. **83.65**

C UNIVERSITY UNILINE COLUMN

MODEL CSO-4. Weatherproof steel enclosure with 4 fungus-proof extended-range 8" speakers. Response, 70-17,000 Hz. Capacity, 75-watts. Impedance, 8 ohms. Dispersion: 120° horiz., 18° vert. 41½x12x8".
12 D 7944 U. Shpg. wt., 40 lbs. **149.40**

MODEL CS-2. Six 5" speakers. 175-12,000 Hz. 30 watts. 8 ohms. 165° horiz., 25° vert. dispersion. 31x5½x5".
12 D 7409 X. Shpg. wt., 14 lbs. **59.70**

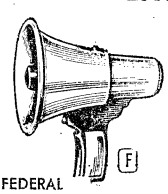
D UTAH SOUND COLUMN

MODEL SND-3. Contains six 8" speakers. Response, 50-15,000 Hz. Capacity, 72 watts. Impedance, 16 ohms. Dispersion: 120° horizontal, 30° vertical. 51x11x7¾".
12 D 7529 U. Shpg. wt., 42 lbs. **79.95**

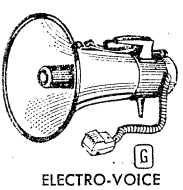
E ATLAS COLUMAIR SOUND COLUMN

MODEL C-80. Ruggedly constructed enclosure boasts special equalization and acoustical treatment for increased efficiency. Contains six 6" speakers. Response, 100-15,000 Hz. 80 watts. 16 ohms. Dispersion: 120° horiz., 36° vert. Attractively styled vinyl-clad metal, wood-grain finish; anodized grill. 45½x8¾x6⅜".
12 D 7408 X. Shpg. wt., 28 lbs. **88.20**

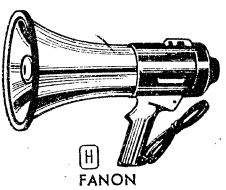
BATTERY-OPERATED SOLID-STATE PORTABLE POWER MEGAPHONES



FEDERAL



ELECTRO-VOICE



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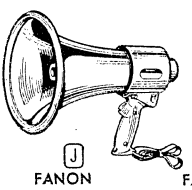


FANON

FANON

F WEATHERPROOF MEGAPHONE

FEDERAL A-12. Weatherproof megaphone is made of lightweight, virtually unbreakable Cycolac®. 3-transistor amplifier with industrial paging-type speaker. Carries sound 500 yards or more. Controlled magnetic microphone. Press-to-talk switch on pistol-grip handle. 10½x9½" long; 7¼" dia. bell. With carrying strap. Order batteries below (uses 8 "AA" penlight cells).
12 D 7319 X. Shpg. wt., 5¼ lbs. . . . **90.00**
18 D 5083. "AA" Batts. 3 oz. . . **Pkg. of 2/.27**

G 16-WATT PORTABLE MEGAPHONE

ELECTRO-VOICE PM16EAC. Battery-powered portable megaphone provides 16-watt peak power (10-watt continuous) output to cover a range of 650 yards. Has external noise-cancelling mike with on-off switch, volume control, coiled cord. Built-in siren alarm tone. Bell diameter, 11½". With shoulder strap. Operates on 8 "C" batteries. Order batteries at right.
12 D 7355 X. Shpg. wt., 6 lbs. **78.95**

H 600-YARD-RANGE MEGAPHONE

FANON MV-8S. Completely self-contained battery-powered portable megaphone sound system is ideal for police, fire, civil defense and industrial applications. Indispensable for recreational and commercial uses; crowd control, general announcements or any public address function. Just touch the pistol-grip trigger switch for powerful voice projection—carries over a 600 yard range. Includes a built-in siren signal.

Push-pull Class B 5-transistor amplifier circuit provides a rated output of 8 watts (10-watt peak power). Volume control compensates for loss of battery power. Lightweight aluminum construction with durable weatherproof baked enamel finish; built-in waterproof dynamic microphone; carrying strap. 7x14" long; 9" bell diameter. Uses six "C" batteries, order below.
12 D 7359 X. Shpg. wt., 5 lbs. **65.95**

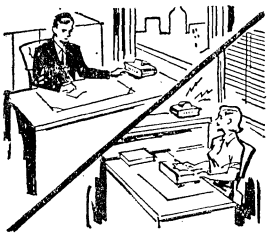
"C" Batteries. For Fanon MV-8S, above or E-V PM16EAC, at left. Shpg. wt., 6 oz.
18 D 5865. . . . . . **Pkg. of 2 for .33**

J MEGAPHONE WITH BUILT-IN SIREN

FANON MV-4S. Rugged portable megaphone is ideal for indoor as well as outdoor use. Provides a rated power output of 4 watts (6-watt peak power) for good coverage over a 300 yard range. Equipped with a built-in siren alarm; waterproof dynamic mike; pistol-grip trigger switch. Weatherproof spun aluminum construction with baked enamel finish. 5-transistor push-pull class B circuit. Volume control. Carrying strap. 7¼ x13". Order 4 "D" batteries below.
12 D 7333 X. Shpg. wt., 4 lbs. **49.50**

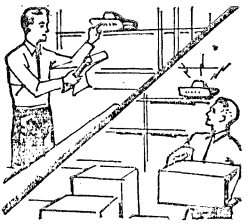
K 200-YARD-RANGE MEGAPHONE

FANON MV-3. Features two volume switches for high or low power. Carries over a range of 200 yards. Pistol-grip trigger switch. Transistorized circuit. Weatherproof aluminum construction. Built-in dynamic mike. With carrying strap. 8¾x13" long. Order 4 "D" batteries, below.
12 D 7324 X. Shpg. wt., 4 lbs. **32.95**
18 D 5779. "D" Batteries. 6 oz. **Pkg. of 2/.33**



Intercom Systems for Office and Plant

LET AN INTERCOM SYSTEM SAVE YOU TIME . . SAVE YOU STEPS . . CUT YOUR OPERATING COSTS



Provides An Important Link Between Departments . . . Reduces Switchboard Congestion . . . Keeps Telephone Lines Open

An Intercom System **saves time**—important executive decisions and up-to-the-minute reports are transmitted in an instant. **Saves steps**—key personnel stay where they're needed most, and inter-departmental traffic is reduced to a minimum. **Saves money**—expedites work in every productive area. **Reduces switchboard congestion**—keeps telephone lines open for important incoming calls. **Provides a link between departments**—key people are always in constant contact. **Inexpensive to own and operate**—costs you only a few pennies a day. Whatever your organizational structure, Allied has an Intercom System for you.

SOLID-STATE INTERCOM SYSTEMS BY *TALK-A-PHONE*

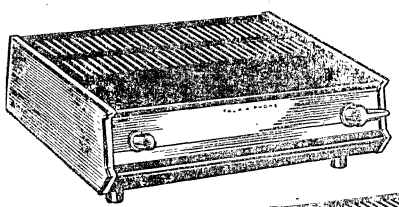
Meet Your Every Requirement . . Offer Time-Proven Dependable Operation

K-LC-2 SOLID-STATE 2-STATION SYSTEM

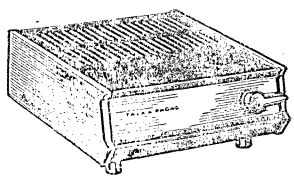
Rugged two-station intercom system for office, plant or warehouse. Consists of one Master Station, one Remote Station and 50 feet of interconnecting cable (up to 2000 feet more can be added). Both Master and Remote can originate calls. Remote can be set for private or non-private operation. Extra Remote Stations (below) can be added at any time. Only Master need be connected to AC power outlet. Master has volume control and pilot light. Master's steel case finished in charcoal gray vinyl and brushed chrome. Remote's case in matching baked enamel. Master, 3⅛x10½x8¾". Remote, 2⅞x7½x8¾". U.L. Listed. For 110-120 VAC. 11½ lbs.

12 D 8095 X..... 46.95

12 D 8090. K-LR-3M Extra Remote Station. Wt., 4 lbs.....Each 15.80



K-LC-2 MASTER STATION



K-LR-3M REMOTE STATION

SELECTIVE WIRELESS INTERCOM SYSTEMS

T-LC-33 DELUXE TWO-STATION WIRELESS INTERCOM

Just plug each system into any AC outlet, on the same power company transformer, and you establish instant communications. "Uni-Trans" switch permits dictating or listening. Steel case finished in charcoal gray vinyl and brushed chrome—resists effects of liquids and corrosive atmospheres. Each unit, 3⅛x10½x8¾". U.L. Listed. For 110-120 V, 50-60 Hz AC or DC. Shpg. wt., 16 lbs.

12 D 8056 X..... 103.00

T-LC-17 EXTRA STATION. Add any number—same as above. Shpg. wt., 8 lbs.

12 D 8057 X.....Each 51.50

ALL-MASTER WIRELESS SYSTEM

Instantly operating wireless intercom systems, using up to six T-LCM-8906 or up to twelve T-LCM-8912 Master Stations. No installation or wiring problems—just plug each Master into electrical outlets on the same line transformer, and you're ready to talk. Each Master Station can originate calls to any other Master on any of 6 or 12 channels. It can also receive calls on any channel. And, by individually calling other Masters to come in on the same channel, it can set up a conference. T-LCM-8906 system can hold up to 3 separate conversations simultaneously; T-LCM-8912 system, up to 6 separate conversations simultaneously. Each Master has "Uni-Trans" for long periods of continuous transmission to another unit (as in dictation), and "Sonic-Gate" circuit to screen out line noises and hum. 3⅛x14x8¾". Charcoal gray vinyl and brushed chrome. U.L. Listed. For 110-120 V, 50-60 Hz AC-DC.

T-LCM-8906 6-STATION WIRELESS MASTER. Handles up to 6 stations individually or in conference. Wt., 10 lbs.

12 D 8043 X..... 103.00

T-LCM-8912 12-STATION WIRELESS MASTER. Handles up to 12 stations individually or in conference. Wt., 12 lbs.

12 D 8050 X..... 116.00

MASTER-AUXILIARY SYSTEMS

Consist of one or more T-LCM-8906 or T-LCM-8912 Masters and any number of T-LCS auxiliary stations listed below. Master stations are described above. Auxiliaries are for use in locations where calls need not be originated, but replies must be made. Each auxiliary is on a fixed channel—from channels 1 to 6—to match that of the Master. Place one or more channel 1 auxiliaries in one area, one or more channel 2 auxiliaries in another, and so on—up to channel 6. Master can then page any area; auxiliaries can be called by, and reply to any Master in the system. No wiring, no cables—just plug each auxiliary into an electrical outlet on the same line transformer as the rest of the system. Same finish as above. 3⅛x10½x8¾". U.L. Listed. For 110-120 V, 50-60 Hz AC-DC. Wt., 7 lbs.

12 D 8044 X. T-LCS-901. Channel 1..... 59.20

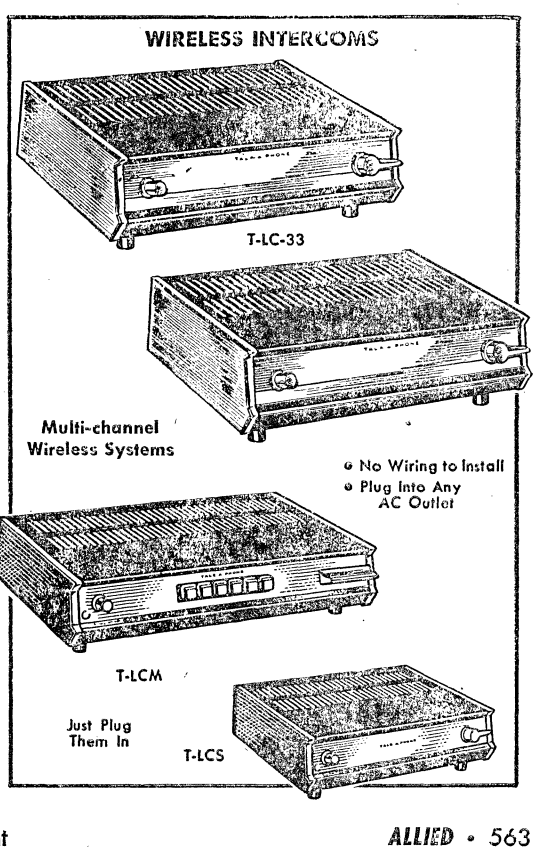
12 D 8045 X. T-LCS-902. Channel 2..... 59.20

12 D 8046 X. T-LCS-903. Channel 3..... 59.20

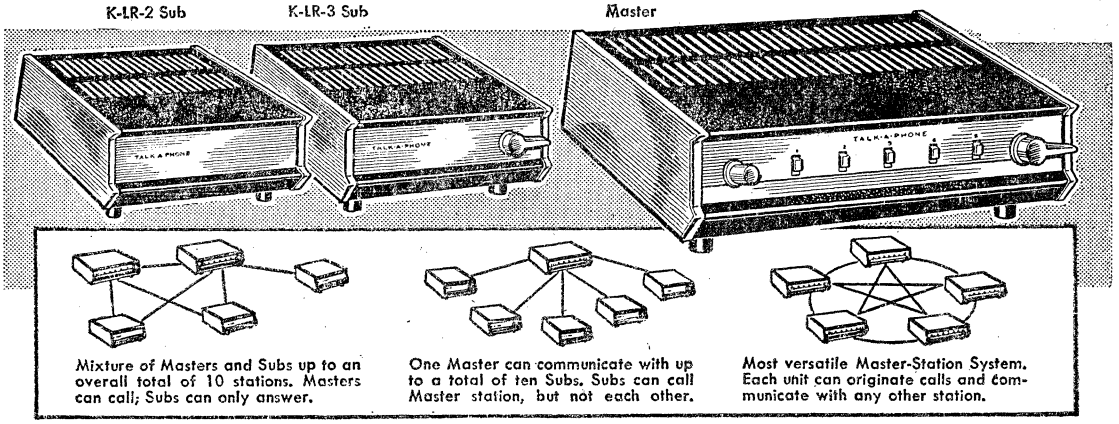
12 D 8047 X. T-LCS-904. Channel 4..... 59.20

12 D 8048 X. T-LCS-905. Channel 5..... 59.20

12 D 8049 X. T-LCS-906. Channel 6..... 59.20



TALK-A-PHONE Solid-State Intercoms



Mixture of Masters and Subs up to an overall total of 10 stations. Masters can call; Subs can only answer.

One Master can communicate with up to a total of ten Subs. Subs can call Master station, but not each other.

Most versatile Master-Station System. Each unit can originate calls and communicate with any other station.

COMBINATION SYSTEMS

MASTERS AND STANDARD SUBS. Master calls can be private or non-private. Masters can call each other or any Sub, selectively. Subs can't originate calls. Masters and K-LR-2 Sub have steel cases in leather-textured gray vinyl and chrome. K-LR-2M Sub in grained enamel. *Stainless steel front panel. Masters, 3⅛x10½x8¾"; Desk Subs, 2⅞x7½x8¾". Wall-mtg. opening, 4⅛x4⅛x2"; front-panel, 4 13/16" sq. Less cable, below. 110-120 volts, 50-60 Hz AC-DC. U.L. Listed. Do not mix K-CL and K-AC Masters in same system.

MASTER STATIONS

K-CL-5 MASTER. To be used with 5-station systems. Shpg. wt., 7 lbs.
12 D 8098 X.....54.95

K-CL-10 MASTER. For use with up to 10-station systems. Shpg. wt., 7 lbs.
12 D 8101 X.....66.20

K-AC-605 HIGH-POWER MASTER. For paging; noisy locations. For 5-stations. Wt., 7 lbs.
12 D 8103 X.....66.20

12 D 8104 X. K-AC-610 High-Power Master. For 10-station systems. Wt., 7 lbs....76.20

SUBSTATIONS

K-LR-2 SUB. Shpg. wt., 5 lbs.
12 D 8110.....20.40

K-LR-2M SUB. Shpg. wt., 4½ lbs.
12 D 8112.....15.80

*K-LR-2R BUILT-IN WALL SUB. 4 lbs.
12 D 8113.....15.80

12 D 8115. KSM Mtg. Accessory. For above. 4 13/16x2⅛". Shpg. wt., 2 lbs.....4.65

HIGH-POWER SUBS. *See accessories, below.*

INTERCONNECTING CABLE

To determine required quantity of Type 6210, 6226, 5506 and 9911 cables, measure from first station to second only; second to third only; and so on, until you reach the last Master in the system. Do not connect last station to first. Add measurements for total. Consult table at right for proper cable type. Required quantities of Type 6902, 5303 and 6303 cables are determined by measuring from each Sub to nearest Master only. Wt., per 100': Type 6210, 6 lbs.; 6226, 12 lbs.; 6902, 2 lbs.; 5303, 1 lb.; 6303, 2 lbs.; 5506, 4 lbs.; 9911, 5 lbs. *Unshielded; †shielded.

MASTER-SELECTIVE SYSTEMS

STANDARD-POWER MASTERS AND SUBS. For systems using one Master and up to ten Subs. Master can call and listen to one, several or all Subs simultaneously. Subs can call and converse with Master, but not other Subs. Subs can be private or non-private, and originate calls. Only Master needs power outlet. K-LR-3M Sub is finished in baked enamel; all others styled in leather-textured gray vinyl and chrome. Masters, 3⅛x10½x8¾"; Subs, 3⅛x7½x 8¾". K-LR-3R: panel, 7 3/16x4 13/16"; opening, 6½x4⅛x2". Less cable, below. For 110-120 V, 50-60 Hz AC-DC. U.L. Listed. Only one Master-Station can be used per system.

MASTER STATIONS

K-ML-5 MASTER. Accommodates up to 5 Sub stations. Shpg. wt., 7 lbs.
12 D 8085 X.....46.00

K-ML-10 MASTER. Accommodates up to 10 Sub stations. Shpg. wt., 7 lbs.
12 D 8086 X.....56.40

K-AC-5406 HIGH-POWER MASTER. 10 times greater volume. For up to 5 Subs. 7 lbs.
12 D 8116 X.....56.40

K-AC-5411 HIGH-POWER MASTER. For use with 10 Sub stations. Shpg. wt., 7 lbs.
12 D 8117 X.....68.00

SUBSTATIONS

K-LR-3 SUB. Shpg. wt., 4½ lbs.
12 D 8088 X.....20.40

K-LR-3M SUB. Shpg. wt., 4 lbs.
12 D 8090.....15.80

K-LR-3R BUILT-IN WALL SUB. Shpg. wt., 4 lbs.
12 D 8089.....15.80

12 D 8118. K-SM-1 Mtg. Accessory. For above. 7 3/16x4 3/16x2⅛". Wt., 2 lbs.....5.25

HIGH-POWER SUBS. *See accessories, below.*

SUPER-SELECTIVE SYSTEMS

SELECTIVE MASTER STATIONS. Most versatile type of intercom systems consisting entirely of Master units. Any station can originate a call to any other station or stations and converse with them—several separate conversations can be held simultaneously without interfering with each other. Conference calls are easily arranged.

Each unit has a translucent indicator that lights up when the unit is in operation. Additional features: slide-switch for each station in the system; spring-return, press-to-talk lever and volume control. All stations may be more than 1000 feet apart and still maintain excellent communications.

Impressively finished in bonded leather-textured gray vinyl, trimmed in brushed chrome. Supplied less cables, below. *Operates for a few pennies a day.* 3⅛x10x 8¾". 110-120 volts, 50-60 Hz AC or DC. U.L. Listed. Do not mix K-LS and K-AC Masters in same system.

MASTER STATIONS

K-LS-5 MASTER. For use in systems with up to 5 Master stations. Wt., 6¼ lbs.
12 D 8079 X.....46.00

K-LS-10 MASTER. For use in systems with up to 10 Master stations. Shpg. wt., 8 lbs.
12 D 8084 X.....56.40

K-AC-505 HIGH-POWER MASTER. For high-noise areas. Provides 10 times the output of K-LS-5 Master above. Accommodates up to 5 Master stations. Shpg. wt., 7 lbs.
12 D 8119 X.....56.40

K-AC-510 HIGH-POWER MASTER. For 10-station systems in high-noise areas. Delivers 10 times the volume output of K-LS-10 Master above. Shpg. wt., 7 lbs.
12 D 8122 X.....68.00

INTERCONNECTING INTERCOM CABLE (SEE EXPLANATION AT LEFT)

Type No.	Cond.	For Connecting	Stock No.	50' Spools	Stock No.	100' Spools	Stock No.	200' Spools
6210	5 pr.	K-CL-5, K-AC-605	55 D 8568	10.00	55 D 8569	20.00	55 D 8575	40.00
6226	13 pr.	K-CL-10, K-AC-610	55 D 8480	22.00	55 D 8481 X	44.00	55 D 8482X	88.00
6902	2	Sub to Nearest Master Only	55 D 8346	1.38	55 D 8358	2.76	55 D 8375	5.52
5303	3*	K-ML-5, K-ML-10, K-AC-5406, K-AC-5411	55 D 8061	2.00	55 D 8059	4.00	55 D 8060	8.00
6303	3†	K-ML-5, K-ML-10, K-AC-5406, K-AC-5411	55 D 8062	3.25	55 D 8065	6.50	55 D 8066	13.00
5506	6	K-LS-5, K-AC-505	55 D 8063	5.50	55 D 8067	11.00	55 D 8068	22.00
9911	11	K-LS-10, K-AC-510	55 D 8064	10.50	55 D 8073	21.00	55 D 8074	42.00

TALK-A-PHONE INTERCOM SYSTEM ACCESSORIES

HIGH-POWER SUBSTATIONS. All Subs can answer Master, as well as originate calls in Master selective systems when used with K-S-100 switch, at right.
12 D 8123 X. K-C-20 Trumpet-Type. 9" reentrant horn. Shpg. wt., 5 lbs.....31.00
12 D 8126 X. K-HP-3 Indoor-Type. 8" speaker. Shpg. wt., 9½ lbs.....21.00

TYPE K-S-100 ORIGINATION SWITCH. Wall-switch, allows High-Power Subs to originate calls. 1¾x5¾x2½". Wt., 1 lb.
12 D 8128.....4.60

KW-1 WALL-MOUNTING BRACKETS. Use with Subs above, except built-ins. Wt., ½ lb.
12 D 8129.....Per Pair .60

OPTIONAL BUILT-IN CRADLE PHONE. To order any Master station (except K-CL-5, K-CL-10, K-AC-605, K-AC-610) with cradle phone, insert "Special" in place of regular stock number, and add "H" to Mfr's Type No. Example: Special, K-ML-5H Master with Cradle Phone. Add $38.00 to price of the Master for Model with Cradle Phone.

Call the Allied Facility Nearest You For Your Electronic Needs

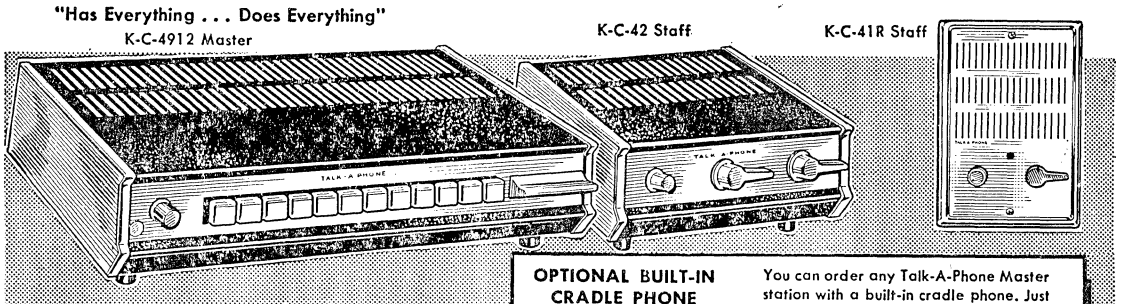
Solid-State Intercoms by *TALK-A-PHONE*

"Has Everything . . . Does Everything"

K-C-4912 Master

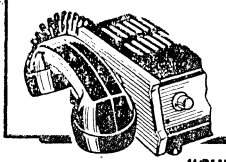
K-C-42 Staff

K-C-41R Staff



- ✓ Easy-to-Use Intercoms with "Built-In Brain" Register Busy Signals, Priority Break-Ins
- ✓ Dozens of Practical, Cost-Saving Applications
- ✓ Private or Non-Private, Noise-Free Operation

OPTIONAL BUILT-IN CRADLE PHONE



You can order any Talk-A-Phone Master station with a built-in cradle phone. Just select the Master, and in place of its regular stock number, insert the word, "Special" and add "H" to the Mfr's Type No. Example: Special. Talk-A-Phone Model K-C-4906H Master with Cradle Phone. Add $38.00 to price of Master for Model with Cradle Phone.

"CHIEF" SOLID-STATE MASTER STATIONS

Deluxe, all-transistor universal Master Stations that can be used in all-Master or Master(s)-Staff(s) systems with capacities of 6, 12, 20 or 30 stations. Effects savings of thousands of man-hours in offices, plants, factories, etc. Masters can operate privately or non-privately and engage in conference calls. In private operation, talk-listen switch is necessary to reply; in non-private, a control is not necessary.

Built-in signal indicates whether line is busy—priority calls can over-ride a busy line. Incoming call is indicated by a light and chime. Master unit includes pushbutton selector, push-to-talk bar, dictation control and volume control. Master Stations may be placed up to one thousand feet apart.

Relays to operate horns, sirens or lights can be connected to operate together with chime in high noise level areas. Master is still fully operational—relay does not take place of Master. Each Master has a junction box with a power supply, and 6-ft. of cable. Steel cases are styled in leather-textured, gray vinyl and brushed chrome. Size, 3⅛x14x8¾". U.L. Listed. For 120 VAC.

Stock No.	Mfr's Type	Capacity	Wt., Lbs.	EACH
12 D 8133 X	K-C-4906	6 stations	15	103.00
12 D 8134 X	K-C-4912	12 stations	15	116.00
12 D 8143 X	K-C-4920	20 stations	16	138.00
12 D 8150 X	K-C-4930	30 stations	18	160.00

"CHIEF" SOLID-STATE EXTRA-POWER MASTER STATIONS

"Chief Redi-Power" Master Stations have features of "Chief" Masters above, plus up to 30 watts of extra power. Provide reserve power for conference calls to many stations at once, or for calling individual stations in noisy area. Receive return speech at normal volume. Built-in 30-watt amplifier. Network automatically adjusts output to pre-selected volume level of each station—no division of output when you call several stations at once. Same size, style, finish and AC rating as Masters above. U.L. Listed.

Stock No.	Mfr's Type	Capacity	Wt., Lbs.	EACH
12 D 8151 U	K-CRP-5912	12 stations	20	175.00
12 D 8152 U	K-CRP-5920	20 stations	21	197.00
12 D 8153 U	K-CRP-5930	30 stations	23	219.00

CONNECTING MASTER TO MASTER. Measure from first to second Master only; from second to third Master only; and so on, until you have reached the last Master in the system. Then add all measurements together. For 6-station Masters, use Type 6214 cable; 12-station Masters, Type 6226 cable. For 20-station Masters, double total measured length (two equal lengths of cable run parallel to each other between Masters) and order Type 6226 cable. For 30-station Masters, triple total and use Type 6226 cable.

CONNECTING STAFF TO MASTER. Measure distance from each staff to Master, and total all measurements. Use single length Type 6206 cable to connect "Chief" Staffs to Masters.

CONNECTING HIGH-POWER STAFFS. Same as Staffs above, using 6206 cable, if origination switch is used. If not used, connect each Staff to nearest Master with single 6902 cable.

INTERCOM CABLE. Indoor or outdoor use. 6214 has 7 pairs of conductors; 6226, 13 pairs; 6206, 3 pairs; 6902, 1 pair. Wt., per 100': 6214, 7 lbs.; 6226, 12 lbs.; 6206, 4 lbs.; 6902, 2 lbs.

Type	Stock No.	50' Spool	Stock No.	100' Spool	Stock No.	200' Spool
6214	55 D 8027	11.50	55 D 8075	23.00	.....	.....
6226	55 D 8480	22.00	55 D 8481 X	44.00	55 D 8482 X	88.00
6206	55 D 8580	5.50	55 D 8587	11.00	55 D 8594	22.00
6902	55 D 8346	1.38	55 D 8358	2.76	55 D 8375	5.52

"CHIEF" ALL-TRANSISTOR STAFF STATIONS

For mixed systems with Masters. Originates calls to private masters with which it is directly connected, answers calls from any Master in system. Cannot talk with another staff. Talk/Listen switch must be used in private operation; non-private operation allows "hands-free" (no switch) conversation. Has monitoring and busy signals, with signal light when other stations call. "M" in Mfr's Type means grained, baked-enamel-gray finish; others, charcoal gray. Powered by Master Station. Metal case, 3⅛x7½x8¾". U.L. Listed.

Stock No.	Mfr's Type	No. of Masters Staff Can Call	Wt., Lbs.	EACH
12 D 8154 X	K-C-41	one	5	27.25
12 D 8155 X	K-C-41M	one	5	22.25
12 D 8156 X	K-C-42	two	5	34.00
12 D 8157 X	K-C-42M	two	5	29.25

12 D 8158 X. Type K-C-41R Flush Wall-Mount Staff. Same as K-C-41 in operation. 4¹³⁄₁₆x7¾₁₆". Shpg. wt., 4 lbs. 22.25

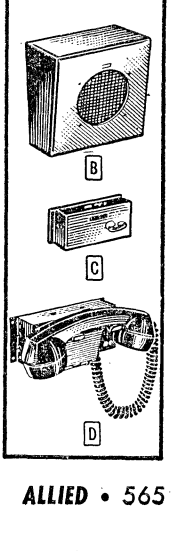
12 D 8161 X. Type K-C-42R Flush Wall-Mount Staff. Same as K-C-42 in operation. 4¹³⁄₁₆x7¾₁₆". Shpg. wt., 5 lbs. 29.25

12 D 8118. Type K-SM-L Surface Mounting Accessory. 2 lbs. 5.25

12 D 8129. Type KW-1 Wall-Mounting Brackets. For Staffs (except KC-41R and KC-42R). Reg. 1 pair per station. 8 oz... Per Pair .60

HIGH-POWER SOLID-STATE STAFF STATIONS, ACCESSORIES

HIGH-POWER STAFF STATIONS. Provide higher volume output than standard units. Specifically designed for use in noisy surroundings and outdoor areas. Staff can answer Master and, with use of origination switches listed below, can originate calls. For use with any "Chief" system.



A K-C-20 TRUMPET-TYPE SPEAKER. 9" weatherproof speaker featuring talk-back design. Power capacity, 15 watts. Charcoal gray. Shpg. wt., 5 lbs.
12 D 8123 X 31.00

K-C-20 V TRUMPET-TYPE SPEAKER. As above, with volume control adj. to full output.
12 D 8166 X. Wt., 5 lbs. 41.00

B K-HP-3 INDOOR-TYPE 8" SPEAKER. Charcoal-gray metal baffle. Capacity, 5 watts. Baffle, 12x12x8". 9½ lbs.
12 D 8126 X 21.00

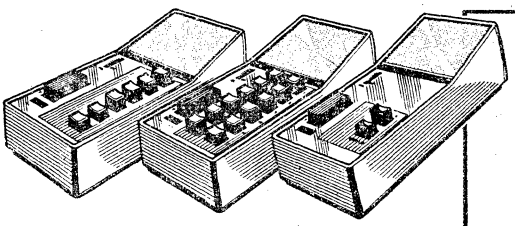
K-HP-3V 8" SPEAKER. As above, but with volume control adj. to full output.
12 D 8168 X. Wt., 9½ lbs. 26.40

C ORIGINATION SWITCHES. Make K-C-20 or K-HP-3 operationally equivalent to K-C-41 or K-C-42. With incoming call and busy lights. Wt., 2 lbs.
12 D 8169. K-S-101. Calls 1 Master... 9.30
12 D 8170. K-S-102. Calls 2 Masters. 15.25

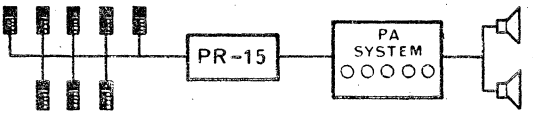
D K-S-111 WALL-MOUNT CRADLE PHONE. For listening privacy and/or use in noisy areas. Use as many as needed, in combination with remote speaker in systems where Sub Stations reply to calls. Phone lifted from cradle automatically disconnects remotes in/out calls. When cradled remote operates normally. Also usable with origination switches. 4 lbs.
12 D 8173 X 46.00

FANON Solid-State Intercom Systems

FI SERIES—USE AS MASTER-TO-MASTER OR MASTER-TO-REMOTE SYSTEM



FI-7 7 Station | FI-13 13 Station | FIR Remote Station



- Plan Your Own All-Master or Master and Remote System
- Remotes Have Signal Button for Calling Master Station
- Remotes Can Be Set as either Private or Non-Private
- All Units May Be Used on Desk or Mounted on Wall

All-Master Unit system lets any station carry on private conversation with any other station. Up to 3 private two-way conversations can be held at a time with 7-station master system, up to 6 with 13-station master system.

Master-and-Remotes system lets master converse with any remote, or several remotes at a time. 7-station master can be used with up to 6 remotes; 13-station master with up to 12 remotes.

Master units have solid-state circuits, with full one watt output, volume control, on/off switch, talk/listen switch with lock position. Sealed, self-cleaning Isostat pushbutton selector switches for maximum reliability. Remote units have signal button for calling master station. Each remote can be set as either "private" or "non-private". Separate module AC power supply included to eliminate heat and hum. Stations can be used up to 500 feet apart. Station button No. 6 usable with PR-15 Paging relay for paging and talkback through PA systems. All units may be used on desk or wall-mounted. Designer-styled gray and charcoal styrene cases. 9¼x4x3¼". For 110-120 VAC. U.L. Listed. **Cable Requirements:** One more conductor than number of stations in system.

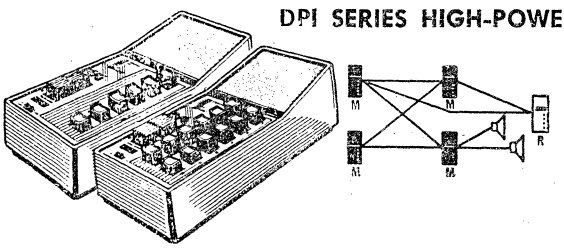
Model FI-7 Seven-Station Master Intercom Unit. Shpg. wt., 3 lbs.
12 D 8232 X.....Each 34.65

Model FI-13 13-Station Master Intercom Unit. As above, with 13 stations, two paging buttons for PR-15 or FIR. Shpg. wt., 4 lbs.
12 D 8233 X.....Each 47.75

Model FIR Remote Station. For above. Shpg. wt., 2 lbs.
12 D 8228 X.....Each 11.25

Model PR-15 Paging/Talkback Relay. Links FI-7, FI-13 to PA systems for paging/talkback. Add one shielded wire for each PR-15. Shpg. wt., 1 lb.
12 D 8229 X.....Each 22.25

DPI SERIES HIGH-POWER INTERMIX INTERCOMS



- Use any Combination of Masters and Remotes
- Four Watts of Audio Power—Up to 2000 Feet Apart
- Masters Are Private or Non-Private • Busy Signal

These versatile intercoms permit master-to-master, master-to-remote or any combination of masters and remotes. Masters have a privacy switch. When in "non-private", Master can answer—"Hands-Free". Call-in lamp announces incoming calls, precluding eavesdropping of master in non-private position. Busy light registers when master calls another station engaged in conversation. One or more remotes or paging horns may be connected to more than one master station. Remotes or horns can reply Hands-Free to calling master but cannot originate calls. Master has Hi Power page position for noisy areas. Balanced line system eliminates any crosstalk, noise, and reduces audio loss due to long cable runs. May be used on desk or wall-mounted. 9½x4x3¾". For 110-120 VAC, U.L. Listed. Cable required: One more conductor than no. of stations.

Model DPI-7 Six-Station Master Intercom Unit. Shpg. wt., 4 lbs.
12 D 8242 X.....Each 49.95

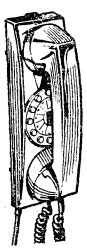
Model DPI-13 Twelve-Station Master Intercom Unit. Shpg. wt., 4 lbs.
12 D 8243 X.....Each 63.50

Model DPR Remote Station. Has privacy switch. Shpg. wt., 2 lbs.
12 D 8244 X.....Each 14.95

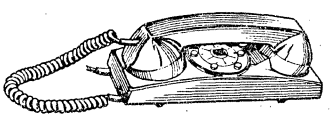
Model HDA-5/8 High Power Re-Entrant Horn. Weatherproof for outdoor use. 10-watt capacity. 6½" diameter horn. 8 ohms. Wt., 3½ lbs.
12 D 8245 X.....Each 9.95

SOLID-STATE TELEPHONE INTERCOMS

77 SERIES WITH SELECTIVE RING



13-Station 7713



7-Station 7707

Features push-pull amplifier with excellent voice-reproduction qualities. 7707 has 7-station capacity using any combination of masters and remotes; with 7713, a maximum of 13 stations (Masters and remotes) can be installed. In an intermix system, any master can call any other master or remotes connected to it. The remote can call only one master. Conferences between any number of stations can easily be set up. One conversation channel is available. For desk or wall. 9¼x3x3½". For 110-120 VAC. U.L. Listed.

Model 7707 Seven-Station Master Intercom Unit. Shpg. wt., 3 lbs.
12 D 8246 X.....Each 24.50

Model 7713 Thirteen-Station Master Intercom Unit. Shpg. wt., 3 lbs.
12 D 8247 X.....Each 26.95

Model 7701 Remote Phone. For use with 7707 and 7713. Wt., 3 lbs.
12 D 8248 X.....Each 20.95

Model PS-77 AC Power Supply. One req'd. per system. Wt., 2½ lbs.
12 D 8249 X.....Each 14.95

Model PR-7 Paging Relay. For 7713, 7707. Connects "77" Series phone system to any PA system. Shpg. wt., ½ lb.
12 D 8250 X.....Each 22.50

"PAGE-CALL" 5-WATT PAGING/PHONE SYSTEM

Paging and phone system designed specifically for offices, stores, supermarkets, warehouse, restaurants —where the key person you want is on-the-go! Localized paging through each PT-7 phone eliminates the need to "blast" your announcement over a PA system.

Any one of the PT-7 phones in the "Page-Call" system can initiate a page call. This call is heard through built-in speaker at every phone in the system. Called party picks up nearest phone and is immediately in direct contact with caller, automatically cutting off page. Page-Call is a common talking system, therefore anyone can join in existing conversation by picking up any handset. No one can page through the system while a conversation is proceeding. Up to 20 stations may be installed in the system. In the event that it is required to extend the page call through large and noisy areas for which the sound from the phones is inadequate, a higher power PA amplifier may be added to the system. The paged call is then heard over the loudspeakers of the PA system in addition to the phone speakers. Suitable for desk or wall use.

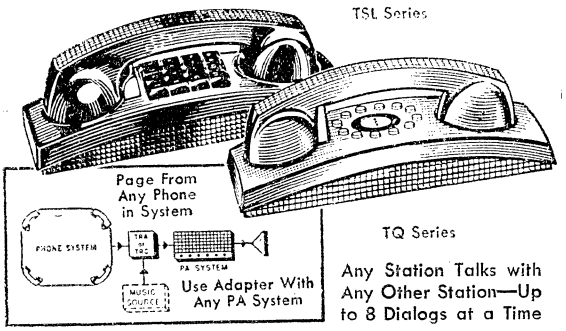
High impact styrene. 9¼x3x3½". For 110-120 VAC. U.L. Listed. Cable requirement: a 6-conductor cable, regardless of the number of phones in the system.

Model PT-7 Paging Telephone Unit. Shpg. wt., 3 lbs.
12 D 8251 X.....Each 21.50

Model APS-5 Amplifier and Power Supply. One req'd. Wt., 6 lbs.
12 D 8252 X.....45.75

Intercoms and Phone Systems

BOGEN



Any Station Talks with Any Other Station—Up to 8 Dialogs at a Time

TSL MULTI-CHANNEL BOGEN-PHONES

In 8-station TSL-8 system, up to 4 private conversations can be held at once; in 16-station TSL-16, up to 8; any station talks with any other. Push desired number of selector buttons for conference calls. To call, lift phone, press selector button, then press ring button; buzzer sounds at called station. 3½x9½x3¼". Beige. Use cable with at least 3 cond. more than number of phones. 4½ lbs.

12 D 8260. TSL-8 Phone. 1 ring, 7 station-selector buttons. Calls up to 7 other stations individually or together.....Each 40.75

12 D 8261. TSL-16 Phone. 1 ring. 15 station-selector buttons. Calls up to 15 other stations individually or together.....Each 48.25

12 D 8263. PRS-16 Power Supply. Takes 1 per system. Use 3-cond. cable. 6x2x3½". For 110-120 V, 50-60 Hz AC. Wt., 4 lbs.....41.55

12 D 8114. TRC Phone-Page Adapter. Allows paging through PA system. Volume control for separate paging and music levels—music stops during page. Use 3-cond. cable. 4x4x2". Wt., 6 lbs.....31.65

TQ COMMON-TALK BOGEN-PHONES

Any station talks with any other station, but only 1 conversation (2-way) can be held at a time. Has selective ringing, conference call feature. Total of 7 stations can be used in TQ-6A system; 13 in TQ-12A. Beige. 3¼x3¼x9¼". Use cable, below, with at least 3 conductors more than number of phones in system. 3 lbs.

12 D 8264. TQ-6A Phone. For up to 7-station system....Each 29.05

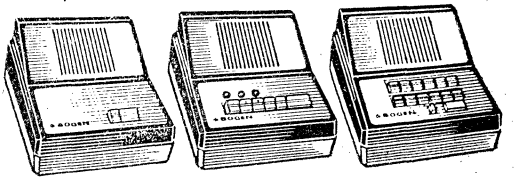
12 D 8265. TQ-12A Phone. For up to 13-station system..Each 32.65

12 D 8266. PRS-1A Power Supply. Takes 1 per system. Use 3-cond. cable, below. 3½x6x2". For 110-120 V, 50-60 Hz AC. 6 lbs...25.00

12 D 8267. TRA Phone-Page Adapter. Allows paging through PA system. Volume control for separate paging and music levels—music stops during page. Use 3-cond. cable. 4x4x2". Wt., 5 lbs.....31.65

CABLE FOR ABOVE IN 100 AND 500-FT. SPOOLS

No. of Cond.	Lbs. per 100 Ft.	100-Ft. Spool		500-Ft. Spool	
		Stock No.	EACH	Stock No.	EACH
3	2	55 D 9458	4.25	55 D 9459	17.59
6	4	55 D 9860	7.50	55 D 7314 X	35.71
12	5½	55 D 7260	13.07	55 D 7995 U	65.21
15	7	55 D 8488	17.40	55 D 8489 U	78.00
25	12	55 D 8405	26.40	55 D 8406 Z	122.25



SOLID-STATE PLANT INTERCOMS

ALL-MASTER SYSTEM. Use up to seven IE-7 or up to thirteen IE-13 Masters. One non-private RIE-1 Remote may be substituted in IE-7 system for hands-free reply, two RIE-1 Remotes can be used in IE-13 system. Any Master can call all others or page thru plant P.A. system. Each has volume control, press-to-talk bar with dictate lock, pushbutton selector switches. For desk or wall mounting. Gray. Each unit 4x6⅞x7⅞". Order cable below—use unshielded cable with at least one more conductor than total no. of stations. All Masters require 110-120 VAC.

SINGLE MASTER-MULTIPLE REMOTE SYSTEM. One IE-7 Master, up to six RIE-1 Remotes; or one IE-13 Master, up to twelve RIE-1 Remotes. Master calls one or more stations simultaneously. Remote originates calls to Master, has press-to-talk bar, privacy switch. Each unit, 4x6⅞x7⅞". Order cable below—use 3-conductor unshielded cable between each station.

IE-4S "ANNUNCIATOR" SYSTEM. IE-4 Master takes up to three RIE-1 Remotes (one incl.). Calls one or more remotes as desired. Remotes originate calls to master by means of beep-tone and magnetic annunciator that remains visible until cleared by Master. IE-4 Master has volume control, press-to-talk bar, 3 pushbutton selector switches (each with annunciator), beep tone call button, clearing button. For desk or wall mounting. Gray. Each unit, 4x6⅞x7⅞". Order cable below—use 2-conductor unshielded cable between each station. For 110-120 VAC.

TBR-1 RELAY ACCESSORY. For IE-7 and IE-13 systems only. Permits tie-in to plant P.A. system for paging from any Master and hands-free reply from loudspeaker or horn. IE-13 system can be used with two TBR-1 relays. Order cable below—requires single-conductor shielded cable for each TBR-1.

12 D 8268 X. IE-7 Seven-Station Master. Shpg. wt., 4 lbs..37.45
12 D 8269 X. IE-13 Thirteen-Station Master. Wt., 4 lbs....46.95
12 D 8270 X. IE-4S System. 1 Master; 1 Remote. 8 lbs....44.95
12 D 8271 X. RIE-1 Remote Station. Shpg. wt., 3 lbs.....11.95
12 D 8272 X. TBR-1 Relay. Shpg. wt., 2 lbs.....24.75
12 D 8273 X. JB-E Junction Box. For ea. IE-7, IE-13. 2 lbs. 5.25

CABLE FOR ABOVE INTERCOMS IN 100-FT. SPOOLS

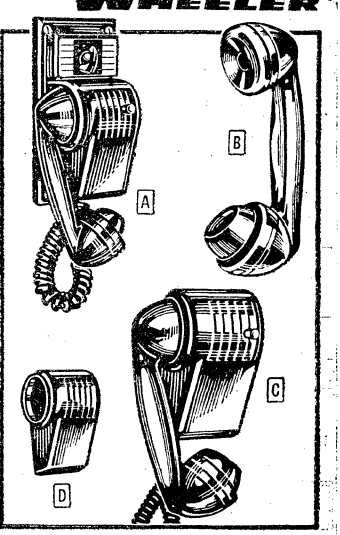
55 D 7691. 2-Cond. Unshield. Use solid cond. wire. 2 lbs...2.40
55 D 9458. 3-Conductor Unshielded. Wt., 2 lbs.....4.25
55 D 7539. 9-Conductor Unshielded. Wt., 5 lbs.....9.25
55 D 7260. 12-Conductor Unshielded. Wt., 5½ lbs.....13.07
55 D 7699. 16-Conductor Unshielded. Wt., 7 lbs.....14.70
55 D 9422. 1-Conductor Vinyl-Shielded. Wt., 1 lb.....5.20

SOUND-POWERED TELEPHONE-TYPE INTERCOM SYSTEMS

WHEELER

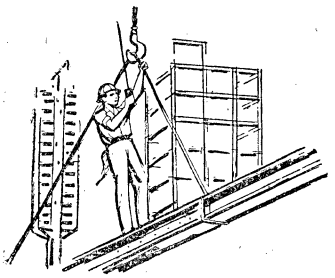
Use these handsets for maintenance-free communications in the plant, on construction sites, the farm, anywhere electrical power is lacking. Comparable in size and quality to the finest commercial telephone equipment. No batteries required. Voice power alone generates current for transmission. Sound-powered elements in telephone and ring generator have Alnico permanent magnets for infinite life without loss of strength. Can remain on an indefinite "standby" for emergency service when other facilities fail. Up to 12 telephones may be connected in parallel to provide fast communication at low installation cost. SPT-102 handset has 4½-ft. non-coiled cord. SPT-123 and SPT-150 have 4-ft. coiled cord. All handsets supplied less connecting cable, listed below. SPS-205 wall-mounted handset holder can accommodate up to 3 telephones in a common ringing system. All units constructed of corrosion resistant materials for trouble-free operation in any weather.

Stock No.	Type	Fig.	Description	Lbs.	EACH
12 D 8087	SPT-102	B	Handset. Up to 12 can be paralleled.	1½	14.81
12 D 8093	SPT-123	B	Hi-level handset for noisy areas (less clips).	1½	16.57
12 D 8094	SPT-150	B	Same as SPT-123 but with insulated clips.	1½	17.20
12 D 8091	SPS-305	C	Wall-mount handset holder. For installations with separate ringing systems. 2⅞x5⅝x3".	1½	13.17
12 D 8092	SPS-1205	C	Same as SPS-305 but with self-contained bell.	1½	19.67
12 D 8255	SPS-205	A	Paired phone system for 2 stations; ready for installation. Less conn. wire.	7	72.00
12 D 8256	SPS-205-MI	A	Master phone similar to SPS-205 but with station selector switch; up to 12 stations.	5¼	54.81
12 D 8257	SPS-205-SI	A	Sub-station (up to 11 SI's with 1 MI) can call only MI, which can connect to another SI.	5¼	46.54
12 D 8097	B-5446	D	Handset hook. For wall or desk-side mtg.	¼	1.49



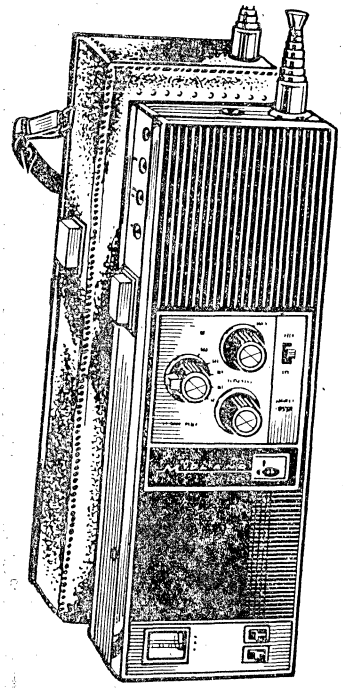
55 D 8749. Dearborn Cable for Sound-Powered Phones. 2-conductor. 100-ft. spool. Measure from Phone 1 to Phone 2, 2 to 3, etc. Shpg. wt., 3 lbs.....5.55

55 D 9458. 3-Conductor Cable. For SPS-205 Series. 100-ft. spool. Wt., 2 lbs.....Per Spool 4.25

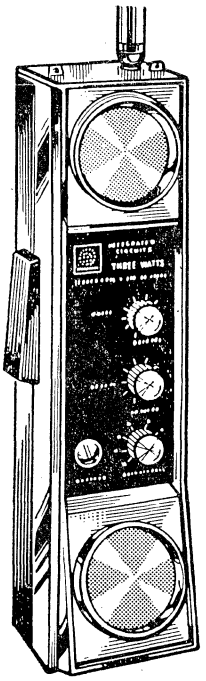


High-Power CB Walkie-Talkies Selected for Industrial Use

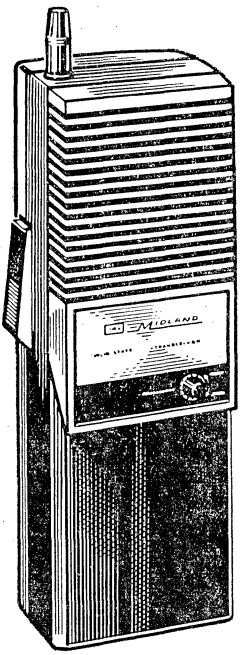
These powerful Citizens Band walkie-talkies are perfect for communications in plants, between lift trucks, for construction operations, and many other industrial applications. All feature advanced-design solid-state circuits for super dependability. An FCC license is required for walkie-talkies with over 100-mW power—no examination necessary.



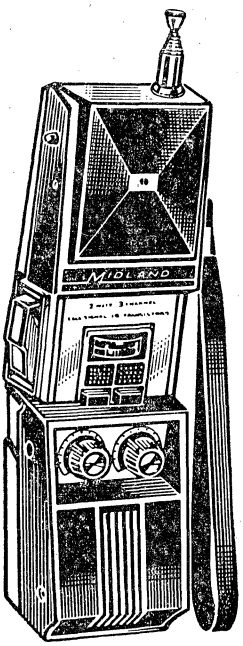
A 5-Watt



B 3-Watt



C 2-Watt



D 1-Watt

A MIDLAND 5-WATT 6-CHANNEL WITH IC'S

MODEL 13-775B. You can't buy a more powerful CB walkie-talkie. Full 5-watt power input provides maximum-range 2-way radio communications. Six-channel transmit and receive capability. Sensitive superhet receiver has four IF stages, tuned RF stage. Its 1.2 μV sensitivity for 10 dB S/N ratio pulls in weak signals even under noisy conditions. Combination speaker/mike with push-to-talk switch; RF output and signal-strength meter; squelch; AGC; built-in PA system; jacks for external antenna, earphone, extension speaker, mike, PA speaker, battery charger; 60" telescoping antenna; hi-lo battery saver. Metal case, 9¾x4⅛x2⅜". Order 8 alkaline or 10 Ni-Cad batteries, base/mobile accessories below. With case, carrying strap, Channel 7 crystals. Japan.

17 D 9825 S. Shpg. wt., 5 lbs.....89.95

B FANON 3-WATT 6-CHANNEL WITH IC'S

MODEL IC-3000. Great solid-state walkie-talkie offers top-notch 2-way CB radio communications. Full 3-watt transmitter makes maximum use of available power, providing a penetrating signal that gets your message through. Versatile 6-channel capability. Squelch control silences speaker during standby operation. Automatic gain control keeps signal-level constant to prevent blasting or overload on strong signals. Has automatic noise limiter, power-boost antenna, battery strength indicator/RF power meter, separate speaker and mike. Controls: on-off/volume, squelch, channel selector, push-to-talk button. 10½x1¾x1⅝". With hand strap and shoulder strap, Channel 9 crystals. Order 10 alkaline batteries and 117 VAC adapter/battery charger below. From Japan.

17 D 9862 S. Shpg. wt., 4 lbs.....79.95

C MIDLAND 2-WATT 3-CHANNEL WITH "CALL SIGNAL"

MODEL 13-732. Truly dependable performer for the demanding requirements of business and industry. Has three separate crystal-controlled transmit and receive channel capability. Sensitive superhet receiver has sharp selectivity, full squelch, and RF stage. "Call Signal" alerts other similar units to your calls. Separate microphone and speaker results in excellent modulation and signal clarity. Features high-level modulation; 48-inch telescoping antenna; battery-condition meter; jacks for optional 117 VAC adapter, battery charger, earphone. Metal case, 10½x3x2¼". Earphone, leather lanyard carrying strap, Channel 11 crystals. Order rechargeable battery pack below. From Japan.

17 D 9807 S. Shpg. wt., 3 lbs.....59.95

D MIDLAND 1-WATT 3-CHANNEL WITH "CALL SIGNAL"

MODEL 13-710. Compact, easy-to-handle walkie-talkie features advanced-design circuit with plug-in crystals and push-pull Class B high-level audio. "Call Signal" alerts other similar units to your calls. Sensitive superhet receiver for clear reception of weak signals. Has adjustable squelch circuit for quiet standby operation; AGC to reduce blasting and fading. Three-channel crystal-controlled transmit and receive capability. Also has battery-condition meter; 60-inch telescoping antenna; jacks for optional AC adapter and battery charger, earphone. Chrome-trimmed metal case, 7¾x2¾x2". With carrying strap, Channel 11 crystals. Order rechargeable battery pack below. From Japan.

17 D 9805 S. Shpg. wt., 4 lbs.....39.95

GET THE MOST FROM YOUR WALKIE-TALKIE WITH THESE USEFUL ACCESSORIES

18 D 5131. Alkaline Batteries. Wt., 4 oz.....Pkg. of 2 for .79

18 D 5636. Eveready Rechargeable Ni-Cad Batteries. 3 oz...Ea. 1.95

17 D 9769 S. Nickel-Cadmium Rechargeable Battery Pack. 11 oz. 11.95

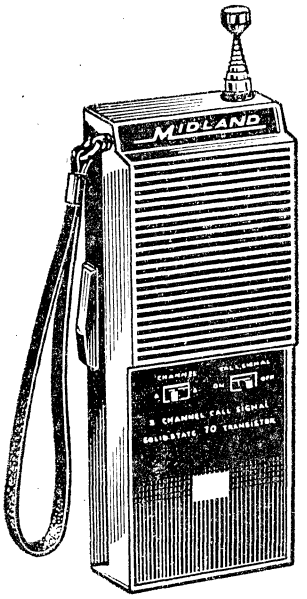
17 D 9816. CHB-4 Combination 117 VAC Adapter and Battery Charger. For Fanon model only. Shpg. wt., 3 lbs.....26.95

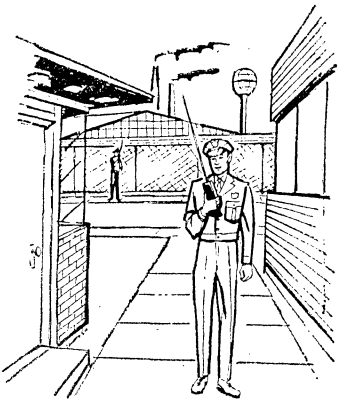
17 D 9712 S. 117 VAC Power Supply/Battery Charger. Operates your walkie-talkie on 117 VAC as base station, recharges nickel-cadmium batteries. For Midland models only. Shpg. wt., 2 lbs. 22.95

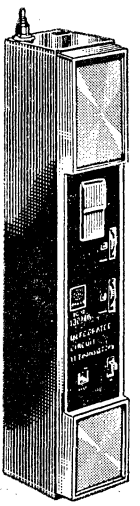
17 D 9645. 12-VDC Auto Cable for Midland units. Plugs into your car's 12-volt cigarette lighter socket. Shpg. wt.,4 oz.....1.95

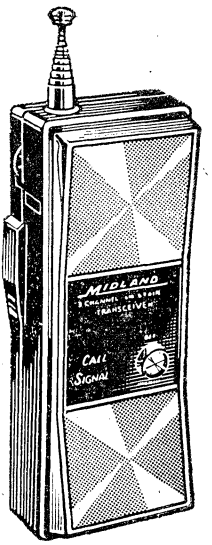
Extra Crystals for Walkie-Talkies Available—Call Your Allied Facility

CB 100-mW Walkie-Talkies and 2-Way Radios









100-mW WALKIE TALKIES

Compact 100-mW walkie-talkies ideal for security, personal, or business use. All have "Call Signal" to alert other similar units to your calls. No license required for operation.

MIDLAND 3-CHANNEL WITH TUNED RF

MODEL 13-124C. Features 3 crystal-controlled channels and Call Signal. Also has separate speaker and push-to-talk mike for improved modulation. Sensitive superhet receiver has tuned RF stage, fully variable squelch. Input jacks for AC adapter, battery charger, earphone. Metal case, 7½x 2¾x2⅛". With leather carrying case, battery holder. Channel 11 crystals. Order 8 "AA" batteries below. Japan. Wt., 1½ lbs.

17 D 9810 S.....29.95
18 D 5083. "AA" Battery. 4 oz.....2 for .27

FANON 3-CHANNEL WITH IC

MODEL IC-10. Offers maximum performance from advanced solid-state/integrated circuit design. Three-channel transmit and receive. Call Signal. Separate mike and speaker for improved modulation and transmitting range; squelch control; battery-life meter; earphone and external power jacks. 10½x2¾x1⅝". With hand strap, shoulder strap, earphone. Channel 9 crystals. Order 8 batteries below. Japan. Shpg. wt., 2 lbs.

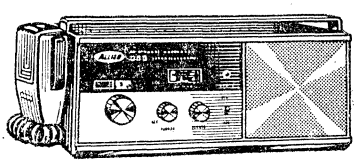
17 D 9786 S.....29.95
18 D 5131. Alkaline Batts. 4 oz...Pkg. 2/.79

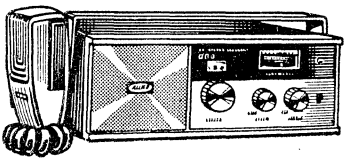
MIDLAND LOW-COST 2-CHANNEL

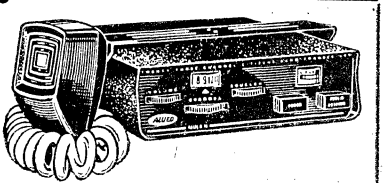
MODEL 13-430. Exceptional low price. Value-packed walkie-talkie boasts two-channel versatility and Call Signal for selective communication. Has high-sensitivity dynamic speaker/mike for good voice reproduction. Also has on-off volume control, push-to-talk switch, telescoping antenna. Input jacks for battery charger, AC adapter, earphone. Metal-back case, 5½x2¼x 1⅜". With carrying strap and 9-volt battery. Channel 11 Crystals. Japan. 1 lb.

17 D 9718 S.....19.95

COMPLETE WITH ALL CRYSTALS







OUR BEST ALLIED® 23-CHANNEL BASE/MOBILE CB 2-WAY RADIO

MODEL A-2568. Latest solid-state circuit. Operates on 117 VAC from built-in power supply electronically regulated for maximum stability over wide variation in input voltages. Also can be operated on 12 VDC in emergency or for boat or mobile use. Incorporates 23-channel frequency synthesizer—no extra crystals to buy.

Two IC's, one in squelch, other in audio, assure exceptional performance expected only in much larger units. FET in RF stage for low noise, top sensitivity. Dual conversion and ceramic filters assure maximum selectivity and image rejection. Superb audio output circuit provides maximum power output with minimum distortion. 100% modulation capability. Solid-state transmit/receive switching, transmit indicator light activated by push-to-talk switch on mike.

Noise blanker and ANL. Built-in 4" speaker. Combination S/RF power output meter. Built-in 3-watt PA system requires only external speaker. Takes 50-ohm antenna. Jacks for external and PA speakers. 11¼x4¾x4". Mike, mounting bracket. 8 lbs.

17 D 6965 U.....199.95

ALLIED SOLID-STATE 23-CHANNEL MOBILE CB 2-WAY RADIO

MODEL A-2564. Two IC's, one in squelch circuit and one in audio circuit, assure exceptional performance from this ultra-compact unit that easily installs in car or boat. Operates on 12 VDC. Incorporates 23-channel frequency synthesizer—no additional crystals to buy. Advanced design utilizes FET in RF amplifier stage for low noise and top sensitivity.

Dual conversion and ceramic filter for maximum selectivity and image rejection. Audio output circuit provides maximum power output with minimum distortion. Noise blanker reduces ignition and similar impulse noises with negligible loss of desired signal intelligibility. Self-adjusting automatic noise limiter switches in whenever noise blanker switches out.

Combination S/RF power output meter. Has built-in 3" speaker. Adjustable squelch. Built-in 3-watt PA system requires only external speaker. Takes 50-ohm antenna. Jacks for external and PA speakers. 8¾x 3¼x8". With push-to-talk ceramic mike and mounting bracket for simplified installation in car or boat. Shpg. wt., 4 lbs.

17 D 6966 U.....149.95

ALLIED 23-CHANNEL BASE/MOBILE CB 2-WAY WITH RANGE-EXPANDER

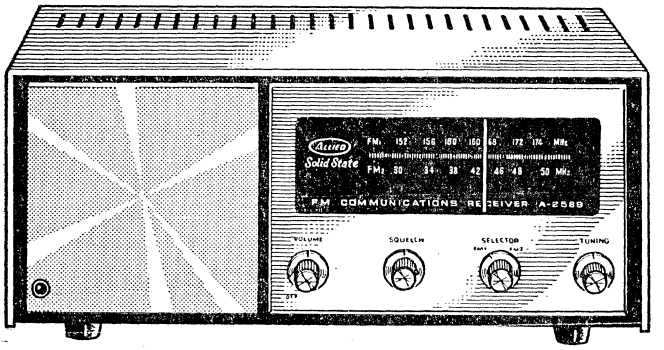
MODEL A-2567. Features built-in solid-state power supply for 115 VAC base, 12 VDC mobile operation. Frequency-synthesis circuit for crystal-controlled transmit/receive on all 23 channels . . no extra crystals to buy. Just turn selector to any desired channel, illuminated numerals show channel in use. Full-power 5-watt transmitter offers 100% modulation. Range-Expander boosts "talk power" to increase transmitter range.

Pi-network output matches any CB antenna. Illuminated 3-scale meter measures SWR for optimum antenna tuning, forward/reverse reflected power output, serves as "S" meter. Dual-conversion superhet receiver has excellent selectivity and gain, delta tuning circuit pulls in signals from stations up to 3 kHz off-frequency.

Serves as 2.5-watt PA amp with ext. speaker. Modulation indicator doubles as monitor to prevent missed calls during PA use. Adj. squelch; standby switch; 4" speaker; headphone jack; noise limiter. 7½x13¾x5½". With all crystals; AC, DC power cords; push-to-talk mike, cord; universal mounting clips. Shpg. wt., 19 lbs.

17 D 6435 U.....179.95

VHF FM Monitor Receivers for Industrial Use



ALLIED® A-2589 SOLID-STATE MONITOR RECEIVER FOR 30-50 MHZ AND 152-174 MHZ POLICE/FIRE BANDS

- 20 Transistors, 10 Diodes
- 4 μV Sensitivity for 20 dB S/N
- 4 IF Stages for Top Selectivity
- Zener-Regulated Power Supply
- Squelch Silences Speaker
- Takes 50-75 Ohm Antenna

Dual-band solid-state VHF-FM monitor receiver covers both 30-50 MHz and 152-174 MHz FM bands. Lets you listen in on Industrial, Land Transportation, Public Safety and Domestic Public Services broadcasts in your area. Advanced solid-state circuit for fine performance, instant-on operation, and long life. Gives clear, static-free reception of even weak signals. Powerful push-pull audio output drives a built-in 4" speaker.

Boasts four IF stages, tuned RF and mixer stages for greatest selectivity and sensitivity. Automatic Volume Control (AVC) prevents overload or blasting by strong signals and builds up weak signals for best possible reception. Adjustable squelch eliminates background noise during standby operation. Highly stable zener-diode regulated power supply.

Frequency Range: 30-50 MHz and 152-174 MHz FM. Sensitivity: Better than 4 μV for 20 dB signal-to-noise ratio. IF Frequency: 10.7 MHz. Power Supply: Full wave, transformer operated; zener diode regulation. Semiconductors: 20 transistors, 10 diodes, 2 thermistors.

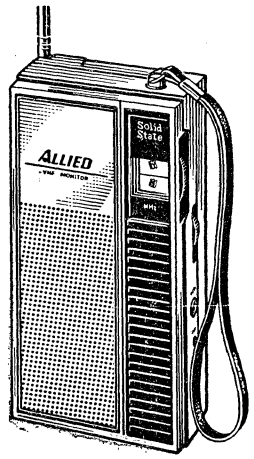
Panel jack for external 8-ohm speaker or headphones. Input for 50-75 ohm antenna. Gray metal case, 5 7/16x11 7/8x7 3/4". For operation from 117 volts, 50-60 Hz AC. From Japan. Shpg. wt., 11 lbs.

17 D 6980 U. **79.95**

17 D 6226. 8-Ohm Dual Headset with Cord and Plug. Wt., 1 lb. **5.95**

Check with Local Authorities for Specific Frequencies of Services Available In Your Area. Outdoor Antenna Needed for Best Long-Range Reception.

ALLIED HAND-HELD VHF FM MONITORS



- Solid-State Superhet
- Pocket Size—Carry it Anywhere
- With Batteries and Earphone
- Provision for AC Adapter

MODEL A-2587 for 146-175 MHz. Hand-held superhet VHF-FM monitor receiver, at amazingly low cost. Pocket-size and battery-powered—use it to monitor U.S. Weather Bureau forecasts (162.55 MHz in many urban areas), railroads, taxicabs, police, utilities, business, and more. Solid-state for instant operation. Superhet circuit provides excellent performance.

Self-contained 2 3/4" speaker, plus earphone for private listening. Built-in swivel telescoping antenna and provision for external antenna. Provision for 117 VAC adapter. Size, 6x3 5/32x1 1/8". With four "AA" penlight batteries, carrying strap. From Japan. Shpg. wt., 1 lb.

17 D 6977 S. **17.95**

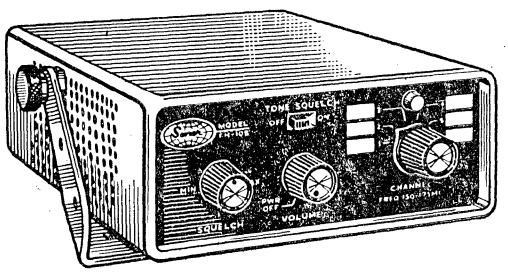
MODEL A-2586 for 27-50 MHz. Similar to above, but for 27-50 MHz. Monitors local police, fire, civil defense, utilities, radiotelephone, radio-dispatched repair vehicles, others. Japan.

17 D 6978 S. Shpg. wt., 1 lb. **17.95**

17 D 9083. 117 VAC Adapter. For A-2586 and A-2587. Shpg. wt., 2 lbs. **3.95**

18 D 5083. Extra "AA" Penlight Batteries. Needs 4. Shpg. wt., 4 oz. ..... **2/27¢**

BASE/MOBILE VHF MONITOR RECEIVERS



SONAR SOLID-STATE MOBILE/BASE FM MONITOR

- Crystal-Controlled 150-175 MHz for Police, Fire, Utilities, More.
- For 12 VDC or 117 VAC
- Compact—Installs Virtually Anywhere

MODEL FR-105. Sensitive 150-175 MHz FM monitor operates in any 12-volt vehicle or from 117 V, 50-60 Hz AC line. Has six crystal-controlled channels, temperature-compensated noise-free squelch, provision for continuous-tone decoder module. Built-in heavy-duty 2x6" speaker with moisture-resistant cone, provision for external speaker. Audio output of 1 1/2 watts. Aluminum case, 2 5/8x6 7/8x8 1/2". Complete with AC and DC power cables, mounting bracket. Order crystal certificate card below, for each frequency.

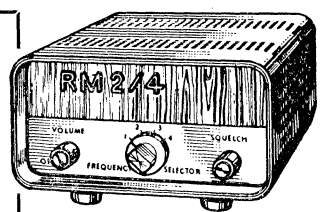
17 D 9726 U. Shpg. wt., 5 lbs. **140.00**

17 D 8195 S. Crystal Certificate Card. Fill out and send to Sonar, Sonar ships crystal to you within 30 days. ..... **Each 5.00**

Deluxe Monitor for Base or Mobile Operation

Uses Accurate, Convenient Plug-In Frequency Cards

Compact Size for Easy Mounting



PETERSEN MODEL RM2-4 BASE/MOBILE FM/AM MONITOR RECEIVER COVERS 2 TO 200 MHZ

- Frequency Plug-In Cards
- Four-channel Capability
- Adjustable Squelch
- Built-in Speaker

Base/mobile monitor can operate on 2-200 MHz, AM or FM. Four-channel capability. Comes with certificate for 1 plug-in frequency card, to be filled out and sent to factory. Built-in speaker, adjustable squelch control. Size, 3 3/8x5 3/4x7 1/2". For 117 VAC/12 VDC. Order 12-volt cord below.

17 D 8525 X. Shpg. wt., 4 lbs. **69.95**

17 D 8526. Mobile Mounting Bracket. Shpg. wt., 1 lb. **4.25**

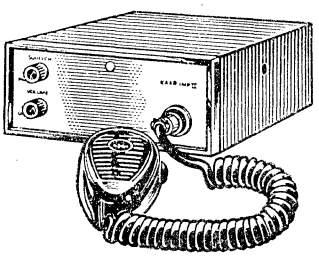
17 D 8527. DC Power Cord. Shpg. wt., 8 oz. **2.95**

17 D 8528 S. Additional Frequency Certificate. One required for each frequency. Fill out and mail to Petersen. Petersen will ship plug-in frequency card to you within 30 days. ..... **Each 14.95**

Depend on Allied for the Latest in Monitor Receivers

Business Band 2-Way Radios and Monitors

KAAR IMP II LOW-POWER BASE/MOBILE 2-WAY RADIO



- For Base or Mobile Operation
- Snap-in Shock Absorbing Mounting
- 3 Watts Nominal Power Input

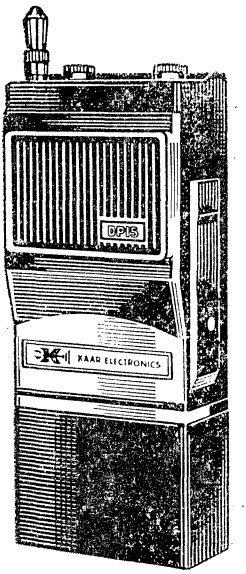
Compact, low-power two-way radio designed for in-plant base or mobile use. Snap-in shock-absorbing mounting for lift trucks or other vehicles makes this set readily interchangeable between base and mobile operation. Reliable, all solid-state circuitry for instant transmit/receive. For security, loading, terminal crews, and any operation requiring dependable short-range communications.

Transmits and receives on single channel in 27-43 MHz range. Provides 3 watts nominal power (maximum permitted under FCC low-power rules). Provision for paging, separate remote speaker and tone squelch. Volume and squelch controls. Complete with push-to-talk microphone. Size, 2⅝x6½x9¼". With one pr. crystals. Specify Your Assigned Frequency. Allow 30 days for delivery. Shpg. wt., 7 lbs. (Non-returnable.)

17 D 6383 CF.....245.00

AC Power Supply. For IMP II, in base operation. 115 V, 60 Hz AC.

17 D 6464 X. Shpg. wt., 5 lbs. 34.95



KAAR HAND-HELD 2-WAY RADIOS

MODEL DP17. Powerful portable VHF-FM transceiver weighs just 30 ounces with battery, operates on up to 5 channels in 30-50 MHz range. Plug-in module design for instant servicing. 2.2 watts RF output; battery life to 10 hours. Ext. antenna, earphone jacks. 1¾x3⅜x8⅛". With 1 pr. of crystals. Specify Your Assigned Frequency. Battery below. Allow 30 days for delivery. (Non-returnable.)

17 D 9853 CF. Shpg. wt., 2 lbs....575.00

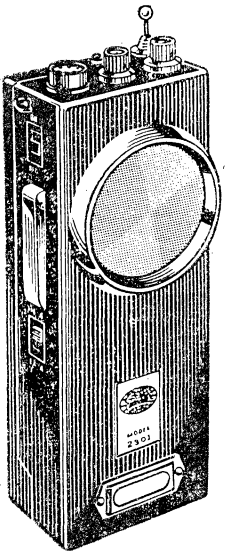
17 D 9850 CF Model DP15. As above, but for 132-174 MHz. Shpg. wt., 2 lbs..550.00

17 D 9854 CF. Model DP16. Above, but 4 watts output for 150.8-162 MHz. 2 lbs.580.00

17 D 9855 F. Mercury Battery Pack. Requires 12 RM502 cells. 12 oz.....9.00

17 D 9856 F. Recharg. Batt. 10 oz....40.00

17 D 9857 F. Batt. Charger. 1 lb.....35.50

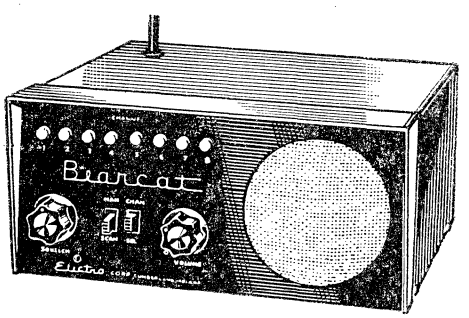


SONAR HAND-HELD 2-WAY RADIO

MODEL 2301. Professional-quality VHF-FM 2-way radio for 132-174 MHz business band. Delivers 1.6-watt RF power output. Receiver and transmitter can be operated on independent frequencies. Ceramic and crystal-filter selectivity give positive rejection of unwanted signals. Electronic antenna switching, overload sensor.

Sensitivity, 0.5 μV for 20 dB quieting. Selectivity, 85 dB at adjacent channel. Spurious and Image Rejection, −70 dB. Spurious and Harmonic signals, more than −50 dB. 29 silicon transistors, 17 silicon diodes, zener VR. Jacks for ext. antenna, earphone, battery charger. 7¾x3x1⅝". Penlight batteries. With one pr. crystals. Specify Your Assigned Frequency. Allow 30 days. (Non-returnable.)

17 D 6523 CF. Shpg. wt., 3 lbs.....375.00



ELECTRA BEARCAT SOLID-STATE BATTERY/AC 8-CHANNEL FM MONITOR WITH AUTOMATIC SCANNING

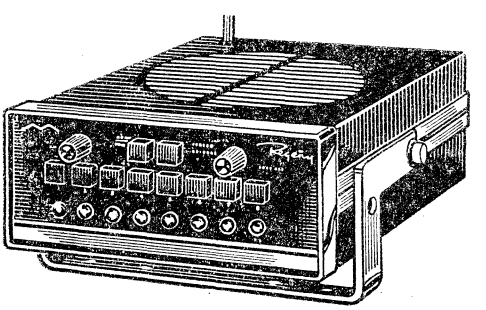
- Automatically Scans up to Eight Crystal-Controlled Channels
- Two Models: 150-174 MHz VHF-FM Band or 450-470 MHz UHF-FM Band

Unique monitor automatically scans up to 8 channels, within a 10 MHz spread. Locks in on the first channel to become active, then resumes scanning when that channel becomes inactive. Manual selection also. Channel indicator lamp lights for each channel selected. Solid-state circuit has FET's in front end and six IC's in switching and limiter-discriminator circuits. Adjustable squelch, telescoping antenna; Motorola-type jack for auto or external antenna. Metal case, 4x9x5". With cables for 117 VAC and 12 VDC neg. ground, mobile mtg. bracket. Order crystal card for each frequency.

17 D 9216 U. For 150-174 MHz. Shpg. wt., 5 lbs.....139.95

17 D 9215 U. For 450-470 MHz. Shpg. wt., 5 lbs.....149.95

17 D 8195 S. Crystal Certificate Card.....Each 5.00



REGENCY MODEL TMR-8 AUTOMATIC-SCANNING 150-174 MHz BUSINESS BAND MONITORADIO

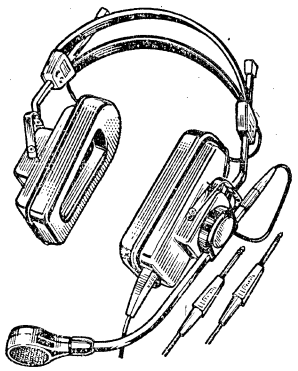
- Automatic Scanning of up to Eight Crystal-Controlled Channels
- For 117 VAC or 12 VDC Operation
- Built-in Speaker

Automatically scans up to 8 crystal-controlled channels over an 8 MHz range. Locks in on the first active channel, resumes scanning when that channel becomes active. Ideal for continuous monitoring of 150-174 MHz business band. Channels can also be selected manually, if desired. For base or mobile use. Solid-state design with 5 integrated circuits, 2.5 watt audio output, built-in 4" speaker. Telescoping antenna, jack for external speaker. With cables for 117 VAC and 12 VDC, mounting bracket and one crystal—specify frequency. For additional frequencies, order Crystal Certificates below. Size, 2¼x8½x5½".

17 D 9221 X. Shpg. wt., 8 lbs.....139.00

17 D 8195 S. Extra Crystal Certificate.....Each 5.00

Telex Language Lab, General-Purpose Headsets



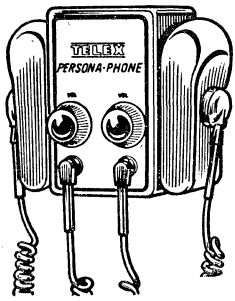
DELUXE DUAL HEADSET WITH BOOM MIKE

- Meets all Language Lab Requirements
- Mike Rotates 360° and Is Easily Detached
- Headset Response a Full 20-20,000 Hz
- Dynamic, Noise Canceling Microphone

Model 2400-42. Beautifully made dynamic headset with boom mike. Headset response is an excellent 20-20,000 Hz. Field-detachable dynamic noise-canceling mike has 100-8000 Hz response and 360° rotation. Impedances: headset, 600 ohms; mike, 300 ohms. Soft, removable earcushions form snug acoustic seal. With 5-ft. cord and straight ¼" molded plugs.
17 D 6287. Shpg. wt., 1½ lbs.....33.95

17 D 6288. Model 2400-19. Same as above, but has right-angle plugs. Shpg. wt., 1 lb.....33.95

17 D 6289. Model ACV-4 Extra Foam Earcushions. Soft, comfortable, reduce outside sounds. Brown, washable. 2 oz...Pair 1.50



PERSONA-PHONE PRIVATE LISTENER FOR AUDIENCES

- Has Two Earsets—Each With Its Own Separate Volume Control
- Ideal for Churches, Theaters and Other Institutions With Audience PA System
- Connects Easily to Sound System
- Lets Each Listener Hear Clearly

Indispensible in large auditoriums. Ideal for churches, theaters, museums, exhibits, libraries—wherever audiences might have trouble hearing. Increases enjoyment of programs by letting listeners hear comfortably without straining.

Operate from institution's 70-volt, 25-volt, or 8-ohm sound system. Connects easily and quickly to system and is ready to operate without complicated wiring. Has built-in matching transformer and terminal strip for simplified installation.

Compact dual-receiver unit provides individual listening for audiences of large institutions. Unit has two earsets, each with its own volume control. User can adjust sound to his personal preference. Earshells fit all listeners, even those who wear glasses; will not disturb ladies' hairdos. Earsets have 5-ft. coil-cords; hang up on control box when not in use; weigh less than 1.5 oz. Gold color. 4¾x3⅞x2⅞".
17 D 6290. Shpg. wt., 5 lbs.....34.00

QUALITY HEADSETS FOR EVERY APPLICATION

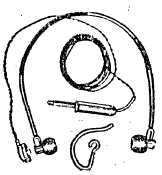
"TWINSET" HEADPHONES

Model HTW-2. Lightweight, comfortable headphones for pilots, Hams, etc. Sound is fed direct to ears through adjustable arms. Background sounds remain intelligible. Magnetic elements rest at temples. 500 ohms. Weighs only 1.6 oz. Complete with 5-ft. cord ¼" plug. Shpg. wt., 10 oz.
17 D 6262.....14.50

SINGLE HEADPHONE WITH MIKE

Model MRB-75 "Magna-Twin" Mark III. Professional headphone/mike. Magnetic headphone element with response of 50-10,000 Hz; carbon boom mike, 50-6000 Hz. Impedances: headphone, 5000-600 ohms; mike, 20 ohms. Mike cannot accidentally rotate. 5-ft. cord, ¼" phone plugs. Gray.
17 D 6390. Shpg. wt., 1 lb.....24.95

LIGHTWEIGHT SECRETARIAL HEADSETS



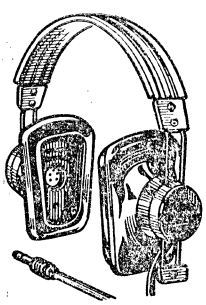
"TELE-FI" HEADSET

Designed for comfort as well as for fine performance. Worn under the chin for ease of operation and so as not to mess hairdos. Headset delays sound to one ear for improved clarity. Frequency Response, 60-6000 Hz. Earloop included for one-ear listening. Choice of 15-ohm or 2000-ohm impedance. Complete with 5-ft. cord and ¼" phone plug.
17 D 6149. Model HFR-91. 15 ohms. 1 lb. 5.95
17 D 6154. Model HFY-91. 2000 ohms. 1 lb. 5.95
17 D 6216. Replacement Cord. For Models HFR, HFY, and HMY-2. Wt., 3 oz.....2.25

SECRETARY'S MONOSET

Model HMY-2. Comfortable, weighs only 1.2 oz. Worn under the chin for convenience; keeps headset cord from getting in the way; won't mess hairdos. Ideal for use in transcribing from office dictation equipment. Has magnetic element, metal housing, removable earplugs. Frequency Response, 50-5000 Hz. Impedance, 2000 ohms. Maximum Input, 25 milliwatts. Complete with 5-ft. cord and attached standard ¼" phone plug. Takes same replacement cord as "Tele-Fi" secretarial headset at left.
17 D 6184. Shpg. wt. 8 oz.....7.95

MODELS FOR HAMS, CB, LANGUAGE LABS AND SWL'S

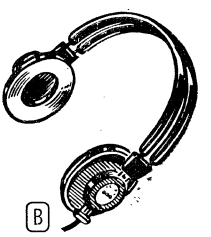


- Wide-Range Response for Music
- Choice of 4 or 600 Ohms

FULL-FIDELITY HEADSET FOR FINE PERFORMANCE

Model 820-02. Lightweight headset reproduces the entire orchestral spectrum with amazing fidelity. Provides enjoyable private listening, makes music a personal experience. Ideal for music courses, libraries, etc. Weighs only 10 ounces. Can be worn over head, or under chin to avoid ruffled hairdos. Comfortable, lets you listen for hours without strain. 50-18,000 Hz frequency response. Impedance, 4 ohms. High-impact plastic phones, vinyl-covered spring-steel headband. Circumaural earcushions reduce outside noise; remove easily for cleaning. 6-ft. cord, molded plug.
17 D 6285. Shpg. wt., 1 lb.....9.95

17 D 6286. Model 820-04. Above, but 600 ohms. Shpg. wt., 1 lb.....13.25



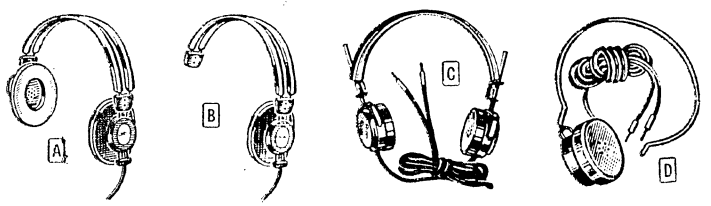
A "TELESET" HEADSET

Model HM-100. Dual headset ideal for Amateurs, CB'ers, shortwave listeners, others. Magnetic element. Adjustable stainless-steel headband. 50-10,000 Hz. 2000 ohms. 5-ft. cord, ¼" phone plug.
17 D 6275. Shpg. wt., 8 oz.....14.50
17 D 6276. Model HM-500. Above, but 500 ohms. Wt., 8 oz...14.50

B LOW-PRICED DUAL HEADSET

Provides faithful sound reproduction. Lightweight, adjusts to fit anyone. Removable earcushions. 5-ft. cord, ¼" phone plug.
17 D 6220. Model 610-2. 2000 ohms. Shpg. wt., 1 lb.....6.95
17 D 6221. Model 610-1. 600 ohms. Shpg. wt., 1 lb.....6.95

Lincoln Headphones . . Quality at Low Prices



A DELUXE DUAL HEADPHONES

Excellent-quality headset for Amateur and CB use. Lightweight, with vinyl-covered double headband. Adjustable earpieces have removable ear-encompassing cushions that block out distracting noise from the surrounding area. Heavy magnets for clear sound. Supplied with heavy-duty 5-ft. cord, standard ¼" phone plug. Gray. Shpg. wt., 1 lb.

17 D 6227. 2000 ohms.....5.95
17 D 6226. 11 ohms. Supplied with standard ¼" phone plug.....5.95

B DELUXE SINGLE HEADPHONE

Deluxe headphone for receiver monitoring and other uses. Perfect for mobile CB, since some States permit only a single phone for mobile operations. Vinyl-covered headband. Comfortable earcushion is removable. 1000 ohms. Five-ft. cord with ¼" phone plug. Shpg. wt., 1 lb.

17 D 6228.....5.95

C LOW-COST DUAL HEADPHONES

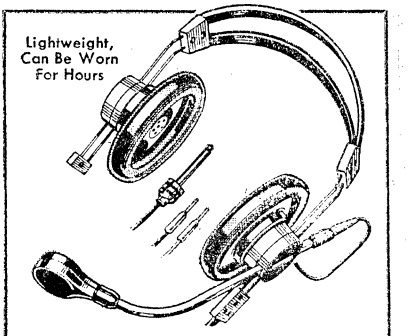
General-purpose headphones suitable for Amateur use and shortwave listening. Vinyl-covered double headband with easily adjustable yokes for comfort. Powerful Hyflux Alnico magnets. 1⅞" diaphragm. 4½-ft. high-quality plastic cord with phone tips. Terminals are inside the earphone. Shpg. wt., 1 lb.

17 D 6083. 2000 ohms.....2.95
17 D 6099. 11 ohms.....2.95
17 D 6215. 11 ohms. Same as above, but with phone plug. Wt., 1 lb.....3.50

D LOW-COST SINGLE HEADPHONE

Dependable headphone, suitable for hard-of-hearing installations, receiver and crystal set monitoring, other applications. 1⅞" diaphragm. 4½-ft. high-quality plastic cord with phone tips. Spring-metal headband permanently attached. 1000 ohms impedance. Shpg. wt., 8 oz.

17 D 6085.....1.50



HEADSET WITH BOOM MIKE

- Earcushions Reduce Outside Sounds
- Sensitive Ceramic Boom Mike

Lightweight dual headset with boom mike is perfect for Hams, CB'ers, language labs, many other uses. Earpieces have extra-heavy-duty magnets for clear voice reproduction. Vinyl-covered headband. Comfortable ear-encompassing cushions are removable and washable. Earpieces adjust for perfect fit. Sensitive mike has ceramic element. Heavy-duty cord has phone plug for both mike and headset. Headset, 2000 ohms; mike, high impedance. Gray.

17 D 6230. Wt., 1½ lbs.....17.95

LOW-PRICED HEADPHONE ACCESSORIES

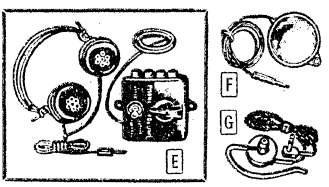
RUBBER EARPHONE CUSHIONS. Provide comfortable listening over long periods and greatly reduce external noises. Rubber is easily washable. Fit all standard earpieces. Shpg. wt., 3 oz.

17 D 6103. 1-9 Pairs.....Per Pair 65¢
10 or More Pairs.....Per Pair 60¢

FOAM EARCUSHIONS. Ear-encompassing cushions to reduce external noises. Fits standard earpieces. Provides maximum comfort for long hours. Ideal for communications use, especially on crowded bands. Vinyl covering is easily washable. Shpg. wt., 2 oz.

17 D 6203.....Per Pair 70¢

PRIVATE LISTENING DEVICES FOR TV, HI-FI, RADIO



E CANNON HEADPHONE SET

Allows you to listen privately. Can be operated along with speaker when desired. Aids hard-of-hearing. Control box has volume control and speaker/phones switch. Includes dual headset, control box, and 15-ft. cord.

17 D 6135. Shpg. wt., 2 lbs.....7.95

F TELEX PILLOW SPEAKER

Model SDN-2A. Provides outstanding sound fidelity for private listening through a pillow or held close to the ear. VA hospital approved. Stainless steel, easily sterilized. Dynamic speaker has handy hanger ring. 3.2 ohms. Insulated. 1⅛x3¾". With 5-ft. cord, ¼" phone plug.

17 D 6246. Shpg. wt., 12 oz.....6.95

G REPLACEMENT EARPHONES

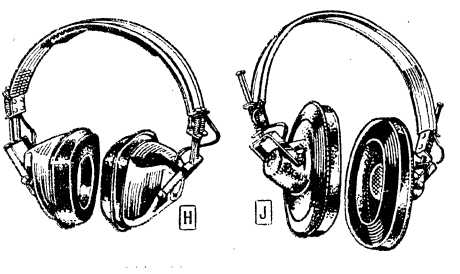
Model 21-200. High-quality single earphone. Impedance, 10 ohms. Has 46-inch cord with right-angle plug (⅛" diameter with ⅝" shank). Comes complete with hanger.

17 D 6307. Shpg. wt., 4 oz.....50

Model 21-205. Same as above, but has 2000-ohm impedance and straight ⅛" diameter plug.

17 D 6308. Shpg. wt., 4 oz.....89

SUPEREX HEADPHONES



H HEADSET FOR LANGUAGE LAB USE

Model AP-S. Deluxe lightweight headset for prolonged use in language labs and for communications. Designed for comfort as well as for fine performance. So comfortable, lets you listen for hours without tiring. Soft, vinyl-covered foam earcushions provide easy listening; are washable. Has an excellent frequency response of 80-12,000 Hz. Factory connected for high-impedance 600-ohm output. Leads may be changed to 4-16 ohms. Comes complete with 7-ft. 4-conductor cord and attached standard ¼" phone plug.

17 D 6302. Shpg. wt., 3 lbs.....24.95

J "COMMUNICATOR" HEADSET

Model COM-S. Extremely sensitive headset for all communications applications. Has excellent frequency response of 100-10,000 Hz. Provides highly intelligible voice reception. Soft, vinyl-covered, foam-filled washable earcushions block out external noise, and are so comfortable you can listen for hours without tiring. Lightweight, fully adjustable headband is designed for comfort and easy listening. Phones have dynamic elements for crisp reproduction of the audio range at all communications frequencies. Impedance, 4-16 ohms. Comes complete with 7-ft. two-conductor cord and ¼" phone plug.

17 D 6309. Shpg. wt., 1 lb.....13.95

AVIATION/MARINE HEADSET

- High Intelligibility in Noisy Areas
- Lightweight and Comfortable
- 10' Retractable Cord with Plug

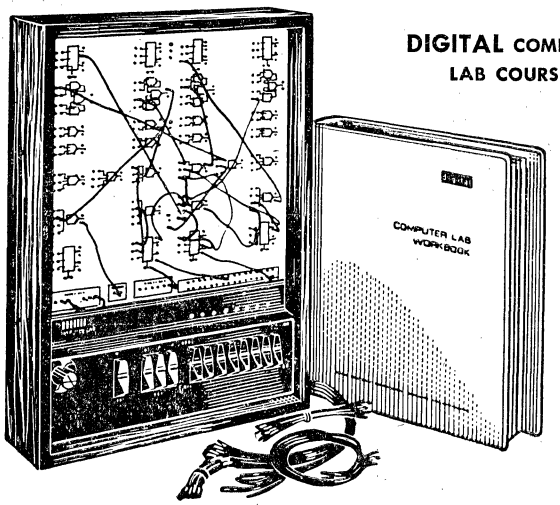
Model AV-NS-7. Features special noise-shield for maximum intelligibility of reception despite elevated noise level in high noise areas. External noise is attenuated up to 50 dB.

Lightweight and comfortable, designed for uninterrupted listening for long periods. Can be worn comfortably with glasses. Lets you listen for hours without strain. Contoured foam earcushions are so soft and easily worn that pressure is no problem even during long sessions at the radio receiver. Spring-steel headband is adjustable and padded for easy listening.

Excellent frequency response of 40-15,000 Hz. Impedance, 600 ohms. 10-ft. retractable cord, phone plug.

17 D 6291. Shpg. wt., 3 lbs. . 45.00
17 D 6292. Model SX-NS-7. Above, 4-16 ohms; 7-ft. straight cord 40.00

Computer Lab, Phone Dialer, Weather Instruments



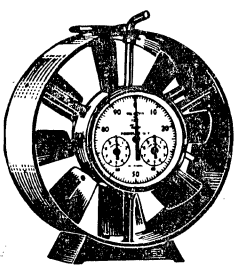
DIGITAL COMPUTER LAB COURSE

Computer Lab makes it easy to teach modern digital logic and computer fundamentals. It's a complete classroom lab course, providing up to 50 hours of training using 10 basic experiments (divided into over 30 sub-experiments). Comprehensive Workbook gives the student step-by-step instructions on the principles. He can follow each step by actually wiring the Computer Lab with easily inserted and removed patchcords, then test his work using three manually-controlled pulse signals or internal variable-frequency clock to supply test signals. Can be tailored to various levels—high school "new math" to university level electrical engineering programs. Format follows that of leading textbooks, can be modified as needed. Also ideal for home study.

Attractive unit is self-contained and portable. Each function is represented on front panel by standard MIL STD-806 symbol. Functions are identical to Digital's PDP computers. Simulated teak frame, 12½x17x3¼". Includes Workbook and carrying case. Low-voltage power supply. For 105-120 V, 50/60 Hz AC.

60 D 7908 X. Shpg. wt., 14 lbs. 445.00
60 D 7909 E. Teacher's/Instructor's Guidebook. 5.00

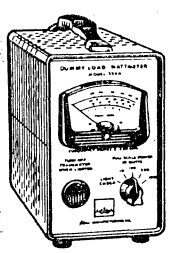
TAYLOR PRECISION BIRAM'S ANEMOMETER



Shows wind velocities from 200 to 3000 feet per minute. Three dials give readings to 10,000 feet. Jeweled movement, automatic zero set, disconnector. 4" diameter. With carrying case, correction chart.
17 D 8984 S. Shpg. wt., 2½ lbs. 160.00

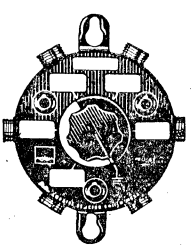
TAYLOR "WEATHERSCOPE" WEATHER-STATION. (Not Illus.). Four instruments on 17x52" walnut panel: barometer, outdoor thermometer, wind speed and direction indicators. With cables, battery.
17 D 6860 X. Shpg. wt., 17 lbs. 199.75

TAYLOR WINDSCOPE (Not Illus.). Shows wind speed or direction. Self-contained; easy to install. Outdoor vane, indoor indicator, 60' cable.
17 D 6851 X. Shpg. wt., 10 lbs. 89.95



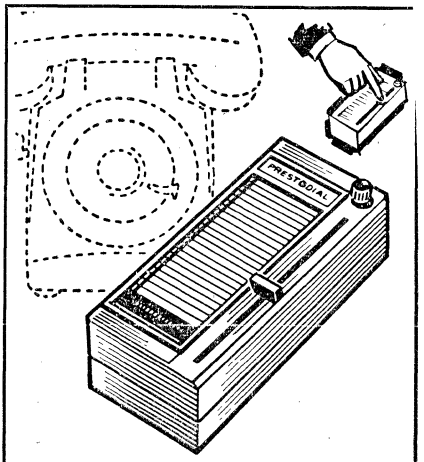
WATERS COMMUNICATIONS ACCESSORIES

For Antenna Matching and Tuning of Amateur, CB and Industrial Band Transmitters



WATERS MODEL 334A DUMMY LOAD/WATTMETER. Acts as dummy antenna load, shows RF output from 0-1000 watts. Frequency range, 2 to 230 MHz. VSWR, 1.3:1. Impedance, 52 ohms. Assists in tuning of Amateur or business band equipment. Size, 4¾x9x3". Wt., 15 lbs.
17 D 6891 X. 135.00

WATERS PROTAX 375 COAXIAL SWITCH. Six-position switch VSWR, 1.2:1. Negligible loss. Grounds antenna when not in use. Mounts behind panel. Provision for erasable markings. Hardware, knob.
17 D 6875. Wt., 2 lbs. 14.50
17 D 6876. Model 376. As above, but 5-position. Wt., 2 lbs. 13.95



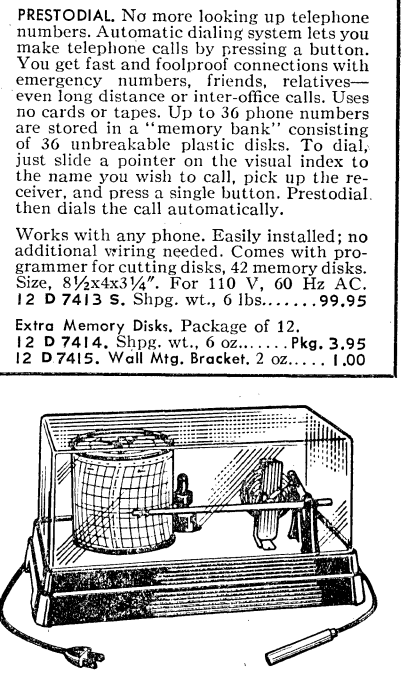
AUTOMATIC TELEPHONE DIALER

- Automatic Dialing at the Touch of a Button
- Disc-type Memory Bank Stores up to 36 of Your Most-Dialed Telephone Numbers

PRESTODIAL. No more looking up telephone numbers. Automatic dialing system lets you make telephone calls by pressing a button. You get fast and foolproof connections with emergency numbers, friends, relatives—even long distance or inter-office calls. Uses no cards or tapes. Up to 36 phone numbers are stored in a "memory bank" consisting of 36 unbreakable plastic disks. To dial, just slide a pointer on the visual index to the name you wish to call, pick up the receiver, and press a single button. Prestodial then dials the call automatically.

Works with any phone. Easily installed; no additional wiring needed. Comes with programmer for cutting disks, 42 memory disks. Size, 8½x4x3¼". For 110 V, 60 Hz AC.
12 D 7413 S. Shpg. wt., 6 lbs. 99.95

Extra Memory Disks. Package of 12.
12 D 7414. Shpg. wt., 6 oz. ..... Pkg. 3.95
12 D 7415. Wall Mtg. Bracket. 2 oz. 1.00



TAYLOR 7-DAY WEATHER RECORDING INSTRUMENTS

Barometer or Thermometer

BAROMETER. Provides a record of 7-days variations in barometric pressure. Range: 29-31 inches, correctible from sea level to 10,000 feet. Sensitive UNI/MAG movement. Size, 6¾x13x6¾". With 13 charts, ink, complete instructions. For 115 V, 60 Hz AC. Shpg. wt., 5 lbs.
17 D 6861 X. 49.95

THERMOMETER. Provides 7-day record of outdoor temperature, −40° to +120° F. Size, 6¾x13x6¾". With 8-foot capillary tubing, 13 charts, ink and complete instructions for use. For 115 V, 60 Hz AC. Shpg. wt., 5 lbs.
17 D 6862 X. 49.95

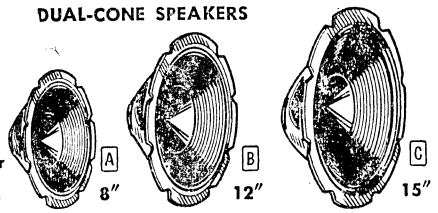
Speakers for Replacement or Production Line

ALLIED® SPEAKERS FOR A WIDE VARIETY OF APPLICATIONS

DUAL-CONE SPEAKERS

Whizzer Cone Extends Response

Slim-Line Design for Modern Enclosures



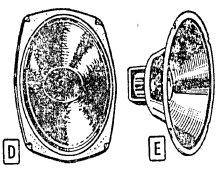
Quality, long-life high-fidelity dual-cone speakers. Excellent performers. Have large 1½" voice coils for greater efficiency of low-frequency power handling. Rigid construction. Plates and ceramic magnet bonded by special epoxy cement. Internal dust cap.

A 8" SPEAKER. Frequency response, 40-16,000 Hz. Handles 20 watts of power. 8 ohms impedance. 4" deep. Big 13-ounce magnet.
24 D 9632. Shpg. wt., 3 lbs. 5.95

B 12" SPEAKER. Frequency response, 35-16,000 Hz. Handles 25 watts. 8 ohms impedance. 5½" deep. Big 13-ounce magnet.
24 D 9631 X. Shpg. wt., 3½ lbs. 6.95

C 15" SPEAKER. Frequency response, 30-16,000 Hz. Handles 30 watts. 8 ohms impedance. 6⅛" deep. Large 20-ounce magnet.
24 D 9630 X. Shpg. wt., 9 lbs. 9.95

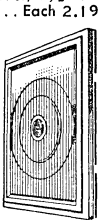
EXTENDED-RANGE SPEAKERS



D 6x9" OVAL SPEAKER. Efficient, extended range oval speaker. Whizzer cone reinforces middle and high frequencies for wide overall response. Big 1.47-oz. Alnico V magnet. Rigid frame. Handles 8 watts. Impedance, 8 ohms. Shpg. wt., 1¼ lbs.
24 D 9529. 1-9 ..... Each 2.49
10-Up ..... Each 2.19

E 8" ROUND SPEAKER. Ideal for replacement use or as an extension speaker. Whizzer cone for wide response. Has 1.47-oz. Alnico V magnet. Handles 8 watts power. 8 ohms. Wt., 1½ lbs.
24 D 9530. 1-9 ... Each 2.49 10-Up ..... Each 2.19

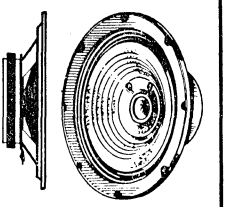
POLY-PLANER WAFER-TYPE SPEAKERS



G-51 PLANAR. Replaces 6" cone speaker wherever space is limited. Only ¾" deep. Polystyrene plastic resists temperature, humidity, shock. ¾" voice coil, 2.9-oz. magnet. Handles 5 watts. Impedance, 8 ohms. Response: 60 Hz-20 kHz. 4½x 8½". Shpg. wt. 13 oz.
16 D 3400 ..... 7.95

G-201 PLANAR. Handles 20 watts. 1"-coil, 4.8-oz. magnet. Response: 60-20,000 Hz. 11¾x14¹¹⁄₁₆".
16 D 3488. Shpg. wt., 1 lb. 3 oz. 14.95

TOP-QUALITY PRECISION-BUILT REPLACEMENT SPEAKERS

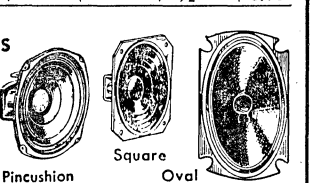


Allied's own brand of high-quality speakers at exceptionally low cost. Specially designed for a variety of uses including replacement of speakers in original equipment such as radios and TV sets, PA systems, intercom systems, extension speakers. Precision-built throughout for years of rugged and continuous service. Large precision-centered magnets and voice coils for better tonal quality with plenty of power handling capacity. Cone is specially treated to prolong speaker life and provide excellent performance. Rigid frame assures permanent alignment of voice coil and other moving elements. 8-ohm impedance matches most music system amplifiers. Finished in enamel. PC, pincushion shape.

- Epoxy Bonds Between Cones, Voice Coils
- Extra-Strong Frame
- Baked Enamel Finish

Stock No.	Type	Size	Shape	Magnet	Wt.,	EACH
16 D 3404	4 BC	4"	Square	1.0 oz.	¾ lb.	4.75
16 D 3408	5 BC	5"	PC	1.0 oz.	¾ lb.	4.95
16 D 3409	6 EC	6"	PC	3.0 oz.	1 lb.	5.50
16 D 3410	8 FC	8"	PC	5.5 oz.	1¾ lbs.	5.95
16 D 3411 X	12 JC	12"	Round	10.0 oz.	3¾ lbs.	9.95
16 D 3412	57 EC	5x7"	Oval	3.0 oz.	1¼ lbs.	5.50
16 D 3413	69 JC	6x9"	Oval	10.0 oz.	2½ lbs.	6.95

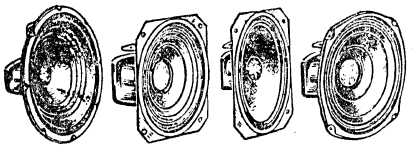
TOP-VALUE PM SPEAKERS



For universal replacement, original equipment. Built to EIA standard dimensions. Dustproof construction throughout. Precision-centered magnet and voice coil. Rigid frame assures alignment of moving elements. With universal mounting bracket. Imp., 3.2 ohms, except †8 ohms. *Extended-range. Call or write Allied for bulk quantity prices.

Stock No.	Size	Shape	Mag. Oz.	Max. Watts	Wt., Lbs.	EACH 1-9	EACH 10-Up
16 D 3476	4"	Square	.68	3.0	½	1.59	1.39
16 D 3477	5"	PC	.68	3.5	¾	1.89	1.69
16 D 3472	5x7"	Oval	1.00	5.0	1	2.39	2.19
16 D 3471	6x9"	Oval	1.47	8.0	1¼	2.69	2.29
16 D 3493	*6x9"	Oval	1.47	8.0	1¼	2.89	2.54
16 D 3416	†6x9"	Oval	1.47	8.0	1¼	2.79	2.49
16 D 3470	8"	PC	2.15	9.0	1½	2.79	2.49
16 D 3529 X	12"	PC	3.16	10.0	3¾	4.99	4.39

QUAM GENERAL REPLACEMENT SPEAKERS



All with Alnico V magnets. Heavy-gauge metal baskets. Baked enamel finish. *Indicates very shallow frame. Impedance, 3.2 ohms except† speakers for transistor use. §High energy Q/8 magnet (impedance shown in digits following Z in Type No.). Av. wt., 1 lb.

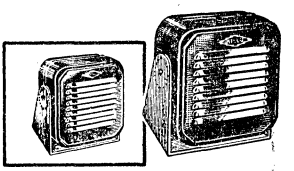
Stock No.	Mfr's Type	Shape	Size	Max. Watts	Magnet Oz.	EACH
16 D 3424	22A06Z8	Round†	2¼"	.25	.45	3.00
16 D 3425	22A06Z100	Round†	2¼"	.25	.45	3.30
16 D 3422	25A07	Square	2½"	2.0	.65	2.28
16 D 3426	27A06Z12	Round†	2¾"	.25	.55	2.97
16 D 3453	3A07	Square*	3½"	2.5	.65	2.43
16 D 3417	4A05	Square	4"	2.5	.55	1.74
16 D 3421	35A05	Oval	3x5"	2.0	.55	2.40
16 D 3435	4A1§	Square	4"	3.0	1.0	2.67
16 D 3436	4A15	Square	4"	3.0	1.47	2.97
16 D 3405	52C10	Pincushion	5¼"	10.0	10.0	6.15

45-OHM INTERCOM SPEAKERS

Permanent magnet replacement speakers.

Stock No.	Type	Size	Shape	Magnet	Wt.	EACH
16 D 3481	3A07Z45	3½"	Square	.65 oz.	½ lb.	2.70
16 D 3482	4A1Z45§	4"	Square	1.0 oz.	¾ lb.	3.06
16 D 3483	5A1Z45§	5"	Pincushion	1.0 oz.	1 lb.	3.21

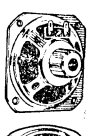
MISCO MODEL MS-3-BB ALL-WEATHER SPEAKER



Weatherproof, dustproof, shockproof speaker—widely used aboard U.S. submarines. Self-contained "Mini-Speaker" includes 3½" speaker in rugged 20-gauge steel enclosure. Electrostatic finished with two coats of baked enamel. Specially treated cone for greater reliability. All parts designed to withstand humidity and temperature changes—resist corrosion. Acoustic design louvers and ducts. Impedance, 8 ohms. Size, 4x4x2⅝". Power handling capacity, 3 watts. Shpg. wt., 1¼ lbs.
16 D 3414 ..... 7.29

MMS-8-F "MUSIC-MINI". Above, but with 8-inch speaker. Handles 8-watts amplifier output. Size, 9x9x4¼". Shpg. wt., 5 lbs.
16 D 3550 ..... 14.29

UTAH WEATHERPROOF OUTDOOR SPEAKERS



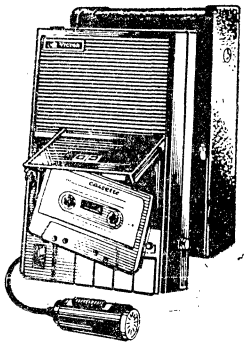
Designed for drive-ins, theatres, golf courses, etc. Specially treated cone, dust cap, and ring. 3-4 ohms. *Square; †pincushion.

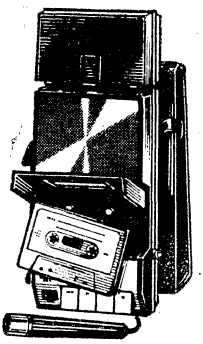
Stock No.	Type SP-	Size	W	Mg. Oz.	Lb.	EA.	TWO for
16 D 3460*	35A-WP	3½"	3	.68	½	2.98	5.36
16 D 3464*	4Y-WP	4"	4	.55	½	2.69	4.84
16 D 3465†	5Y-WP	5"	4	.55	½	2.69	4.84
16 D 3469†	8D-WP	8"	8	1.47	1¼	3.98	7.16

Solid-State Monophonic Cassette Tape Recorders

ALLIED

BATTERY/AC PUSHBUTTON RECORDERS





DELUXE 1150 WITH ALC

- Pop-Up Cassette Loading and Removal
- Switchable Automatic Level Control
- Delivers 1¼-Watt Music Power Output

Portable cassette recorder operates on six "C" batteries or 120 VAC. Records and plays up to two hours (two-track mono) on standard cassettes. Pop-up cassette loading and removal is fast and easy. Delivers clear, distinct sound with wide 200-11,000 Hz response.

Features include: convenient keyboard-type pushbuttons, switchable automatic level control, tone control, monitor switch, aux. input, record level/battery meter. With remote stop-start mike, C-60 cassette, leatherette carrying case, shoulder strap. Order six batteries below. 9⅜x 6x2⅝". From Japan. Wt., 5 lbs.

15 D 7116 X.....69.95
18 D 5078. "C" Batteries. 4 oz.....2/33¢

1100 HANDY PORTABLE

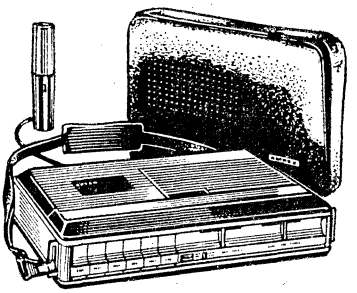
- AC Cord Stores in Snap-On Adapter
- Easy-to-Operate Keyboard Controls
- Cassettes Snap In and Out Easily

Versatile recorder operates on 5 "C" batteries or 117 VAC with adapter. Unique snap-on adapter looks like part of recorder when in use; has cord storing compartment. Records and plays up to 2 hours (both tracks) of extra-clear mono. Cassette snaps in and out quickly and easily.

Easy-to-use keyboard-type pushbuttons, record interlock button, record level/battery condition meter, extension speaker jack. With snap-on AC adapter, remote stop-start dynamic mike, C-60 tape cassette, earphone and vinyl carrying case for portable use. 2½x5x12". With batteries. From Japan. Shpg. wt., 7 lbs.

15 D 7138 X.....39.95
18 D 5078. Extra "C" Batts. 4 oz...2/33¢

AMPEX



MICRO 24 BATTERY/AC RECORDER

- Recharges Batteries while Playing on AC
- Switchable Automatic Level Control
- Delivers over 2-Watt Peak Power Output

Records and plays up to two hours of 2-track mono on compact tape cassettes using 5 "D" batteries or 117 VAC. Automatically recharges nickel cadmium batteries while operating on AC. Easy pop-up cassette loading.

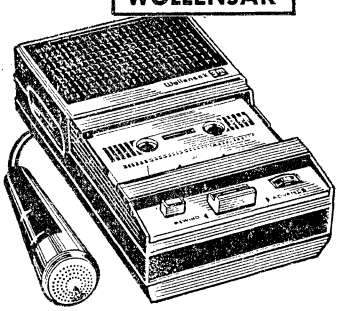
Pushbutton controls with fast forward and rewind; switchable automatic recording level control; digital counter; tone control. Record level/battery condition meter. With leatherette carrying case, stop-start dynamic mike, earphone and C-60 cassette. 3x7x12". Order rechargeable batteries below. (Uses 5.) Shpg. wt., 9¾ lbs.

15 D 7521 X.....89.95
18 D 5634. Ni-Cad Batteries. 3 oz.....6.30

Micro 32. As above, but with built-in FM-AM radio. 3x7x12". Shpg. wt., 9¾ lbs.

15 D 7524 X.....129.95

WOLLENSAK



4200 WITH ONE-SWITCH CONTROL

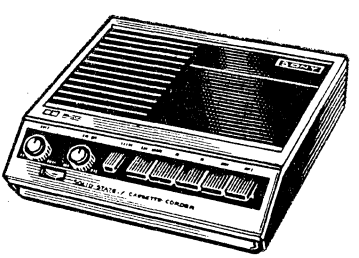
- Separate Record Level and Volume Controls
- Single Switch Controls all Tape Functions
- Safety Lock Prevents Accidental Erasures

Compact, battery-operated tape cassette recorder is perfect for business meetings, dictation or memos on-the-go. Records and plays up to 2 hours with convenient drop-in tape cassettes. Constant speed capstan drive at 1⅞ ips. Single 4-position switch controls all tape functions for easy operation. Record-safety lock prevents accidental erasure of recorded material.

Versatile recorder has separate recording level and volume controls. Combination recording level/battery condition meter. Frequency response, ±3dB, 80-10,000 Hz. With remote stop-start mike, mike stand, C-60 tape cassette, carrying case. Less batteries. 4½x7⅞x2¼". Imported. 4 lbs.

15 D 7349 X.....69.95
18 D5078. "C" Batt. Uses 5. 4 oz.....2/33¢

SONY/SUPERSCOPE



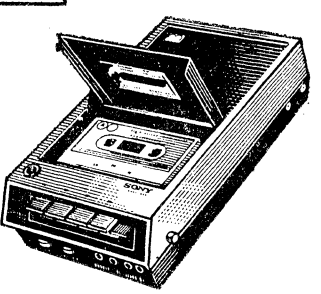
TC-70 WITH BACK SPACE CUING

- Stop-start Mike for Easy Dictation
- Operates in Any Carrying Position
- Easy-to-Use Pushbutton Operation

Solid-state monophonic cassette tape recorder is perfect for business use. Operates on four "C" batteries or 117 VAC. Features smart side-panel styling. Back space cueing for easier transcribing makes it ideal for stenographic work. Instant cassette loading, ejector button for quick cassette removal, and fingertip pushbutton operation make it easy to handle. End-of-tape alarm; record level/battery condition meter.

Has record interlock to prevent accidental erasure. Can be operated in any carrying position. With handy stop-start dynamic mike for easy dictation, earphone, batteries and tote bag. Size, 2⅝x8⅛x8¼". From Japan. Shpg. wt., 9 lbs.

15 D 7074 X.....69.50
18 D 5078. Extra "C" Batts. 4 oz.....2/33¢



TC-110 WITH BUILT-IN MIKE

- Automatic Level Control Cuts Distortion
- Records Directly from Radio or TV
- Ejector Button Pops Out Cassette

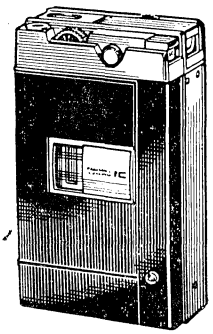
Features built-in electret condenser microphone. Can't be seen, yet it picks up voices from anywhere in the room. Also has external remote stop-start mike that can be used separately or simultaneously to moderate business conferences. Operates on four "C" batteries or 117 VAC. Pushbutton controls and shoulder-strap portability make it ideal for on-the-go taping.

Automatic level control prevents distortion caused by over-recording. Fingertip cassette ejector—cassettes pop in and out instantly. Record level/battery condition meter. Radio-TV input. With stop-start mike, earphone, case, cassette and batteries. Size, 9½ x2⅝x5½". From Japan. Shpg. wt., 7 lbs.

15 D 7066 X.....99.50
18 D 5078. Extra "C" Batts. 4 oz.....2/33¢

Miniature Cassette Recorders, Telephone Valets

PANASONIC



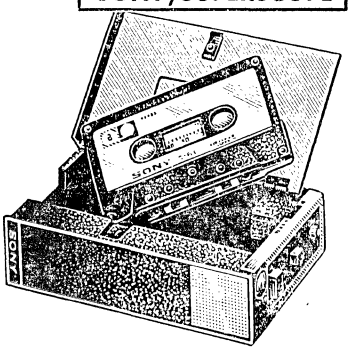
EASY-TO-USE RQ-210S

- Extra-Compact—Uses 6 Integrated Circuits
- Automatic Level Control for Even Recording
- Easy-to-Use Single Touch-Lever Operation

Lightweight recorder features six integrated circuits for exceptional performance, smaller size. Records and plays up to 2 hours on standard Philips-type tape cassettes. Automatic level control maintains constant recording level, prevents overload distortion, for perfect recordings effortlessly. Delivers crisp, clear sound on playback through quality speaker.

Convenient touch-lever control allows fast, easy operation. Quick pop-up cassette loading and removal—no tape threading or rewinding. Has record level/battery condition meter. Output for external amplifier. With remote stop-start mike, stand, C-60 cassette, earphone, carrying case, 4 "AA" batteries. 1⅞x3¾x6⁷⁄₁₆". Japan. Shpg. wt., 2½ lbs.
15 D 7461 S.....99.95
18 D 5870. Extra Batts. 10 oz.....Pkg. 2/20¢

SONY/SUPERSCOPE



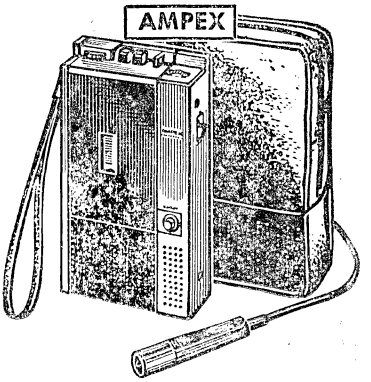
POCKET-SIZE TC-50

- Automatic Level Control Cuts Distortion
- Separate Built-in Mike and Speaker
- Convenient "Pop-Up" Cassette Loading

Extra-small, lightweight monophonic cassette tape recorder will actually fit in a coat pocket, yet delivers the same fine performance of larger models. Operates on four "AA" penlight batteries. Handy snap-in battery pack is the perfect complement to convenient cassette tape loading. Pushbutton controls offer added convenience.

Records and plays up to two full hours on standard cassettes. Automatic level control assures easy, distortion-free recording every time. Features separate built-in microphone and speaker, recording level/battery condition meter. With snap-in battery pack, leather carrying case, batteries, and C-60 tape cassette. Size, 7x3x1½". From Japan. Shpg. wt., 2 lbs.
15 D 7073 S.....119.50
18 D 5870. Extra Batts. 10 oz....Pkg. 2/20¢

AMPEX



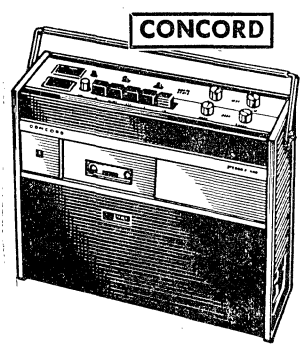
INTEGRATED CIRCUIT MICRO 7

- Pushbutton Fast Forward and Fast Rewind
- IC's Assure Trouble-Free Performance
- Records Anywhere from Remote Microphone

Precision-made ultra-compact cassette tape recorder is ideal for businessmen and students. Great for dictating, taking notes or recording lectures. Records and plays up to two full hours of two-track mono on instant-loading tape cassettes. Operates on three "AA" penlight batteries.

Easy-to-use controls include pushbutton fast forward and fast rewind; slide lever for play or record. Record interlock prevents accidental erasure of prerecorded tapes. Pushbutton cassette ejector. Recording level/battery condition meter. Earphone allows comfortable "private" listening. With remote start-stop dynamic mike, cassette, batteries, earphone, leatherette case. 6¾x4½x1¾". Shpg. wt., 2¾ lbs.
15 D 7529 X.....89.95
18 D 5870. Extra Batts. 10 oz....Pkg. 2/20¢

CONCORD



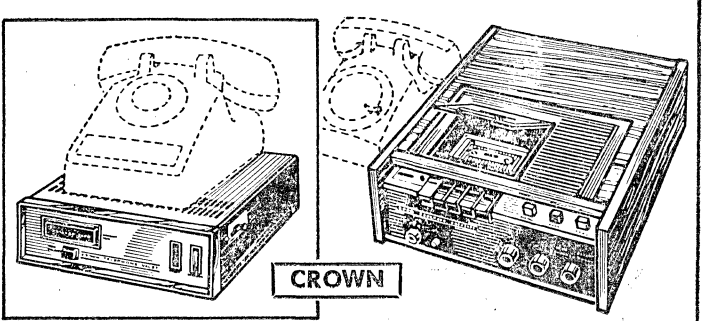
F-400 BATTERY/AC STEREO

- Operates Anywhere on Batteries or AC
- Switchable Automatic Level Control
- Fast, Easy-to-Use Pushbutton Controls

Truly portable recorder tapes and plays stereo or monophonic on extra-compact tape cassettes. Operates on six "D" batteries or 117 VAC. Record from mike, radio, phono or another tape recorder. Two built-in high-power stereo amplifiers and acoustically matched speakers provide excellent sound quality and separation.

Has switch-controlled automatic level control. Convenient pushbutton operation. Separate volume and tone controls for each channel. Outputs for use with extension speaker or as stereo tape deck with any component or console home music system. With dynamic remote-control mike, cassette, batteries. 9¾x12⅜x3¾". From Japan. Shpg. wt., 12 lbs.
15 D 7322 U.....139.50
18 D 5079. Extra Batts. 10 oz....Pkg. 4/65¢

TELEPHONE ANSWERING EQUIPMENT



CTA-4100 AUTOMATIC VALET

- Highly Dependable Solid-State Circuit
- Answers Phone and Delivers Message
- Records Message with Separate Recorder

Automatic telephone answering and message-taking service at a budget price. Voice induction device automatically answers phone, delivers your pre-recorded message on endless-loop tape cartridge. Message can be erased for re-recording as you desire.

Records caller's message, using any standard tape recorder with remote-control facilities. Accepts about thirty calls with 3" reel tape recorder, more calls with larger size reel. Wood-grain steel cabinet. 3⅜x8½x10⁷⁄₁₆". With microphone. For 117 V, 60 Hz AC. From Japan. Shpg. wt., 7 lbs.
15 D 7527 U.....119.95

CTA-4400 ANSWERER/RECORDER

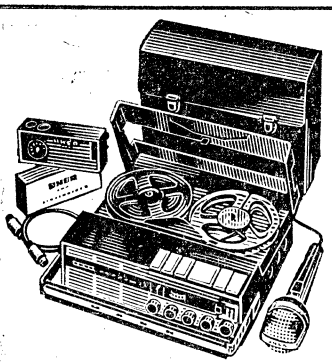
- Has Built-in Cassette Tape Recorder
- Answers Phone and Delivers Message
- Records Caller's Message for Playback

Answers telephone automatically. Gives up to 30-second message pre-recorded on endless-loop tape, *also* records caller's message on built-in cassette recorder for playback later. Voice-activated recorder may be used separately. Uses standard cassettes.

Pushbutton controls for record/rewind/playback/fast forward/stop. Separate tone, volume controls. Function selector switch (message record/message confirm/valet/cassette). Installs in minutes, no re-wiring. Walnut cabinet. 3⁵⁄₁₆x10¹⁄₁₆x12¹³⁄₁₆". With tape, cassette, built-in mike. 117 VAC. Japan. 9 lbs.
15 D 7541 U.....199.95

Professional-Quality Monophonic Tape Recorders

UHER



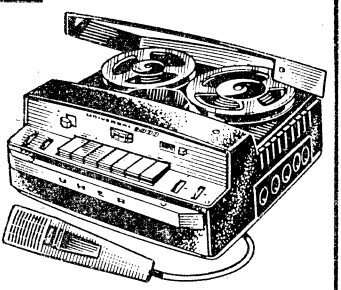
PORTABLE RECORDER OUTFIT

- With Battery Pack and AC Supply
- Ideal for Radio and TV Work

MODEL 4000L. Professional monophonic recorder widely used by radio and TV stations. Operates from rechargeable "Dry-fit" battery pack or 117 VAC power supply. Powerful, quiet high-frequency motor, professionally calibrated VU meter, brushed aluminum piano-key controls, built-in belt cleaning brushes, digital counter.

Records and plays at 7½, 3¾, 1⅞ and 15/16 ips. Response: 40-20,000 Hz at 7½, 40-16,000 Hz at 3¾, 40-10,000 Hz at 1⅞, 40-4500 Hz at 15/16 ips. Wow and flutter: 0.15% at 7½ ips. Solid-state circuit. 5" reel capacity. 3½x11x9". With mike, leather case, battery pack, AC supply, takeup reel. Imported.

15 D 7500 U. Shpg. wt., 22 lbs...**299.95**



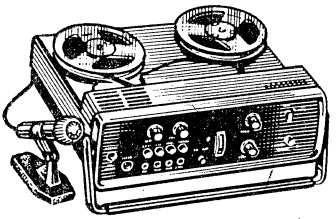
EXTRA-VERSATILE RECORDER

- Automatic Rewind, Repeat and Stop
- Full Remote Control of Tape Motion

MODEL 5000. An outstanding mono recorder for virtually any use in home, school or business. Ideal for dictating, transcribing, conferences, audio-visual applications. Solid-state for instant operation. Boasts separate record and play volume controls, automatic volume control, automatic rewind, automatic stop, message repeater, slide synchronizer, digital counter. Optional mike permits remote control of play, record, rewind, stop. 6" reel capacity. 3¾, 1⅞, 15/16 ips. 40-16,000 Hz at 3¾ ips. 6x10x13". 117 VAC. Imported.

15 D 7501 U. Shpg. wt., 30 lbs...**300.00**
15 D 7189. M153 Mike. 2 lbs.....**30.00**
15 D 7190. Steno Typewriter Control. Stop, start, backspace/rewind. 1 lb.....**17.00**

TANDBERG



BROADCAST-QUALITY MONO PORTABLE TAPE RECORDER

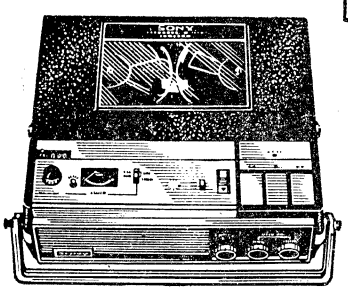
- VU Level/Battery Condition Meter
- 3 Heads for Record, Erase, Play

MODEL 11. Battery-operated professional recorder. Perfect for the exacting demands of on-the-go recording for newsmen, businessmen or anyone needing top quality, dependability and ease of operation. Features three precision heads—record, erase and play—for full-feature 2-track mono. Constant 7½, 3¾, 1⅞ and 15/16 ips speeds.

Automatic limiting level control prevents overloading. Has mixing facilities with separate level controls for mike and line inputs. Built-in speaker. Headphone jack for record monitoring. VU level/battery condition meter. 30-20,000 Hz at 7½ ips; Flutter/Wow, 0.1% at 7½ ips. Full 7" reel capacity. 4x13x10". Order mike, batteries, below. Imported.

15 D 7655 U. Wt., 9½ lbs.....**449.00**
18 D 5346. "D" Alkaline Batteries. Uses 10. Shpg. wt., 10 oz.....**Pkg. 2/1.27**
15 D 7656. Mike. 1 lb.....**39.85**

SONY/SUPERSCOPE



4-SPEED BATTERY/AC RECORDER

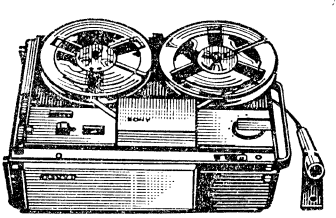
- Integrated-Circuit Amplifier
- Built-in Electret-Condenser Mike

MODEL 800-B. Professional-quality mono recorder features a built-in electret-condenser mike with integrated circuit amplifier for high sensitivity and sharp directivity. Also includes remote start-stop cardioid dynamic mike. Switch selects internal mike, external mike or both.

Provides finest recording quality anywhere; operates on 8 "D" batteries or 117 VAC. Records and plays at 7½, 3¾, 1⅞ and 15/16 ips speeds. Has vari-speed tuning, servo-control motor. Two-position switch selects Sonymatic record mode for perfect, distortion-free recordings (voice or music) plus manual record level control.

Pushbutton controls, record interlock, tone control, digital counter, monitoring. Large record level/battery condition meter. 4½x12¼x10½". With batteries, 5" takeup reel. From Japan.

15 D 7586 U. Shpg. wt., 15 lbs....**199.50**



RECORDER WITH ALC

- Automatic/Manual Record Level Control
- Instant, Easy One-Hand Tape Threading

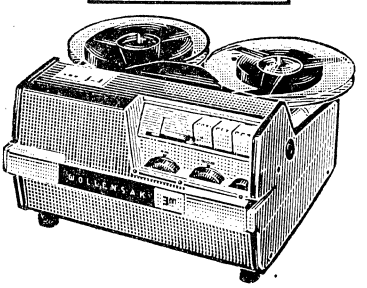
MODEL 104-A. Feature-packed mono recorder is ideal for schools or businesses. Especially suited to audio-visual applications. Convenient one-handed tape threading for fast, easy operation. Single knob function control. Facilities for use as a public address system amplifier.

Automatically adjusts recording level, or lets you adjust it manually using level meter for excellent 2-track mono at 7½, 3¾ or 1⅞ ips. Pause control and digital counter for easier editing. Automatic tape lifter protects heads during fast forward and rewind. Record interlock button. Automatic shutoff at end of tape play.

Has 6x4" speaker; low- and high-impedance inputs; outputs for monitor and external speaker. Frequency response, 40-18,000 Hz at 7½ ips. With mike, earphone, 7" takeup reel. 6½x16x10¾". 117 VAC. Japan.

15 D 7253 U. Shpg. wt., 16 lbs.....**112.50**

WOLLENSAK



HIGH-FIDELITY TAPE RECORDER

- Powerful Push-Pull 10-Watt Amplifier
- Provision for Monitoring or PA use

MODEL 1500SS. Performance-proven recorder is packed with features for convenience and versatility. Boasts powerful 10-watt solid-state amplifier for true high-fidelity performance. Includes provision for use as a public address system. Easy-to-use keyboard-type pushbutton controls.

Accurate digital counter for easy indexing and editing. Tape lifters protect heads during fast forward and rewind. Automatic head demagnetization. Record level indicator. Records and plays 2-track mono at 7½ and 3¾ ips. Response, 40-15,000 Hz at 7½ ips. S/N ratio, better than 48 dB.

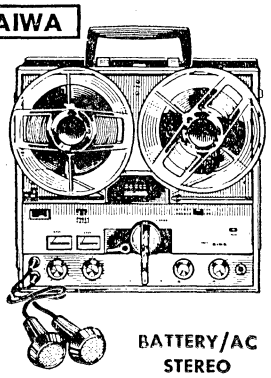
Inputs for mike and radio or phono. Preamp outputs for use as a deck; extension speaker jack. Durable all-metal construction. Overall size, 6½x10¼x11¾". With dynamic mike, 7" reel of tape, takeup reel. For 117 VAC. Shpg. wt., 20 lbs.

15 D 7339 U......**184.95**

Allied Has Solid-State Recorders for Every Need

Finest Solid-State Tape Decks and Recorders

AIWA



BATTERY/AC STEREO RECORDER

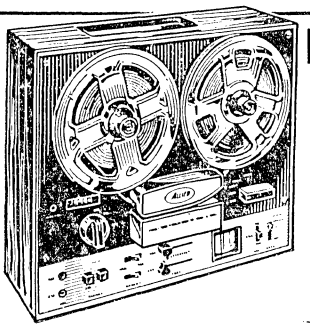
MODEL TP-1012. Versatile stereo recorder records and plays full-range 4-track stereo or mono anywhere. Operates on 8 "D" batteries, 12 VDC car cord, or 117 VAC. Boasts many big recorder features not usually found in a lightweight portable instrument.

Features include: full 7" reel capacity, record level meters for each channel, single-knob function control, record interlock, automatic shutoff, digital counter, pause control, AC bias erase, two built-in 6x4" speakers, compartment for two mikes and AC line cord. 7½, 3¾, 1⅞ ips speeds. Response, 50-16,000 Hz at 7½ ips. 5-watt output.

Inputs: 2 mike, 2 aux. Outputs: stereo headphone, external speakers. With 2 mikes, 5" reel of tape, 7" takeup reel, batteries and 117 VAC cord. Size, 13½x12⅜x7¼". From Japan.

15 D 7151 U. Shpg. wt., 17 lbs. **149.95**

ALLIED®



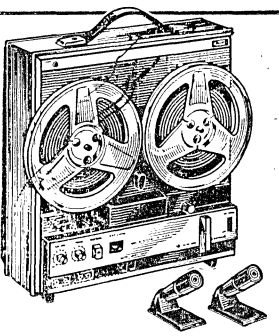
3-HEAD STEREO TAPE DECK

- Tape Monitoring, Sound-On-Sound
- Double Lamination Playback Head
- All-Silicon Transistor Circuit

MODEL TD-1095. Quality designed for the serious recording enthusiast. Records 4-track stereo or mono; plays through system or console. 3 heads for tape monitoring, sound-on-sound, echo, sound-with-sound. Playback head has double lamination for longer life. Automatic tape lifter protects heads.

Flutterless 4-pole motor provides accurate 7½, 3¾, 1⅞ ips speeds. Single knob function control with pause. Tape monitor switch. Slide-type level controls; illuminated dual-comparison level meters. Digital counter. Automatic shutoff. Inputs: 2 mike, 2 aux. Outputs: line, stereo headphone jack. Response: ±3 dB, 30-22,000 Hz. Flutter/Wow: less than 0.1%, at 7½ ips. Walnut-grain vinyl covered wood case. 19x12x18". 117 VAC. Japan.

15 D 7574 U. Shpg. wt., 25 lbs.. . **179.95**



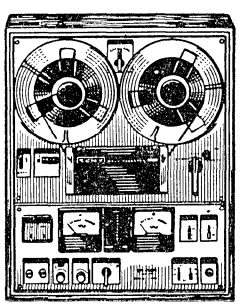
7"-REEL MONO RECORDER

- Automatic Level Control Feature
- Facilities for Use as a PA System

MODEL TR-1050. Smartly-styled recorder is loaded with extras for top performance. Records and plays 2-track mono at 7½ and 3¾ ips. Full 7" reel capacity. Solid-state amplifier delivers two watt peak output power to built-in 4x6" wide-range speaker. Automatic level control switches off for recording music.

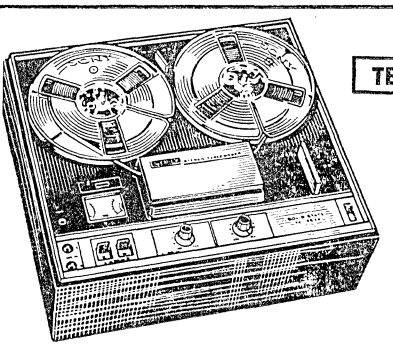
Single-knob function control with pause; record interlock; record level meter; push-to-reset digital counter; tone control; high or low level speaker monitor. Accessory compartment on rear for storing mike and AC cord. Line output for use as deck, external speaker jack. Response, 50-12,000 Hz at 7½ ips. Molded dust cover. 13½x13⅛x7⅜". With mike, 5" reel of tape, takeup reel, patch cords, splicing tape. 117 VAC, Japan.

15 D 7575 U. Shpg. wt., 18 lbs.... **79.95**

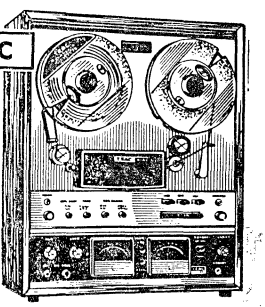


SONY/ SUPERSCOPE

Superb Solid-State Stereo Tape Decks Play Through Your Home Music System or Stereo Console



TEAC



DELUXE 3-HEAD STEREO DECK

- Three Heads Permit Special Effects
- Non-Magnetizing Record Head Cuts Hiss

MODEL 630-D. Professional-quality tape deck records superb 4-track stereo or mono; plays through your system or console. Three heads and built-in switching for sound-on-sound, echo and direct monitoring. Non-magnetizing record head and scrape flutter filter reduce tape modulation and hiss.

Large, easy-to-read professional VU meters, slide-type recording level controls for accurate level adjustment. 4-digit tape counter and pause control with lock for easy editing. Tape/source monitor. Retractomatic pinch roller allows you to thread tape quickly and easily. Automatic tape lifters protect heads during fast forward and rewind. Automatic shutoff.

7½, 3¾, 1⅞ ips. Response, 20-22,000 Hz; flutter/wow, 0.09% at 7½ ips. Walnut case. 7¼x16x19". Dust cover, 7" takeup reel, patch cords. 117 VAC. Japan.

15 D 7584 U. Shpg. wt., 26 lbs.... . **279.50**

VALUE-PRICED STEREO DECK

- Has Sound-with-Sound Capability
- Front Stereo Headphone Monitor Jack

MODEL 252-D. Two-speed stereo tape deck has quality and features usually found only in higher-priced equipment. Record 4-track stereo or mono at 7½ and 3¾ ips; play through your home music system or console with true-to-life fidelity. Boasts clean, uncluttered styling for smart appearance.

Offers sound-with-sound capability; stereo headphone monitor jack; retractomatic pinch roller for easy tape threading; vibration-free motor; special scrape flutter filter to prevent tape modulation distortion; non-magnetizing record head eliminates hiss; easy-to-read dual-comparison record level meters; pause control and push-to-reset digital counter for editing and indexing.

Automatic tape lifter protects head. Automatic shutoff. Response: 30-18,000 Hz; flutter/wow, 0.12% at 7½ ips. S/N: 52 dB. Walnut case, 7½x15¼x13½". 117 VAC.

15 D 7557 U. Japan. Wt., 18 lbs... **119.50**

AUTO-REVERSE STEREO DECK

- Precise Hysteresis-Synchronous Motor
- Silicon Transistor Record/Play Preamps

MODEL A-6010. Professional-quality automatic-reversing stereo tape deck records 4-track stereo or mono in one direction, plays in both directions. Tape reverses automatically at end of play—no reel turnover or rethreading. Reverse is activated by either sensing foil or phase sensing system signal recorded on tape.

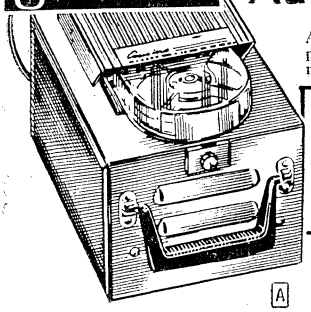
Precision hysteresis-synchronous motors assure exact 7½ and 3¾ ips speeds. Features separate silicon-transistor record and playback preamps; separate record, erase, play heads; reverse play head. Two large VU meters; tape tension switch; automatic shutoff; 4-digit counter; tape and source monitoring; built-in stereo headphone amplifier; mixing facilities.

Response: 30-20,000 Hz; wow/flutter, 0.08% at 7½ ips. S/N: 55 dB. Walnut case. 21x17½x8¼". 117 VAC. From Japan.

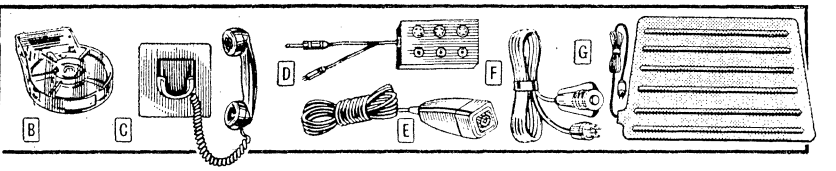
15 D 7453 Z. Shpg. wt., 52 lbs.. . . . **664.50**

ORRTRONICS

Automatic Tape Equipment, Accessories



Automatic tape equipment offers unlimited possibilities for instruction and sales promotion. Operates continuously, periodically, or when cued. Available in playback units alone, or with recording facilities. Tape cartridges (below) thread automatically.



A AUDIO ANNOUNCER

79.95 *Solid-State . . . Plays Continuously or On Cue . . . Two Speeds*

MODEL 773.200. Solid-state cartridge-loading playback unit operates on cue, or continuously. Automatic shutoff. Countless uses for sales promotion or instructional purposes. Operates at 3¾ and 1⅞ ips. 4-pole motor. Requires power amplifier or headset. Size, 6x6x9". 117 VAC.
15 D 8900 S. Shpg. wt., 14 lbs..... 79.95

A AUDIO REPEATER

MODEL 773.280. Has same fine features as Model 773.200 listed above, but with built-in 4-watt audio amplifier; 4-inch speaker; external jack for remote speaker. Size, 6x6x9". Shpg. wt., 15 lbs.
15 D 8901 S.....99.95

SYNCHRO REPEATER

MODEL 773.283. Plays message, plus trip-tone signal which may be recorded on Synchro Recorder.
15 D 8907 S. Shpg. wt., 9 lbs.....159.97

A AUDIO REPEATER-RECORDER

MODEL 773.310. Similar to Model 773.280, but also records tapes. Foil strips on tape provide automatic "end of cycle" shutoff. Shpg. wt., 16 lbs.
15 D 8902 S.....135.95

A SYNCHRO REPEATER-RECORDER

MODEL 773.410. Similar to Model 773.310, but also has facility for tone-triggering remote units on playback. Wt., 17 lbs.
15 D 8903 S.....183.95

B ECHO-MATIC TAPE CARTRIDGES

For all Orrtronics units listed here. Running time given in minutes, at 3¾ ips, except *seconds. †Empty cartridge. 1 lb.

Stock No.	Mfr's Type	Minutes	EACH 1-11	12-144	145-Up
15 D 8909	141.070	70*	3.00	2.40	2.10
15 D 8910	141.003	3	3.25	2.60	2.28
15 D 8911	141.006	6	3.75	3.00	2.63
15 D 8801	141.008	8	4.00	3.20	2.80
15 D 8802	141.010	10	4.25	3.40	2.98
15 D 8912	141.012	12	4.60	3.68	3.22
15 D 8913	141.015	15	4.95	3.96	3.47
15 D 8803	141.000	15†	2.00	1.60	1.40
15 D 8804	143.030	30	5.95	4.76	4.17
15 D 8805	143.000	40†	3.00	2.40	2.10

C PHONE HEADSET AND CRADLE

MODEL 846.010. Activating accessory starts Audio Announcer and provides quiet, private commentary for listener. Wt., 2 lbs.
15 D 8908. Black.....19.10
15 D 8920. Model 846.020 Red.....23.35

D JUNCTION BOX

MODEL 846.030. 3-phone input junction box.
15 D 8921. Shpg. wt., 1 lb.....13.35

E LOW-IMPEDANCE MICROPHONE

MODEL 843.120. Recommended as an accessory for Models 773.310 and 773.410.
15 D 8922 S. Shpg. wt., 1 lb.....15.25

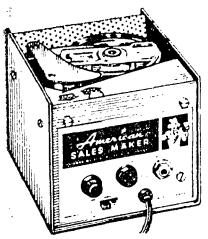
F PUSHBUTTON REMOTE SWITCH

MODEL 845.410. Starts tape equipment from remote location by pressing button. With 6-foot cord and plug. Shpg. wt., 1 lb.
15 D 7456.....3.80

G FOOTMAT START SWITCH

MODEL 845.470. Vinyl footmat will activate any Audio Announcer when stepped on. Commonly used for point-of-purchase applications such as supermarkets, etc. Size, 17x23". Shpg. wt., 1 lb.
15 D 8925.....13.90

AUDIO EQUIPMENT FOR "POINT OF PURCHASE" SALES

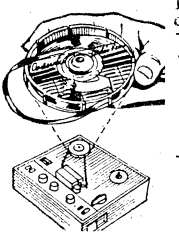


Utilizes all Orrtronics Remote Start Accessories

"AMERICAN SALES MAKER"

MODEL 779.000. Designed for easy selling. Tells the complete sales story right on the dealer's sales floor. Starts automatically "on demand," or runs continuously; shuts off automatically at end of message.

Built-in speaker and output for external speaker. Playing time up to 15 minutes on audio vendor cartridges (at right). Record on most standard tape recorders. Fully transistorized. 3-min. blank cartridge included. 5¼x 5x7". 110 VAC. 12 lbs.
15 D 8923 S.....59.50

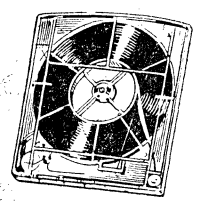


CONTINUOUS-PLAY AUDIO VENDORS

Running time at 3¾ ips. Counter-clockwise. *Empty cartridge. †Ready-mount spindle. Shpg. wt., 12 oz.

Stock No.	Type	Min.	1-9, EA.	10-Up, EA.
15 D 8806	150.003	3	3.16	2.77
15 D 8807	150.005	5	3.80	3.33
15 D 8808	150.000	*	2.54	2.23
15 D 8809	131.008	8	5.72	5.00
15 D 8136	131.012	12	6.40	5.60
15 D 8144	131.015	15	7.16	6.27
15 D 8810	131.018	18	7.80	6.83
15 D 8811	131.000	*	3.80	3.33
15 D 8812	121.024	24	8.76	7.67
15 D 8813	121.030	30	10.36	9.07
15 D 8814	121.000	*	5.04	4.41
15 D 8815	831.088	†	1.50	1.13

"FIDELIPAC" AUTOMATIC TAPE CARTRIDGES



- Match All Major-Brand Cartridge Equipment
- Continuous Record/Play
- Endless-Loop Principle
- Self-Enclosed for Protection from Dust, Marring, Tearing

Continuous, self-contained automatic tape cartridges—the standard of the broadcast industry. They are compatible with all major-brand cartridge equipment available on the market today. Designed for both recording and playback—utilizing the endless-loop principle of tape operation. Fidelipac cartridges offer unlimited applications in all fields. The entire cartridge is constructed of plastic, and its specially lubricated tape is self-enclosed (with transparent cover) affording complete protection from dust, tearing, marring. Offers the utmost handling ease. Three model sizes, NAB-3A, 6B and 12CX, for program flexibility. See table at right. *Empty cartridge.

MODEL NAB-3A TAPE CARTRIDGES

Stock No.	Length	Time at 7½ ips	Size	Wt., Oz.	EACH 1-99	100-499	500-Up
15D8915	25′	40 sec.	4x5 7/32x7/8″	4	2.16	1.91	1.68
15D8917	44′	70 sec.	4x5 7/32x7/8″	4	2.28	2.02	1.78
15D8942	63′	100 sec.	4x5 7/32x7/8″	4	2.40	2.12	1.86
15D8918	132′	3½ min.	4x5 7/32x7/8″	4	2.74	2.42	2.14
15D8940	207′	5½ min.	4x5 7/32x7/8″	5	3.14	2.78	2.44
15D8941	394′	10½ min.	4x5 7/32x7/8″	8	4.12	3.64	3.20
15D8930	....	*	4x5 7/32x7/8″	3	1.70	1.50	1.34

MODEL 6B TAPE CARTRIDGES

Stock No.	Length	Time at 7½ ips	Size	Wt., Oz.	EACH 1-99	100-499	500-Up
15D8924	600′	16 min.	6x6 3/32x7/8″	9	6.76	5.96	5.26
15D8931	.....	*	6x6 3/32x7/8″	5	2.82	2.50	2.20

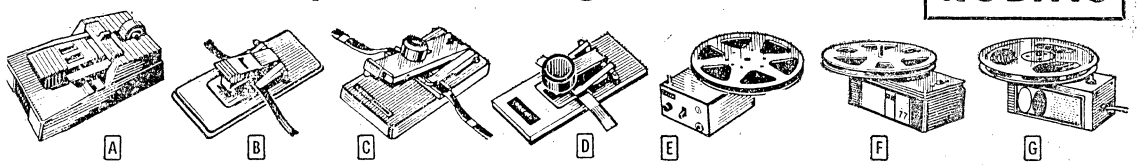
MODEL 12CX TAPE CARTRIDGES

15D8926	1163′	31 min.	7 5/8x8 13/32x7/8″	16	11.90	10.70	8.95
15D8932	.....	*	7 5/8x8 13/32x7/8″	10	4.24	3.74	3.30

Allied Offers Same-Day Shipment in Industrial Quantities

Tape Recording Accessories

ROBINS



A TS-8D DELUXE STEREO SPLICER. For 4-track tapes. Cuts diagonally with tiny "Gibson Girl" side trim. "See-thru" windows show operating position. Guide and fingers hold tape securely. Replaceable cutter, centering adjustment, integral tape dispenser. With 100 ft. of ½" splicing tape.
15 D 8142. Shpg. wt., 1 lb.....7.99

B TS-7J JUNIOR STEREO SPLICER. Precision splicer cuts diagonally, with "Gibson Girl" trim. "See-thru" windows on knob shows cut or trim positions. Guide and fingers gently secure tape; centering adjustment for accuracy. Replaceable cutter. Uses ⅜" splicing tape. Shpg. wt., 8 oz.
15 D 8221.....4.99

C TS-1000 1" PROFESSIONAL VIDEOTAPE SPLICER. For Ampex 1" systems. Produces "Gibson Girl" trim to prevent adhesive from harming recorder. Replaceable blades, cutter pads; centering adjustment.
15 D 8226. Shpg. wt., 4 lbs.....55.00
15 D 8223. TSV-100. Standard diagonal cut splicer, for 1" tape. With 25 splicing patches. Shpg. wt., 1¾ lbs.....12.95

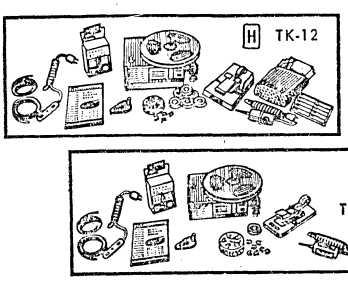
D TS-500 ½" PROFESSIONAL VIDEOTAPE SPLICER. For studio work. "Gibson Girl" trimming; replaceable blades; cutter pads; precision centering adjustment.
15 D 8227. Shpg. wt., 4 lbs.....55.00
15 D 8222. TSV-50. Diagonal cut ½" splicer. With 25 patches. Wt., 1¾ lbs.....12.95

E TM-100 AUDIO-VIDEO BULK TAPE ERASER. For tape to 1" on 10½" reel. 5 min. on/off cycle. Reduces background noise 50-90 dB below saturation minimum. 3¾x6x8". U.L. Listed. 115 VAC.
15 D 8244. Shpg. wt., 10 lbs.....63.00

F TM-77 DELUXE BULK TAPE ERASER. For tape reels to 7" dia.; ¼" tapes. Erasure 2 to 4 dB below erase-head level. 2⅜x3¾x 6¼". U.L. Listed. For 110-120 V, 50-60 Hz.
15 D 8130. Shpg. wt., 5 lbs.....16.75

G TM-44 BULK TAPE ERASER. For ¼" tape; reels to 7". Size, 5¼x2⅛x3⅛". Duty cycle: 1 minute on, 5 minutes off. For 115 V, 50-60 Hz AC. U.L. Listed.
15 D 8242. Shpg. wt., 2¾ lbs.....11.49

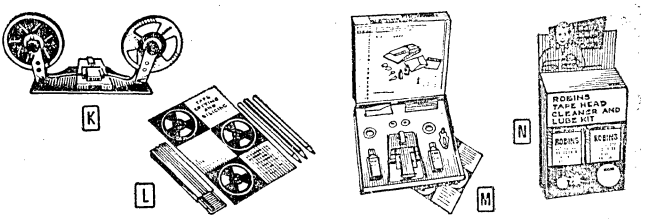
AUDIO-VISUAL TAPE ACCESSORY KITS



H TK-12 TAPE ACCESSORY KIT. Professional kit for language labs, studios, audio-visual use. Includes: TS-8D Deluxe Splicer; 6 rolls ½" Splicing Tape; Tape Threader; Tape Jockey Cloth; Head Cleaner; Lubricant; 75 Tape Clips; 180 Reel Title Labels; Strobe and Light Kit; TM-99 Bulk Tape Eraser; TD-6 Head Demagnetizer; 150 swabs.
15 D 8213 X. Shpg. wt., 14 lbs.....52.50

J TK-11 ACCESSORY KIT. Includes: TM-77 Bulk Tape Eraser; TS-7S Splicer; roll of ⅜" Splicing Tape; Lubricant; Cleaner; TK-5 Strobe and Light Kit; TD-3 Head Demagnetizer; Tape Threader; Jockey Cloth; 180 Reel Title Labels; 75 Tape Clips.
15 D 8218. Shpg. wt., 9 lbs.....31.70

TAPE EDITING AND ACCESSORY KITS

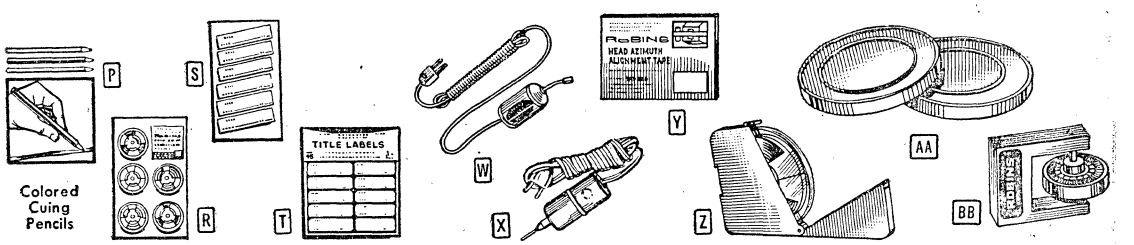


K TK-9 TAPE EDITING WORKSHOP. For easy and accurate splicing and editing. Handles reels to 7". Consists of two tape winders and deluxe Stereo Tape Splicer, mounted on sturdy walnut-grain, warp-proof base. 7x14x5½". Accurately calibrated timing/editing scale on base. With splicing tape, editing and cuing pencil, handy guide book for professional-quality editing and splicing. Wt., 2 lbs.
15 D 8348.....14.99

L TK-19 TAPE EDITING KIT. Low-cost kit includes: TS-5 "Cut-N-Splice" metal tape splicing block; 25 self-stick splicing patches; 3 editing and cuing pencils; editing and splicing guidebook. Shpg. wt., 5 oz.
15 D 8229.....2.98

M TK-8DLX DELUXE TAPE ACCESSORY KIT. Everything needed for editing and recorder care. Contains: TS-8D Deluxe Stereo Tape Splicer; roll of ½" Splicing Tape; Tape Threader; 12 Tape Clips; 2-oz. Head Cleaner; 2-oz. Head and Guide Lubricant; Tape Jockey Cloth; pair of Reel Holders; 30 Reel Title Labels; Editing and Splicing Guide Book. Wt., 1½ lbs.
15 D 8169 X.....12.98

N TK-6 CLEANER AND LUBE KIT. For cleaning and lubricating tape recorder heads and guides. Insures smooth performance and minimum wear. Includes 2-oz. bottle of Head Cleaner, 2-oz. bottle of Lubricant. Both have applicator caps. Wt., 6 oz.
15 D 8181.....1.29



P TG-3 EDITING AND CUING PENCILS. For marking tape to be edited. Pkg. of 3 (black, white and yellow). Wt., 6 oz.
15 D 8768.....Pkg. of 3 for 1.00

R TT-16 COLOR-CODING LEADER TAPES. Reinforce and color-code tape ends. Set of five 2½" reels in 5 colors. 1½ mil Mylar.
15 D 8248. Wt., 14 oz.....2.98

S TL-240 COLOR-CODING TITLE LABELS. Package of 240 self-stick 2x½" labels; asstd. colors. Sheets of 10. Wt., 2 oz.
15 D 8249.....Pkg. of 240 for 1.29

T TL-180 REEL TITLE LABELS. Pkg. 180 white pressure-sensitive 2x½" labels. Write or type on them for identification.
15 D 8253. Wt., 5 oz....Pkg. of 180 for .89

W TD-3 TAPE HEAD DEMAGNETIZER. Removes residual magnetism. Soft plastic shield for safe head contact; angled for easy reaching. 3½x1¼" dia. For 110 VAC.
15 D 8127 Shpg. wt., 8 oz.....3.99

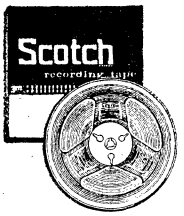
X TD-6 DELUXE HEAD DEMAGNETIZER. Heavy-duty demagnetizer removes residual magnetism from tape heads for better performance. Also "cleans" recorder parts to minimize tape drop-out. 4⅝x1¼" dia. U.L. Listed. 110-120 V, 50-60 Hz AC.
15 D 8154. Shpg. wt., 1 lb.....7.29

Y TAT-100 ALIGNMENT TAPE. For aligning recorder head for maximum sound output. 6 kHz tone. 100' tape on 2½" reel.
15 D 8217. Shpg. wt., 8 oz.....1.19

Z TCP-12 TAPE SAFES. Set of 12, to store and protect 7" tapes. Molded plastic with hinge cover and dovetail groove. Includes wall mtg. bracket. Less reels.
15 D 8102. Shpg. wt., 8 lbs.....11.89

AA TC7-2 TAPE STORAGE CANS. Pair of 7" dia. metal cans. Ribbed for stacking.
15 D 8207. Wt., 1 lb.....Pair 1.19
TC5-2. Same, for 5" reels.
15 D 8208. Wt., 14 oz.....Pair .79

BB TW-1 TAPE STROBE. Precision metal strobe checks speed accuracy, flutter and wow of 7½ and 3¾ ips recorders. Precision machined, with needle bearings. With instructions. Shpg. wt., 1 lb.
15 D 8116.....6.99



Recording Tape and Accessories

FOR PROFESSIONAL-QUALITY RECORDINGS EVERY TIME

TYPE 111 STANDARD ACETATE

High quality, 1½-mil acetate recording tape for general purpose use. Silicone lubricated to protect heads and extend tape life. Has ½-mil red oxide coating, 1½-mil cellulose acetate backing. With molded plastic reels, except *aluminum NAB reel (3″ center hole). Av. wt., 8 oz.

Stock No.	Mfr's Type	Feet	Reel	EACH 1-11	EACH 12-Up
15 D 8542	111-1.5	150	3″	.52	.47
15 D 8547	111-6	600	5″	1.69	1.52
15 D 8548	111-12	1200	7″	2.59	2.33
15 D 8549	111-25RO*	2500	10½″	7.20	6.48

TYPE 150 EXTRA-LENGTH 1-MIL POLYESTER

Provides 50% more playing time than same reel size with standard tape. Plastic reels, except *aluminum NAB with 3″ ctr. hole. 12 oz.

15 D 8531	150-9	900	5″	2.29	2.06
15 D 8532	150-18	1800	7″	3.99	3.59
15 D 8533	150-36RO*	3600	10½″	9.57	8.61

TYPE 153-16 LUBRICATED 1-MIL POLYESTER

For continuous-loop cartridge application. External lubrication on back side alone. 7″ contains 1600′ of tape. Wt., 1½ lbs.
15 D 8521. 1-11.....Each 3.57 12-Up.....Each 3.24

TYPE 175 HEAVY-DUTY 1½-MIL "TENZAR"

Manufactured with high-potency oxide coating. Resists heat and minimizes oxide rub-off. Lasts up to 15 times longer than ordinary tapes. Highly resistant to tearing and stretching. 5-inch plastic reels contain 600-ft. of tape, 7-inch plastic reels contain 1200-ft. of tape. **Available in choice of clear, red, blue, green, or yellow—specify color when ordering.** Av. shpg. wt., 10 oz.

15 D 8315 C. 5″ Reel. 1-11....Ea. 1.60 12-Up.....Ea. 1.44
15 D 8316 C. 7″ Reel 1-11....Ea. 2.50 12-Up.....Ea. 2.25

TYPE 190 EXTRA-LENGTH 1-MIL ACETATE

Thinner acetate base—gives you 50% more playing time than standard tape. Lets you record longer selections without reel changes. Economical and space-saving, too. Plastic reels, except *aluminum NAB reel with 3″ center hole. Av. shpg. wt., 12 oz.

Stock No.	Mfr's Type	Feet	Reel	EACH 1-11	EACH 12-Up
15 D 8550	190-9	900	5″	2.29	2.06
15 D 8552	190-18	1800	7″	3.99	3.59
15 D 8553	190-36RO*	3600	10½″	8.53	7.68

TYPE 200 DOUBLE-LENGTH ½-MIL TENSILIZED POLYESTER

Super-strong, long-playing recording tape gives twice the recording time of standard tapes on same size reel. Tensilized polyester backing is pre-stretched for strength and thinness. The thin .38 mil high potency oxide coating retains the full output and sensitivity of standard oxide coatings. Exclusive silicone lubrication lets tape glide smoothly over sensitive recording heads, for minimum friction and wear. The silicone is impregnated through the coating, lasts the life of the tape. Type 200 tape gives high frequency response with increased efficiency; ideal for narrow-track recording. Available in 1200 foot length on 5″ plastic reel or 2400 foot length on 7″ plastic reel. Av. shpg. wt., 12 oz.

Stock No.	Mfr's Type	Feet	Reel	EACH 1-11	EACH 12-Up
15 D 8500	200-12	1200	5″	3.69	3.32
15 D 8541	200-24	2400	7″	6.49	5.84

TYPE 201, 202, 203 "DYNARANGE"

Professional quality. Provides 15% longer life, low-noise level and low-rub-off. Dynarange tapes offer the same high-frequency performance one normally expects only from high-resolution tapes. Superior signal-to-noise ratio makes it well-suited for transcribing tape-to-tape or disc-to-tape. All polyester, except *acetate. 1 lb.

Stock No.	Mfr's Type	Base	Reel	Feet	EACH 1-11	EACH 12-Up
15 D 8535	201-6	1½ mil*	5″	600	1.95	1.75
15 D 8504	201-12	1½ mil*	7″	1200	2.99	2.69
15 D 8536	202-6	1½ mil	5″	600	1.99	1.79
15 D 8537	202-12	1½ mil	7″	1200	3.40	3.06
15 D 8538	203-9	1 mil	5″	900	2.83	2.55
15 D 8505	203-18	1 mil	7″	1800	4.90	4.41

TYPE 290 TRIPLE-LENGTH ½-MIL TENSILIZED POLYESTER

Gives you 200% longer playing time. Av. shpg. wt., 1½ lbs.

Stock No.	Type	Feet	Reel	1-11, EA.	12-Up, EA.
15 D 8304	290-18	1800	5″	4.69	4.22
15 D 8545	290-36	3600	7″	7.99	7.19

"LIVING LETTERS" MAILER WITH 3″ REEL OF TAPE

Plastic mailer meets new Postal Regulations. *Tensilized. 4 oz.

Stock No.	Mfr's Type	Base	Feet	EACH 1-11	EACH 12-Up
15 D 8300	111-¼-150-LL	1½-mil Acetate	150	.69	.62
15 D 8301	200-¼-300-LL	½-mil Polyester*	300	1.39	1.25
15 D 8302	290-¼-600-LL	½-mil Polyester*	600	1.99	1.79
15 D 8303	MT-MAILER-LL	Mailer w/empty 3″ reel		.40	.36

SCOTCH® GRAND TAPE RECORDING ACCESSORIES

TYPE 24 LEADER AND TIMING TAPE. 100′ length. In self-dispensing container for added convenience. Shpg. wt., 3 oz.
15 D 8569. White 1-11.....Each .60 12-Up.....Each .54
15 D 8568. Yellow 1-11.....Each .60 12-Up.....Each .54

TYPE 21-10 LEADER TAPE. Special anti-static coating. White plastic tape. 1000′ on 7″ plastic reel. Sturdy storage box. 10 oz.
15 D 8546. 1-11.....Each 3.00 12-Up.....Each 2.70

TYPE 41-½-S SPLICING TAPE. Coated on one side with non-run adhesive. ½x150″. Handy dispenser package. Shpg. wt., 3 oz.
15 D 8557. 1-11.....Each .39 12-Up.....Each .35

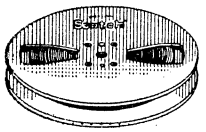
TYPE 51-7/32S ALUMINIZED SENSING TAPE. For recorders with automatic "stop" and "reverse." Adhesive on one side, foil on the other. 7/32x150″. Dispenser package. Shpg. wt., 3 oz.
15 D 8577. 1-11.....Each 1.89 12-Up.....Each 1.32

EMPTY PLASTIC TAKEUP REELS

Each with convenient index box. Buy in larger quantities—Save.

Stock No.	Reel Size	Shpg. Wt.	EACH 1-11	EACH 12-Up
15 D 8559	3″	4 oz.	.17	.15
15 D 8558	5″	4 oz.	.44	.39
15 D 8556	7″	4 oz.	.50	.45

PRST-7 EMPTY SELF-THREADING REEL. Perfect for business uses where time and efficiency are such important factors. 7″ clear plastic reel takes the time and tedium out of tape threading. Just place the end of the tape on the hub of the self-threading reel—your recorder does the rest. Shpg. wt., 8 oz.
15 D 8014. 1-11.....Each 1.00 12-Up.....Each .90



VIDEO TAPE FOR HELICAL SCAN RECORDERS

This 1-mil polyester tape is especially designed for helical scan video recorders. Low-noise oxide coating provides superior signal-to-noise ratio for high-resolution pictures. Impregnated silicone lubricant reduces head wear, increases tape life. Specially coated to reduce static charge build-up. R86B has plastic self-threading reel in book-style box; R97B has phenolic hub reel with aluminum flanges in box; VRB has precision heavy-duty reel in box. *Playing time determined by recorder speed.

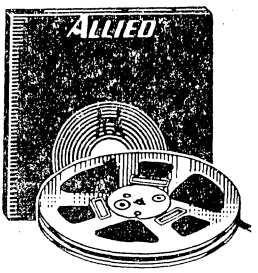
Stock No.	Mfr's Type	Equipment Used In	Feet	Play Time In Min.	Tape Width	Reel Dia.	Reel Type	Wt., Lbs.	EACH 1-9	EACH 10-24	EACH 25-49	EACH 50-Up
15 D 8320	351	Sony, Concord, Panasonic	1250	32	½″	7″	R86B	1	21.95	20.85	20.19	19.76
15 D 8319	351	Sony, Concord, Panasonic	2400	64	½″	7″	R86B	1½	39.95	37.95	36.75	35.96
15 D 8318	357	Ampex VR6000, 7000	1500	31	1″	9″	R97B	1	44.95	42.70	41.35	40.46
15 D 8317	357	Ampex VR6000, 7000	3000	62	1″	9″	R97B	1½	59.95	56.95	55.15	53.96
15 D 8321	350B	All Professional Units	1200	*	2″	8″	VRB	7½	62.35	59.23	57.36	56.12
15 D 8322	350B	All Professional Units	1800	*	2″	10″	VRB	10	87.43	83.06	80.44	78.69
15 D 8323	350B	All Professional Units	2400	*	2″	10″	VRB	12	110.15	104.64	101.34	99.14
15 D 8324	350B	All Professional Units	4800	*	2″	12″	VRB	20	208.07	197.79	191.62	187.51

NOTE: Ask Your Nearest Allied Facility for Quotes on Larger Quantities

Recording Tape for Every Use

ALLIED

260 GENERAL-PURPOSE RECORDING TAPE



Strict quality control standards are employed to produce a tape that is free of microscopic irregularities such as skew, edge burrs, feathered edges, cupping and curling. Gives the intimate head contact essential to full-range fidelity without excessive recorder wear. Deep lubricant extends life of both tape and recorder heads. The continuous length, splice-free material gives you a tape with exceptional strength and high resistance to adverse temperature. High sensitivity lets you use lower recording speeds without loss of fidelity. Signal-to-noise ratio makes it ideal for transcribing from prerecorded tapes, records or tuner without loss of frequency response. Offers highest quality, from minimum print thru 1½-mil acetate, to extended-play ½ mil-polyester for the best in recording pleasure. *Tensilized.

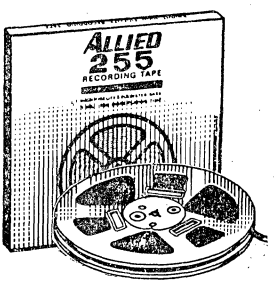
Stock No.	Reel	Feet	Mil	Base	Wt., Lbs.	EACH 1-11	12-24	25-Up
15 D 8740	3¼"	600	0.5	P'eyster	½	.89	.79	.69
15 D 8741	5"	900	1.0	P'eyster	¾	1.18	1.06	.95
15 D 8742	7"	1200	1.5	Acetate	1	1.49	1.34	1.19
15 D 8743	7"	1800	1.0	P'eyster	1¼	2.14	1.93	1.75
15 D 8744	7"	2400	0.5	P'yester*	1	3.49	3.14	2.86
15 D 8745	7"	3600	0.5	P'yester*	1	4.98	4.49	3.99

265 "ULTRA-RANGE" TAPE . . OUR BEST

Allied "265" Ultra-Range tape offers you features and quality unmatched at these prices. Abrasion is reduced to an absolute minimum. Heavy-duty computer-type reel is heat treated to assure parallel, unwarped flanges. Each box contains silicone-impregnated rayon tape conditioner. Red and green polyester leaders are attached to each end. Bonded sensing foils actuate recorders equipped with automatic reverse. A length of head cleaning tape is spliced into one end of every reel of tape to remove accumulated material from the recorder heads. Built-in homogenized lubrication reduces possibility of peeling. 1½ mil-acetate tape is general purpose for parties, home recordings, etc. 1-mil Polyester is excellent for taping stereo LP's or recording from tuner. ½-mil polyester is professional quality for lengthy operas, symphonies, live radio programs.

Stock No.	Reel	Feet	Mil	Base	Wt., Lbs.	EACH 1-11	12-24	25-Up
15 D 8269	7"	1275	1½	Acetate	1	2.09	1.88	1.67
15 D 8270	7"	1875	1	P'eyster	1	3.19	2.97	2.65
15 D 8271	7"	2475	½	P'eyster	1½	4.60	4.14	3.89

255 SUPER-VALUE TAPE CUTS THE COST OF RECORDING



Tape your valuable, irreplaceable record collection at exceptionally low cost. Durable, extra-strong acetate or Polyester tape is ideally suited for this purpose. Use your recorder for any of a thousand reasons. Make a permanent record of family fun, the children's voices, classroom lectures, weddings, important business notes, or dictate an entire book. One continuous 1200-ft. length of tape on 7" reel plays up to 8 hours at 1⅞ ips. Special oxide formula for good fidelity recording. Lubrication on tape reduces wear of expensive tape recorder heads. Uniform sensitivity throughout. High tensile strength virtually eliminates chance of tape breaks.

Stock No.	Reel	Feet	Mil	Base	Wt., Lbs.	EACH 1-11	12-24	25-Up
15 D 8275	3¼"	375	1.0	Acetate	½	.69	.59	.56
15 D 8276	5"	900	1.0	Acetate	¾	.84	.76	.72
15 D 8277	7"	1200	1.5	Acetate	1½	.99	.94	.89
15 D 8278	7"	1800	1.0	Acetate	1½	1.59	1.43	1.39
15 D 8279	7"	2400	0.5	P'yester	2	2.99	2.69	2.54

SUPER COATED TAPE CASSETTES

Standard cassettes are manufactured with the same high-quality acetate and Polyester blank tape used on regular reels. Super-coated for superior signal-to-noise ratio. Also prevents binding during fast-forward. Prestretched for high resistance to breakage, humidity. Has polished, splice-free, non-abrasive finish to insure smooth output. Used in all recorders using the widely-acclaimed Philip's Cassette system. Type C-60 records up to 60 minutes. Type C-90 records up to 90 minutes. Type C-120 records up to 120 minutes. All are ½-mil, permitting maximum amount of footage per reel (up to 120 minutes).

Stock No.	Mfr's Type	Recording Time	Wt., Lbs.	EACH 1-11	12-24	25-Up
15D 8000	C-30	30-Min.	¼	.98	.88	.83
15 D 8001	C-60	60-Min.	½	1.79	1.61	1.53
15 D 8002	C-90	90-Min.	¾	2.69	2.42	2.19
15 D 8003	C-120	120-Min.	1	3.65	3.28	2.99

BASF RECORDING TAPE FOR FULL SOUND

¾-MIL LUVITHERM TAPE (DOUBLE PLAY)

Stock No.	Type No.	Feet	Reel	Wt.	EACH 1-10	11-Up
15 D 8820	LGS-26	300	3"	3 oz.	1.29	1.19
15 D 8821	LGS-26	1200	5"	10 oz.	3.49	3.09
15 D 8822	LGS-26	2400	7"	18 oz.	5.59	4.99

1-MIL POLYESTER TAPE (DOUBLE PLAY)

15 D 8823	PES-35	1800	7"	1 lb.	4.79	4.29

½-MIL POLYESTER TAPE (TRIPLE PLAY)

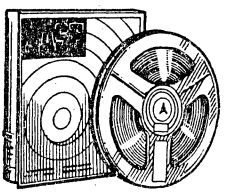
15 D 8824	PES-18	1800	5"	10 oz.	5.49	4.89
15 D 8840	PES-18	3600	7"	19 oz.	8.49	7.49

LUVITHERM-BASE CASSETTES

Library-box cassettes with Luvitherm tape for extra strength, full response, high signal-noise ratio. Plastic container.

Stock No.	Type No.	Time	Wt., Oz.	EACH 1-12	13-Up
15 D 8841	C-60	60 minutes	4	2.21	1.85
15 D 8842	C-90	90 minutes	4	3.64	3.05
15 D 8843	C-120	120 minutes	5	4.48	3.75

LUVITHERM® OR POLYESTER PRESTRESSED RECORDING TAPE



High-quality tape features Luvitherm unplasticized polyvinyl chloride film or polyester base. Prestressed (tensilized) for exceptional strength and dimensional stability. Luvitherm types are unaffected by humidity and temperature variations, and are extremely supple for superior tape-to head compliance. Excellent frequency response. Mirror finish—no drop outs, no rub off, or print through. Automatic stop switch foil Colored leader tape on each end. Packaged in plastic library storage container. Contains top quality materials to give outstanding full-range sound reproduction and provide years of reliable service. Has sturdy inner box and index. Imported.

1½-MIL LUVITHERM TAPE (STANDARD PLAY)

Stock No.	Type No.	Feet	Reel	Wt.	EACH 1-10	11-Up
15 D 8816	LGS-52	600	5"	10 oz.	1.79	1.59
15 D 8817	LGS-52	1200	7"	1 lb.	2.69	2.39

1-MIL LUVITHERM TAPE (LONG PLAY)

15 D 8818	LGS-35	900	5"	9 oz.	2.39	2.09
15 D 8819	LGS-35	1800	7"	18 oz.	3.89	3.49

ALLIED Recording Tape Is Guaranteed Splice-Free

Selected Stereo Hi-Fi Components

Write for Our Free Hi-Fi Catalog Featuring These Top Names

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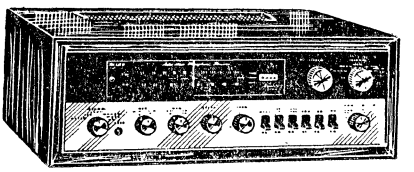


ALLIED 195-WATT FM-AM RECEIVER

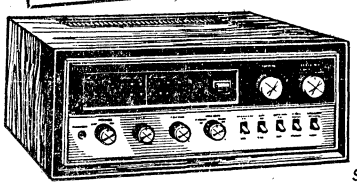
- All Silicon-Transistor Circuit with FET's in RF Stage, Integrated Circuits in IF
- Plug-In Speaker Connectors for Easy Phasing

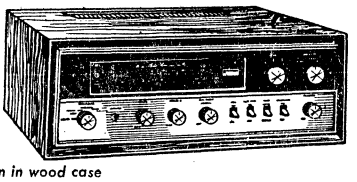
Model 395. Praised by audio experts for remarkable features and performance. Field-effect-transistors in the RF stage and integrated circuits in the IF section pull in superb stereo FM. Full-feature preamp has all the controls and inputs needed for any stereo source. All silicon transistors, plus 195 watts of audio power for finest stereo possible.

Preamp has volume, balance, and dual-concentric bass and treble controls. Switch selects AM, FM Mono, FM Automatic, Phono, Aux, plus Tape Head equalized at either 3¾ or 7½ ips. Rocker switches control loudness contour, scratch and rumble filters, between-station silencing on FM, Phono 1 and 2, and AFC. Five position switch for AC power, main speakers, remote speakers, main-plus-remote speakers, and speakers off. Mode/monitor switch for stereo, left and right channels. Signal-strength tuning meter, stereo FM indicator light, flywheel tuning, stereo headphone jack.

Power Output at 4 ohms: 195 watts ±1 dB; 160 watts IHF; 55 watts rms per channel. Response: ±1.5 dB, 15-100,000 Hz. Harmonic Distortion: 1%. Outputs: 4-16 ohms, tape and stereo headphones. With metal case; walnut case sold below. 5½x16x13¾". 110-120 VAC. Japan.

14 D 5074 U. Shpg. wt., 30 lbs.....299.95
14 D 5003 X. Walnut Wood Case. 6 lb 19.95





Shown in wood case

ALLIED® 40-WATT FM-AM RECEIVER

- All-Silicon Solid-State Stereo Circuit
- Integrated Circuits, plus FET Front End for Additional Stability

Model 339. Latest circuit advances, low price make this an excellent value. All-silicon solid-state circuit has Field-Effect-Transistor front-end for exceptional stability, sensitivity. Integrated circuit in 3rd FM IF stage for extra selectivity. Transformerless output delivers plenty of power. Full array of controls and inputs.

Lighted slide-rule dial. Tuning meter and stereo light. AFC for drift-free FM. Fused output protection. Power Output at 4 ohms: 40 watts ±1 dB; 32 watts IHF; 11 watts rms per channel. Response: ±3 dB, 20-40,000 Hz. Harmonic Distortion: 1% at rated power. Outputs: 4-16 ohms, headphones, recorder. With metal case; optional walnut case below. 5x16x12½". 117 VAC. Japan.

14 D 5039 U. Shpg. wt., 26 lbs.....149.95
14 D 5003 X. Walnut Wood Case. 6 lb 19.95

ALLIED 75-WATT FM-AM RECEIVER

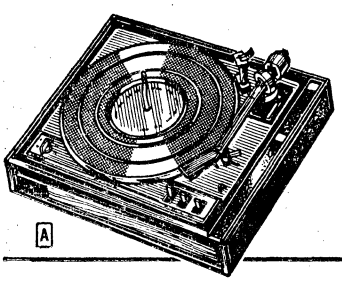
- Advanced All-Silicon Solid-State Stereo Design has 3 Integrated Circuits
- Schmidt Automatic FM Stereo Switching

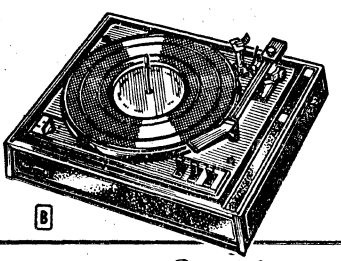
Model 369. Superb stereo FM-AM receiver with nearly every advanced feature. Years-ahead all-silicon circuit boasts three integrated circuits: two in the IF stage, one in stereo FM stage. FET front-end, Schmidt automatic stereo-mono switching circuit. Output transistor protection, direct-coupled transformerless output. Delivers full 75-watt power output.

Inputs for every stereo source. Tape monitor, headphone jack. AFC. Slide-rule dial, tuning meter, stereo indicator light. Power Output at 4 ohms: 75 watts ±1 dB; 60 watts IHF; 20 watts rms per channel. Response: ±3 dB, 20-50,000 Hz. Harmonic Distortion: 0.7%. With metal case; wood case below. 5½x16x13¾". 117 VAC. Japan.

14 D 5069 U. Shpg. wt., 28 lbs.....199.95
14 D 5003 X. Walnut Wood Case. 6 lb. 19.95

GARRARD AUTOMATIC TURNTABLES WITH ELLIPTICAL CARTRIDGE OFFER





Choose any one of the excellent elliptical cartridges shown at right when you purchase your Garrard—and save!

only 1¢ more

Empire 888E	Pickering V15/ATE-3	Shure M93E
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only $5 more

Empire 888TE	Pickering XV-15/400E	Shure M91E
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A FINEST AUTOMATIC TURNTABLE

- Synchro-Lab Motor for Exact-Speed Play
- Damped Cuing Protects Records, Stylus
- Precision Antiskate and Stylus Gauges

Model SL95B. 3-speed turntable has counterweight, 12" platter, Auto-Rise® platform. 15 13/16x14 5/8". Req. 4 3/8" above, 3" below mnt. brd. With cartridge for 1¢ more. For 117 VAC.

13 D 0950 CDU. Specify Cart. 12 lb 129.51

SL95B with Deluxe Cartridge for $5 More.
13 D 0951 CDU. Specify Cart. 13 lb 134.50

13 D 3114 U. SL95B Alone. 13 lbs...129.50

SL95B with Empire 999VE for $25 More.
13 D 0952 DU. Save $49.95. 13 lb. 154.50

B DELUXE AUTOMATIC TURNTABLE

- Twin-Braced, Low-Mass Pickup Arm
- Precision Speed Synchro-Lab Motor
- Adjustable Counterweight, Stylus Force

Model SL75B. Features Auto-Rise® safety platform. Plays up to six records manually or automatically at 33⅓, 45 or 78 rpm. Full-size 12" platter. 16 1/16x14 9/16". Requires 4⅜" above, 3" below mounting board. With cartridge for 1¢ more. 117 VAC.

13 D 0953 CDU. Specify Cart. 13 lb 109.51

SL 75B with Deluxe Cartridge for $5 More.
13 D 0954 CDU. Specify Cart. 13 lb 114.50

13 D 3115 U. SL75B Alone. 13 lbs...109.50

C LOW-PRICED TURNTABLE

- Constant Speed Synchro-Lab Motor
- Low-Mass Tubular Pickup Arm with Counterweight, Antiskate, Stylus Gauge

Model SL72B. Damped cuing and automatic play to protect stylus, records. Auto-Rise® platform for extra record gentleness. Three speeds. Manual or automatic. 15 13/16x14 5/8". Reg. 4⅜" above, 3" below mnt. board. With cartridge for 1¢ more. 117 VAC.

13 D 0955. Specify Cart. 13 lbs.....89.51

SL72B with Deluxe Cartridge for $5 More.
13 D 0956 CDU. Specify Cart. 13 lbs. 94.50

13 D 3118 U. SL72B Alone. 13 lbs....89.50

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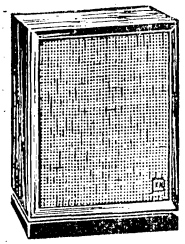

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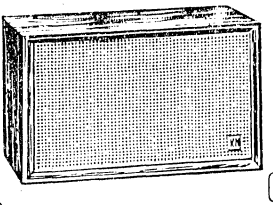

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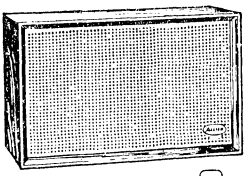


C

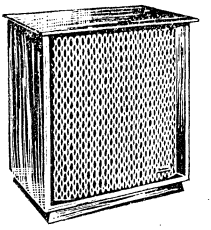
ALLIED® THREE-WAY SPEAKER SYSTEMS

A **Model 2385 15" System.** Our finest speaker system. Giant 15" woofer with 5¼-lb. magnet structure for high efficiency and 100-watt peak power capacity. Cloth-roll suspension and 1½" voice coil assure smooth bass from 20-2000 Hz. Die-cast, horn-loaded compression speaker provides clear midrange sound from 2000-10,000 Hz. Dome radiator tweeter delivers treble from 10,000 Hz to beyond audibility. Crossovers at 1000 Hz and 8000 Hz. Midrange and tweeter level controls. Walnut with satin black base. 8 ohms. 30¼x20½x14". Shpg. wt., 70 lbs.
20 D 9715 Z.....149.95

B **Model 2300CK 12" System Kit.** Acoustic-suspension woofer. 6¾-lb. ceramic magnet structure. Compression horn midrange, compression ring radiator tweeter. 25-20,000 Hz. 30 watts, 60 watts peak. 8 ohms. Instructions, finishing oil. 14x25x13½". Shpg. wt., 49 lbs.
20 D 9762 U.....74.95
20 D 9761 U. Assembled, Oil Walnut..99.95

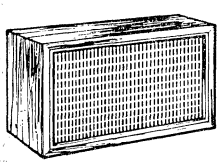
C **Model 3030BK 12" System Kit.** High-compliance woofer has 1¾-lb. Alnico V magnet structure; 6" midrange cone speaker and 3½" tweeter for great hi-fi. ¾" wood enclosure. With instructions, finishing oil. Tweeter control. Size, 14½x24x9". Shpg. wt., 28 lbs.
20 D 9743 U.....44.95
20 D 9745 U. Assembled, Oil Walnut..64.95

ALTEC-LANSING 15-INCH SPEAKER SYSTEM



Model 846A. Has same components used in renowned Voice of the Theatre system, but in an enclosure half the size. Huge 416A 15" woofer with 3" voice coil delivers bass down to 35 Hz. Efficient 806A VHF driver coupled to 811B sectoral horn offers smooth midrange and highs up to 22,000 Hz. Dual LC crossover at 800 Hz. Impedance: 8, 16 ohms. Capacity, 50 watts. Hand-finished walnut cabinet with fretwork grille. Size, 29¾x27½x19". Shpg. wt., 100 lbs.
20 D 7439 Z.....339.00

20 D 8210 U. A-7. Components—woofer, driver, horn and crossover above, less enclosure. 43 lbs. **190.50**



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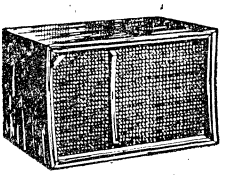
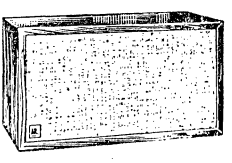


E

FISHER AND WHARFEDALE SPEAKER SYSTEMS

D **Fisher XP-9B 4-Way 12" Speaker System.** Big-system sound from this bookshelf-size speaker system. 12" woofer has 6-lb. magnet structure and 2" voice coil for bass down to 28 Hz. 6" lower midrange and 5" upper midrange speakers. 1½" dome radiator tweeter. 4-way LC crossover network. Tweeter balance control. Response: 28-22,000 Hz. 10-60 watts. 8 ohms. Walnut finish. 14x24½x12".
20 D 7312 Z. Shpg. wt., 60 lbs.....179.95

E **Wharfedale W60D 3-Way 12" Speaker System.** Exclusive sand-filled Achromatic enclosure has 12" woofer with 9½-lb. magnet assembly for bass down to 30 Hz. Acoustically-isolated 5" midrange cone and mylar dome radiator tweeter. Midrange and tweeter level controls. 30-22,000 Hz. Capacity, 40 watts. Impedance: 4-8 ohms. Oiled walnut finish. Size, 14¼x24x13".
20 D 7413 Z. Shpg. wt., 56 lbs.....129.95



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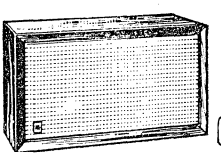
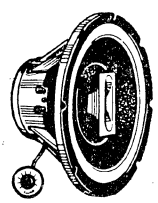


G

AR ACOUSTIC-SUSPENSION SPEAKER SYSTEMS

F **Acoustic Research AR-4X 2-Way 8" Speaker System.** Famous acoustic-suspension design features 8" woofer for rich bass. Wide-dispersion 2½" tweeter delivers superb treble response. LC crossover network at 1200 Hz. Requires amplifier rated at least 15 watts per channel. 8 ohms. Has tweeter level control. 10x19x9". 22 lbs.
20 D 7629 U. Oiled Walnut Finish.....57.00
20 D 7628 U. Ready-to-Finish Pine.....51.00

G **Acoustic Research AR-3A 3-Way 12" Speaker System.** AR's finest system. Powerful rich-toned 12" woofer. 2" midrange. 1½" and ¾" dome tweeters. Response, 32-20,000 Hz. Crossovers at 575 Hz and 5000 Hz. Requires 25 watts. 4 ohms. 14x25x11⅜". 55¾ lbs.
20 D 7042 Z. Oiled Walnut Finish.....250.00
20 D 7041 Z. Natural Birch.....240.00
20 D 7040 Z. Ready-to-Finish Pine.....225.00



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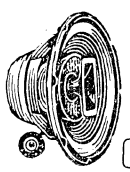

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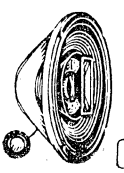


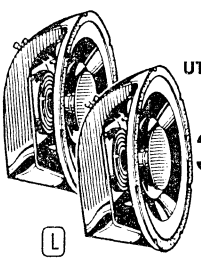
K

TOP-PERFORMING ALLIED® SPEAKERS

H **Model 844 12" Acoustic-Suspension-type 3-Way Speaker.** Full 12" woofer has 1⅞-lb. ceramic magnet and cloth-roll suspension. Midrange cone radiator and compression horn tweeter. Crossovers at 2500 Hz and 4500 Hz. 23-20,000 Hz. 35 watts. 8 ohms. 6⅝" deep.
20 D 9733 X. Shpg. wt., 11½ lbs.....49.95

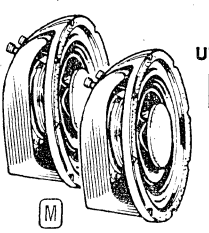
J **Model 888HCA 12" 3-Way Speaker.** Wide-range sound at a budget price! 12" woofer has 1¾-lb. magnet, 1½" voice coil. Midrange cone radiator and compression tweeter. Smooth response from 25-19,000 Hz. Capacity, 25 watts. 8 ohms. Depth, 6⅜".
20 D 9753 X. Shpg. wt., 11½ lbs.....39.95

K **Model 830BHC 12" 3-Way Speaker.** Our most popular 12" speaker has husky 13-oz. magnet for deep bass, high efficiency. Midrange cone and horn tweeter. Response, 25-18,000 Hz. Capacity: 20 watts; 40 watts peak. Impedance, 8 ohms. Depth, 5¼".
20 D 9707 X. Shpg. wt., 10½ lbs.....24.95



L

UTAH 12" Per Pair **35.95**



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UTAH 8" **19.95** Per Pair

SAVE WHEN YOU BUY UTAH SPEAKERS IN PAIRS

L **Model C-12PC-3B 3-Way 12" Speaker.** One of Utah's most popular speakers. Features big 12" woofer with 1½" voice coil. Midrange cone and tweeter with Alnico V magnet. Crossovers at 1000 and 3500 Hz. Die-cast frame. Response, 25-20,000 Hz. Capacity, 45 watts peak. 8 ohms. 5¹¹⁄₁₆" deep. Wt., per pair, 24½ lbs.
20 D 8229 X. One Speaker.....34.95
Two Speakers.....35.95

M **Model C8JC3 3-Way 8" Speaker.** True hi-fi sound at a special low price. Woofer has cloth-roll suspension and powerful 10-oz. ceramic magnet for smooth bass down to 35 Hz. Tweeter has Alnico V magnet for highs to 20,000 Hz. Spring-loaded binding terminals. Capacity, 30 watts peak. 8 ohms. Wt., each, 5½ lbs.
20 D 8414. One Speaker.....18.95
Two Speakers.....19.95

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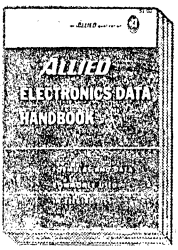

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Carefully selected and prepared by Allied's technical staff. For the student, instructor, service engineer, experimenter and maintenance man. Serves as a valuable adjunct to classroom study, laboratory work. Includes: Math Constants and Symbols; Algebraic Formulas; Log., Trig. Tables; Tables of Powers, Roots, Reciprocals; Formulas for Ohms Law, Capacitance, Inductance, Impedance; Transistor Information; Interchangeable Tubes; Color Codes; Lamp Data; Metric Relationship, more. 112 pp. 6x9".
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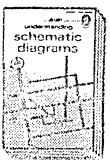

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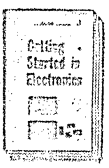

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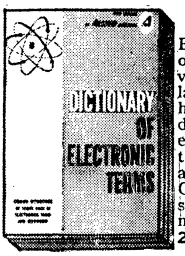

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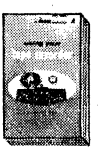

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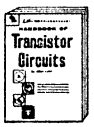

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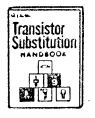

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17	.80	1.40	1.60	1.90	2.35	2.75	3.30	3.80
18	.80	1.45	1.65	1.95	2.45	2.85	3.45	4.00
19	.85	1.50	1.75	2.05	2.55	2.95	3.60	4.15
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29	1.05	1.90	2.20	2.70	3.40	4.10	5.05	5.90
30	1.05	1.95	2.25	2.75	3.50	4.20	5.20	6.05
31	1.05	2.00	2.30	2.80	3.60	4.35	5.35	6.25
32	1.10	2.05	2.35	2.90	3.65	4.45	5.50	6.40
33	1.10	2.10	2.40	2.95	3.75	4.55	5.65	6.55
34	1.15	2.10	2.45	3.00	3.85	4.65	5.75	6.75
35	1.15	2.15	2.50	3.05	3.95	4.80	5.90	6.90
36	1.15	2.20	2.55	3.15	4.00	4.90	6.05	7.10
37	1.20	2.25	2.60	3.20	4.10	5.00	6.20	7.25
38	1.20	2.25	2.65	3.25	4.20	5.10	6.35	7.40
39	1.25	2.30	2.70	3.35	4.25	5.25	6.45	7.60
40	1.25	2.35	2.75	3.40	4.35	5.35	6.60	7.75

Over 40 lbs. shipped truck or express. See information at left.

HOW TO ESTIMATE AIR PARCEL POST CHARGES

We will ship your order by Air Parcel Post on your instructions. Size and weight limitations are 70 pounds and 100 inches (length plus girth).

Wt. Lbs.	Zones 1, 2, 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	APO's and FPO's
To 1	$0.80	$0.80	$0.80	$0.80	$0.80	$0.80	
1-1½	.98	1.02	1.07	1.14	1.18	1.24	APO & FPO San Francisco, 80¢ per lb., plus 8¢.
1½-2	1.16	1.23	1.34	1.47	1.55	1.68	
2-2½	1.40	1.48	1.62	1.79	1.91	2.08	
2½-3	1.64	1.73	1.90	2.11	2.27	2.48	
3-3½	1.88	1.98	2.18	2.43	2.63	2.88	
3½-4	2.12	2.23	2.46	2.75	2.99	3.28	APO & FPO New York, 56¢ per lb., plus 22¢.
4-4½	2.36	2.48	2.74	3.07	3.35	3.68	
4½-5	2.60	2.73	3.02	3.39	3.71	4.08	
For Each Extra Lb.	Add 48¢	Add 50¢	Add 56¢	Add 64¢	Add 72¢	Add 80¢	

USE YOUR ZIP CODE TO FIND YOUR PARCEL POST ZONE

Use the first three numbers of your Zip code to determine your Parcel Post zone. Example: if your zip code is 58374, use the first three numbers (583), and refer to the chart below to find your Parcel Post zone, which is 5.

Zip Code	Zone	Zip Code	Zone	Zip Code	Zone	Zip Code	Zone	Zip Code	Zone	Zip Code	Zone	Zip Code	Zone
006-009	8	286-289	4	400-406	3	474-478	3	560-574	4	718	5	835-839	7
010-046	5	290-292	5	407-409	4	479	2	575-579	5	719-729	4	840-849	6
047	6	293	4	410	3	480-489	3	580-581	4	730-739	5	850-854	7
048-098	5	294-295	5	411-419	4	490-491	2	582-589	5	740-744	4	855-863	6
100-129	5	296-297	4	420	3	492	3	590-591	6	745	5	864	7
130-132	4	298-299	5	421-422	4	493-495	2	592-593	5	746	4	865-880	6
133-139	5	300-303	4	423-424	3	496-499	3	594-599	6	747-748	5	881	5
140-179	4	304	5	425-426	4	500-504	3	600-605	1	749	4	882-883	6
180-199	5	305-307	4	427-438	3	505	4	606	Local	750-778	5	884-889	5
200-215	4	308-329	5	439	4	506-507	3	607-609	1	779-785	6	890-899	7
216	5	330-334	6	440-443	3	508-519	4	610-619	2	786-787	5	900-933	7
217	4	335-338	5	444-447	4	520	2	620-636	3	788	6	934	8
218-219	5	339-349	6	448-456	3	521-526	3	637-649	4	789-796	5	935-938	7
220-232	4	350-359	4	457	4	527-539	2	650-652	3	797-799	6	939-951	8
233-238	5	360-361	5	458-459	3	540	4	653-675	4	800-812	5	952-953	7
239-274	4	362	4	460-462	2	541-547	3	676-679	5	813-819	6	954-955	8
275-279	5	363-369	5	463-464	1	548	4	680-689	4	820-823	5	956-961	7
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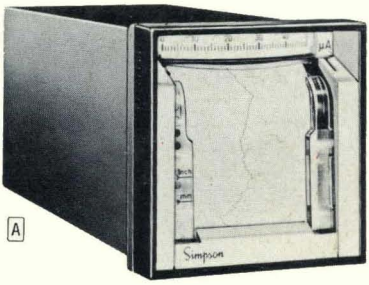

A

A **2750 CHART RECORDER.** Built-in adjustable amplifier for recording range of 400 μV to 25 mV. Input impedance, over 50 megohms. Inkless recording. *See page 445.*

B **260® VOM.** Taut-band meter movement cannot develop error-causing friction from shock or vibration. Readings stay accurate under all conditions. Overload protected, too. *See page 440.*

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C

C **MODEL 2800 DIGITAL PANEL METER**
See page 486

D **CENTURY SERIES PANEL INSTRUMENTS**
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E **MODEL 2700 DIGITAL MEASURING SYSTEM**
Plug-in modules for voltage, current, resistance. 4-digit readout, overrange.
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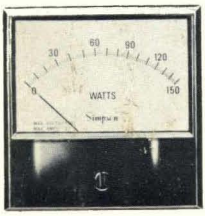

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